



STABILITY PACT
FOR SOUTH EASTERN EUROPE

HEALTH PROMOTION AND DISEASE PREVENTION

**A HANDBOOK FOR TEACHERS, RESEARCHERS, HEALTH PROFESSIONALS
AND DECISION MAKERS**

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0.1 Preface

The concepts of health promotion and disease prevention have come into age since Ottawa 1st International Conference on Health Promotion, held in 1986, and the subsequent conferences and adopted declarations guided by the World Health Organization. But that does not mean that these ideas are now outdated and weakened. On the contrary, it seems that they are more vibrant than ever, relieved from some ideological burdens and stimulated by worldwide acknowledgement. Former challengers are mute or even supportive and the setting approach – initiated toward the end of the 1990-ties – opened the doors for an improved collaboration with the medical profession and down to earth approaches. Indicative of this development is for example the fact that in the eighties German physicians complained about undue and unprofessional competition of self help groups, today they are crying for more self help initiatives of patients in order to reduce the burden of care on their shoulders.

In the former socialist economies health promotion had also a political dimension fostering a downside up movement, not welcome even in the health sector, forget about repercussions in other politically more relevant fields. In the framework of our Stability Pact Project, funded by Germany with the aim to rebuild Public Health in the region in terms of teaching, research and practice, we identified two main deficits: Public health management and health promotion together with effective disease prevention. The first topic has been addressed by two voluminous teaching books on “Health Systems and their Evidence Based Development (1st edition in 2004 and the 2nd edition in 2005) and on “Public Health Strategies: A Tool for Regional Development” (1st edition 2005). The third book on “Health Determinants in the Scope of New Public Health” (published also in 2005 by Hans Jacobs Publishing Company, Lage, Germany) in addition to the epidemiology of health and disease already touched some relevant aspects of health promotion and disease prevention. Now with the teaching book presented here we are dealing also with the second deficit identified in the region as a heritage of the communist period.

Since the year 2000 our Research & Development Project, best known as the “Public Health Cooperation in South Eastern Europe (PH-SEE) and from 2006 as “Forum for Public Health in South Eastern Europe (FPH-SEE)”, tried to reconstruct public health in the region by developing teaching material and training curricula. With Schools of Public Health by now in almost each country of SEE and about 1800 pages of published teaching books today we can be more than satisfied with the results. This 4th teaching book on “Health Promotion and Disease Prevention” adds another 800 pages bringing us up to about 2600. All books are available full text and free of charge on our website (www.snz.hr/fph-see).

We have to thank the authors from many countries in SEE who contributed free of charge for the sake of improvement of the quality of public health education in South Eastern Europe. We believe that there is no other endeavour of this size and established close collaboration between countries, some of them having been in war with each other only a few years ago. Last not least we are obliged to the editors and assistant editors who motivated the authors and did a huge amount of unpaid work to get this book finally printed.

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0.2 Poem:

THE NEW PUBLIC HEALTH SEE VISION

Stability Pact FPH-SEE Project has a noble mission,
to support MPH education and scientific transition.

In order to implement the New Public Health vision,
many actions have been initiated in the SEE Region,

The strong FPH-SEE network is our precious wealth,
many SEE countries created School of Public Health.

We are committed to produce MPH handbook manuals,
for teachers, researchers and public health professionals.

We teach the students to deal and look by years ahead,
for improving quality of the human life on our planet.

We fight with enemies and any threat of civilization,
and promote peace and tolerance through education.

People's health and quality of life we tend to increase,
Public Health is a catalyst for development and peace.

We are governed by our professional code of ethics,
health promotion is essential tool in various settings.

We have leadership spirit and strong self-confidence,
by promoting democratic principles we prevent violence.

We support social justice and human rights movement,
we create vision for human opportunities improvement.

We are persistent in performing our professional roles,
support achievement the Millennium Development Goals.

Sustainability of the FPH-SEE is our main concern,
who dares to teach must never stop to learn...

Doncho M. Donev
Skopje, Macedonia

0.3 Acknowledgement

We, the editors of the book, would like to express our sincere gratitude to all authors who contributed to the FPH-SEE Handbook on Health Promotion and Disease Prevention. We highly appreciate their professional expertise and commitment, efforts and contributions, which enriched the quality of the modules and the value of the book.

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Finally, we greatly acknowledge the continuous support from the principle investigators of the Public Health Collaboration in South Eastern Europe Project – Prof. Dr Ulrich Laaser, Faculty of Health Sciences, University of Bielefeld, Germany and Prof. Dr Luka Kovacic, Andrija Stampar School, School of Medicine, University of Zagreb, Croatia.

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0.5 Editors' Foreword

Taking over the responsibility of being editors of this book faced us with enormous challenges of the editorial process, we were not aware of (not even in our dreams). As public health professionals with predominantly academic goals, related to the field of health promotion and disease prevention, both educational and scientific, and at the same time as public health practitioners in our home countries, of course with international experiences, we felt enormous need to put together a handbook, which would make our experiences and experiences of our colleagues joined in the FPH-SEE network as uniform as possible. Our vision was to prepare e book, which could play a role of a lighthouse for more secure navigation in the stormy waters, which could harmonize the public health and health promotion approaches and practice in countries in transition. All three of us had enormous initial editorial enthusiasm, but soon (un)expected several minor and also some major challenges arose.

The first major challenge was the content of the book. When preparing it, we wanted to give answers to several questions. Some of them were: »What is the *meaning* of the term *health promotion*, especially in this part of Europe? How to interpret properly different contemporary understandings of *relationship between health promotion, health education, and disease prevention*? Which of the contemporary approaches to *health promotion definition* should be chosen as the right one? «.

The second major challenge was collaboration with authors. Unexpectedly, a great number of colleagues expressed their wish to (exchange) present their experiences (with others), and/or to become recognized as potential future partners in the common professional sphere.

The last, but not the least challenge, was the decision whether to keep the diversity-heterogeneousness of contextual approaches of different authors, or to harmonize–unify all modules. We decided not to be too strict in none of these two possible options.

The book was not meant to be, and it couldn't be, an overall comprehensive textbook about all aspects and topics in the field of health promotion and disease prevention. However, its content is complex and structured in five chapters with 64 modules and case studies. The book is mainly a result of present understanding, approaches and vision of authors, and should stimulate critical reflection and action in practice of their (our) colleagues. It was also not meant to be a perfect book, and it is not, like life that is not perfect as well.

For our editorial team (the meaning of this term – together everybody achieve more - was fully expressed) the editorial process of this handbook was *salutogenetic*. It was not an easy process, but we *managed to cope* all challenges (or at least the majority of them) properly, and *empowered* ourselves in the full meaning of this word. The experience was extraordinary, and a huge development was achieved in the field of our personal *social network*, as well as in the field of professional networking with authors of the modules.

We are grateful to the colleagues from our institutions, who expressed a great extent of understanding for our voluntary work, and even co-operated in it. We are grateful to all 81 authors to their voluntary contribution as well. Especially we are grateful and indebted to members of our families, who were extending their understanding and support (all the time being with us) and who often missed our real presence and contribution to the family life, especially during the last few months of the final stage of the editorial process.

We sincerely hope that this handbook will be a valuable resource in your everyday academic life and practice. We invite you, the readership of this book, to comment on and send us your experiences with the book.

Doncho Donev
Gordana Pavlekovic
Lijana Zaletel Kragelj

**OLD PARADIGMS
AND NEW
PROGRAMS FOR
HEALTH PROMOTION**

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Old Paradigms and New Programs: The Need for an Interactive Device for Promoting Health and Preventing Disease
Module: 0.6	ECTS: 1
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Key words	disease prevention, health promotion, social medicine, health care ecology model, health care belief model
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none"> • be aware of the limitations of conventional methods to promote health and prevent disease and the need for new programs based on a synthesis of social medicine and health care ecology; • recognise the interrelationship between individuals, families, the community, and society and the accompanying interaction between biological, psychological, sociocultural, and behavioral factors in disease prevention and health promotion; • increase their knowledge of how to institute disease prevention and health promotion interventions in the doctor-patient relationship, the family care situation, the community network, and societal institutions; • understand the strengths and weaknesses of the health belief model; • differentiate between social medicine and health ecology as a basis for synthesizing a new programmatic device; • be able to conceptualize what is needed to design, implement, and evaluation an effective disease prevention and health promotion program for a designated geographical area or population.
Abstract	To understand the complexities of creating an effective health promotion and disease prevention strategy, conventional wisdom in this field must be assessed critically and thoroughly. The rapidity of change—scientifically, clinically, and politically—in the health care sphere, requires a holistic understanding of the health of the public, the evolving patterns of disease, and the efficacy of the health care system.

	<p>This paper provides a framework for assessing the current state of disease prevention and health promotion, integrating traditional paradigms into new programs for confronting changing socio-cultural as well as biomedical forces. Particular eras and paradigms in public health will be examined and discussed. The interdependency of human phenomena—biological, psychological, socio-cultural, and behavioral—is explained. Misconceptions of aspect of how individuals respond to the theory and practice of health behavior such as the health belief model will be discussed. Building on classic conceptual schemes in social medicine in conjunction with the health care ecology model will be explored in terms of a potential synthesis of concepts and applications. The aim of this proposal is to update and reinvigorate disease prevention and health promotion perspectives by demonstrating the significant role they play for improving the health of the public.</p>
Teaching methods	<p>A well-planned sequence of six lectures that begin with the definition of terms and include a brief history of eras and paradigms, major components of contemporary human growth and development, misconceptions of health care interventions, the social medicine and health care ecology models, and ending with a focus on a post-modern paradigm for planning, implementation, and evaluation. Each lecture will be followed by small group discussion providing the students opportunities to digest and discuss the topics presented. When possible a guest lecturer in public health, social medicine, or social thought and philosophy should participate</p>
Specific recommendations for teachers	<p>The continuity and sequencing of material is of utmost importance. The personal learning and development of the students should follow a heuristic approach of continuing education and based on synthesis and exploration.</p>
Assessment of students	<p>A five minute quiz of one or two questions should start each lecture. The first one should be the students' statement on what they expect to learn from the course. Based on small group discussions, students should explore sources (the internet, the library) to find evidence supporting or rejecting what is being discussed. A one page summary of this material should be submitted at the end of each session. The summary of the first session submitted at the start of the second discussion group, and continues in sequence. A five page essay, following the criteria stated for exploration serves to demonstrate the students' understanding, application, and creativity regarding the concepts and modalities that constitute the thesis of this module. The essay counts for 60%, the quizzes 20%, and the summaries for 20%.</p>

OLD PARADIGMS FOR NEW PROGRAMS: THE NEED FOR AN INTERACTIVE DEVICE FOR PROMOTING HEALTH AND PREVENTING DISEASE

Edward J. Eckenfels

Laying the foundation

The aim of this paper is to critique commonly held beliefs pertaining to disease prevention and health promotion as a basis for program planning, implementation, and evaluation.

To begin with, most health care interventions are taken for granted, that is, those who apply them implicitly believe that what they are doing is the right thing. Moreover, with the vast array of new “medical armamentarium” constantly being created, there is little time to question their efficacy. What has been lost in this avalanche of information is healthy skepticism and critical reasoning. The aim of this paper is to dig deeper than the current trend of medical advances, to question fundamental notions about health and illness, where they come from historically, and how a new perspective can be developed that integrates old paradigms with new programmatic efforts in the field of disease prevention and health promotion.

The need for a historical perspective

Pearce (1) points out that “to understand the causation of disease in a population, it is essential to understand the historical and social context and to emphasize the importance of diversity and local knowledge rather than only searching for universal relationships.” Disease prevention and health promotion strategies must be framed in terms of the broader concept of public health if they are to be effective, i.e., reach *all* the people. A good place to start is the Sussers’ conceptualization of *eras* and *paradigms* (2). Although their construct is epidemiology, the implications for disease prevention and health promotion should be obvious. In the first half of the 19th century, *sanitary conditions* were recognized as a major source of disease and death, with *miasma* the “poisoning by foul emanating from soil, air, and water.”

In the early stages of the 20th century *infectious diseases* were characterized in the *germ theory* paradigm with the focus on how “single agents relate one to one to specific diseases.” The last half of the 20th century has seen the emergence of *chronic diseases* with its paradigm of the “*black box*,” in which “exposure (input) is related to outcome (output), without necessity for intervening factors or pathogenesis.” The Sussers are more concerned with the current era they called *eco-epidemiology* with its paradigm the *Chinese boxes* (one inside of the next larger one). Their observation of the importance of understanding “causal pathways at the societal level and with pathogenesis and causality at the molecular level” is pertinent to the direction disease prevention and health promotion must take.

Pearce (1) is justifiably worried that “modern epidemiology, with its emphasis on methodology and risk factor identification in the individual, has diverted epidemiologists from a primary concern in understanding the dynamics of disease occurrences in populations.” The clinical trial and multivariate analysis have emphasized a reductionist approach by downplaying a population orientation. This model has become especially true in academic settings. The tendency to study factors that fit individualistic epidemiology has become the dominant paradigm of chronic disease and, in the process, has taken the investigation away from public health issues.

Nevertheless, a new framework is emerging that recognizes the complex interaction of biology with the social, political, economic, and cultural relations of the 21st century. A creative exploration of this type of paradigm leads to a better recognition of what is needed to prevent disease and promote wellness. But first, we need to better understand what is currently considered important in the etiology of disease and illness.

Emerging factors in health and illness

At the start of the 21st century, it is clear that *biology* has taken precedence over other factors in health and illness. There are many reasons for this but most obvious are the advances in the understanding of normal biological processes and their accompanying pathophysiology. As more disease processes are identified, so are new interventions for treatment and cure. The initial prominence given to infectious diseases has moved to chronic diseases and how to live with them throughout life. Chronic ailments continue to be subdivided with specialties and subspecialties to treat them. The conventional way of managing chronic illnesses, according to Porter, is through changing individual behavior, raising health consciousness, and promoting self-care (3). The latest breakthrough to assure biology its position in the hierarchy of causality is molecular biology, especially the creation of the genome. Preventing disease and promoting health gets lost in the potential of stem cells and transplantation. As the Sussers (2) have stated “a molecular paradigm is hugely attractive because of its explanatory power.”

Classic *psychology* has also taken on a new thrust. Although the day of Watsonian behaviorism is far in the past, as is Freudian psychology, and other non-quantifiable conceptualizations, measuring attitudes and behavior have become the hallmark of contemporary psychology. The focus is on *cognitive* factors; through surveys and scales, attitudes can be measured and analyzed statistically. The American model of prevention applied most often focuses primarily on changing individual behavior. The *behavioral aspect* is added as a separate entity because in disease prevention and health promotion it becomes an essential protocol for making successful interventions operational. *Socio-cultural aspects* encompass two configurations: first a person’s *social status* in a group, a community, or a society and, second, *culture*, which, in its simplest form, refers to the beliefs and values of a society or population group. In the broadest sense, the norms, the customs, and the beliefs form the moral order of a society and its social aggregates.

In sum, under the rubric of *biology* we know how the human body functions and what can be done to keep it functioning. *Psychology* tells how we think (rationally) and our emotional responses (not rational) to certain stimuli. *Culture* provides the patterns of attitudes, values, and beliefs that have a powerful influence on our identity and our behavior. *Social and economic* factors (class) determine where we fit in the social hierarchy (a social stratification system). *Behavior* means simply how we behave in conjunction with these human conditions.

Shortcomings of single factor causation

Each of these factors needs to be looked at more critically. *Molecular biology* allows for the study of disease causation from a strictly biophysical perspective. The precision of molecular biology makes it possible to determine the means and the timing of transmission and to find a way of interrupting it. It is seen by the public as well as scientists and health professionals as the closest thing yet to the magic bullet. An unanticipated consequence is taking the focus away from a social perspective. If human nature rests in the biophysical person

and the discernible component is genetic, then the focus of disease prevention and health promotion is the person. Not only does this leave environmental and cultural perspectives out of the model, but it becomes the basis for education and training in the health professions. Eisenberg (4) succinctly states that in contemporary medical education, “the tendency is to ask only biological questions about what are in fact biosocial phenomena.”

In the *doctor-patient* relationship the biomedical diagnosis and treatment take precedence. This is how physicians are trained. The old adages of “Doctor’s orders,” and “quit smoking and lose some weight” become the accepted protocol for disease prevention and health promotion. This is how doctors and nurses interact with patients. The primary tasks of clinical medicine may be preventing premature death and disability and improving the lives of those under care, but medical professionals are not trained to understand social structure and the need for intervention at the structural level (5). As Kleinman (6) has recognized, “the need to routinely ask patients (and when appropriate family members) what matters most to them in the experience of illness and treatment tends to be left out of the interaction.” He also observes that, “*cultural competency*, as taught in most medical schools, suggests culture can be reduced to a technical skill for which clinicians can be trained to develop expertise. It becomes a series of ‘do’s and don’ts’ that define ways to treat a patient of a given ethnic background.”

When it comes to promoting health in an interpersonal vein, the Holy Grail for reaching patients is the *health belief model* (HBM). This model is based on the work of Kurt Lewin and was developed by social psychologists working with public health specialists in the 1950s. As Hughes (7) as pointed out, “belief served as an unexamined proxy for culture.” The assumption was that one’s *beliefs* about health and illness were not the same as *knowing* what caused the illness in the first place. Furthermore, correcting false beliefs among the sick should be a first priority of public health. The situation was defined as scientific medicine versus myths and folklore.

The HBM is a rationalist’s paradigm. It presumes that “perceived susceptibility and perceived severity of disease, combined with perceived benefits of preventive actions minus perceived barriers to taking those actions, explains the likelihood of an individual taking preventive health measures, complying with prescribed regimens, or utilizing medical services” (8). This model presents a very narrow view of culture and human action. Sahlins (9) called the HBM “subjective utilitarianism,” whereby the sick person responds to *incentives* the way Economic Man does to capital. In other words, the person proceeds rationally toward the goal of positive health. This theory is fraught with narrow renderings of culture as health belief. It is built on the premise that the “rational, autonomous care seeker is an empirically-based, value-free conceptualization” (8). This too is a myth since, for one thing, it leaves out the role of the family, the community, and society. It is really an *ideological model* that applies to reasonable and educated people and excludes those who have less control over their lives. Moreover, “health decisions are far more constrained by *objective social factors* and macro-level *structures of inequality* . . . than by subjective beliefs or cognitive factors” (8). Many practitioners of public health have been seduced by the HBM, and, in some situations, blame the victim for not following the prescribed treatment plan.

The two most misunderstood concepts in health care are *culture* and *social status*. Culture has particular meaning not only because it is basic to understanding all social phenomena, but, in particular, because it is relevant to how health is fostered and disease is prevented. All human actions are filtered in some way through culture. A misconception of the power

of culture, however, can lead to opposite conclusions such as potentially harmful attitudes and stereotyping of “others” from different racial, ethnic, and social groups (10). When the focus is solely on learning specific characteristics of various “ethnic groups” lumped together and viewed as one inevitable identity, then prospects of how “to reach them” regarding their health and illness will be static and one dimensional.

Myths about human nature and culture abound such as “conflict between people of different cultures, races, or genders is inevitable”; “biology is destiny”; “culture is immutable”; “poverty, inequality, and suffering are natural states”; and “people in other societies who don’t want to live just like Americans are afraid of ‘modernity’” (11).

Culture (6) is “inseparable from economic, political, religious, psychological, and biological conditions. [It] is a process through which ordinary activities and conditions take an emotional tone and a moral meaning for participants. Cultural processes frequently *differ* within the same ethnic or social group because of differences in age cohort, gender, political association, class, religion, ethnicity, and even personality.” Furthermore, the “stuff of culture” is absolutely necessary to see how culturally derived attitudes and beliefs affect the health and well-being of people from different cultural backgrounds. In particular, the implications of cultural sensitivity are significant for creating healthy lifestyles and disease awareness. Finally, whether it is from the perspective of a region, a community, a family, or a person, lack of knowledge about cultural norms, values, and beliefs creates an invisible barrier to fostering health and wellness.

Every society has some form of *social stratification*. When it comes to one’s health within the hierarchy, Marmot (12) has demonstrated, through decades of carefully conducted empirical research, “as bad as poverty is for health, what is really at issue here is inequality.” He calls this phenomenon the *status syndrome*. He further states, “All societies have rankings because individuals are unequal in a variety of ways; but not all societies have the same gradient in health. What matters is the degree to which inequalities in ranking lead to inequalities in capabilities—being able to lead the lives they most want to lead. Central to these capabilities are *autonomy* and *social participation*.” He goes on to say, “Control over one’s life and opportunities for meaningful social engagement are necessary for health. It is also likely the relationship goes the other way; without good health it is hard to achieve autonomy and full social engagement.” Implicit in Marmot’s analysis are the *cultural constraints* that limit capabilities.

This convergence of culture and status is an essential factor in what is needed to develop effective health promotion and disease prevention programs at the community and society levels. Breaking through the social shield of poverty and deprivation is essential for making these programs work for the disadvantaged. To be healthy, let alone happy, people need control over their own lives. In addition, they need a social network of support that they can trust. This social and physical environment is the setting for fostering systematic program interventions.

Behavioral constitutes the interaction that occurs in all of these social settings. Communication between the doctor and the patient must be reciprocal and acknowledged if the patient is to comply with the health care plan. If strict adherence to a treatment regimen is required, the family care takers, if any, must be involved. How the community behaves toward “outcasts” determines their fate when it comes to sickness and health. Community-based programs can be organized to sustain the health of the residents. This area can be a great source of innovation and creativity.

A just and fair society has a moral obligation to eliminate social injustice and all forms of inequality. Farmer (5), through his work in Haiti and other truly disadvantaged countries, has turned his attention to *structural violence*, which, according to Galtung (13), is the “avoidable impairment of fundamental human needs or . . . the impairment of human life, which lowers the actual degree to which someone is able to meet their needs below that which would otherwise be possible.” The health of the public is primary to a society’s fiduciary responsibilities.

Paradigms and programs

The last half of this paper discusses two important and too often misunderstood paradigms: *social medicine* and the *health care ecology model* and how they can be integrated to serve as a basis for developing new programs for preventing disease and promoting health. *Social medicine* is making a remarkable comeback in developed countries. The stark fact is that most disease on the planet is attributable to social conditions in which people live and work. As Eisenberg (4) has observed, “all medicine is inescapably *social*.” Even the human genome is inescapably social, in term of the benefits, the risks, and the costs of genetic screening. Large-scale social forces give rise to human disease and affect its distribution around the world. In 1848 Virchow (14) concluded that poverty and living conditions, not biology, were the prime causes of the typhus epidemic in Silesia.

Social medicine in the 21st century is concerned with which social forces operate at different levels. Eisenberg (4) has developed four domains for delineation. The *first domain* consists of the cultural and social aspects (values and status) of the relationship between patients and health professionals. This relationship is the basis for important health outcomes and is universal. The *second domain* involves the patients’ beliefs, practices and experiences. Patients’ experiences of and responses to suffering are not confined to the clinical encounter and vary dramatically among different populations. The *third domain* is the culture of medicine itself. This consists of how health professionals are socialized beginning with medical education and continuing throughout their careers. Health systems and health research have their own agendas. Understanding the culture of medicine is essential to understanding health professionals’ attitudes toward illness, patients, and treatment. The *fourth and final domain* brings us back to Virchow and the large-scale forces shaping health that have become known as the social determinants of disease.

To give substance to these concepts, the classic paradigm of social medicine created by Alwyn Smith in 1970 is especially valuable (15). Smith was well ahead of his time in trying to integrate the major variables that constitute how illness and health are distributed in any give *social aggregate*. He also believe social medicine was a *discipline* like any other field in medicine and public health with clearly discernible *principles* about how disease and health were distributed in society using the *methods* of epidemiology and biostatistics to demonstrate that social factors are significant determinants of disease and illness. His thesis was simple but deceptive. The *changing* distribution (the model had to be dynamic) of disease and wellness in any social aggregate is the function of the *population*, which includes *geographical area* (urban, rural, climate, physical environment, etc.) and *social structure* (age, gender, ethnicity, religion, social status); *patterns of disease* (infectious, chronic, genetic, etc.); and the *health care system* (professional and ancillary personnel, facilities, technology, folk healers, etc.). For Smith, a starting place for integrating these variables was to show the prevalence of morbidity and mortality in terms of differentiated stages along the

life cycle—infancy, childhood, adolescence, young adult, adult, elderly, and very old. This conversion of morbidity and mortality rates with select population characteristics could be applied to specific geographical regions ranging from a country to a neighborhood. This mechanism provides structure for ascertaining the state of health in a community, which is the baseline for prevention and promotion interventions. Without data, of course, the model remains only a theory. Furthermore, the health care system's role in the paradigm is not easy to define without data because it is difficult to determine where and how it fit in. The lesson learned here is that even the most creative exercises in disease prevention and health promotion cannot be effective without current and valid data.

It is also necessary to reflect on an important point, that is, a search for a level of *generality* that applies to all situations in which the goal is to promote health and prevent disease. As the Sussers (2) state, “when we enter the physical, biological, and social realms of the human world, we need a parallel set of ideas interwoven with the search for generality. [In the realm of social medicine] the poor fit of *universalism* with human reality is better replaced by a contrasting construct of *ecologism*.” (As noted earlier, the Sussers' primary focus is epidemiology, but the conceptualization applies to the broader discipline of social medicine.)

In proposing a paradigm in the vein of ecologism, the health care ecology model, initially presented by Kerr White in a 1961 publication of the *New England Journal of Medicine* (NEJM) entitled “The Ecology of Medical Care” is essential (16). This classic paradigm provides a framework for thinking about the *organization* of health care, medical education, and research.

The original model was based on multiple sources of information, mostly from the United States and Britain, dating from 1928. There were a number of estimates (“intelligent guesses”) when no data were found. White and his colleagues derived a model whereby in a population of 1000 adults, in an average month, 750 reported an illness, 250 consulted a physician, 9 were hospitalized, 5 were referred to another physician, and 1 was referred to a university medical center. (Keep in mind these results are not nested, i.e., they are not subgroups of one another; all are based on a denominator of 1000.) To the surprise of White and his colleagues, this model has been used repeatedly in papers, textbooks, by investigators, and policymakers. Despite the incredible changes in medicine, scientifically, clinically, financially, and organizationally, Green et al. (17), who incorporated data on children and additional sites and types of health care services, found some variation but overall stability of the relationships proposed 40 years ago. (Two charts depicting these subdivisions of a population denominator of 1000 are found in “Occasional Notes”, *New England Journal of Medicine*, Vol. 344, No. 26, June 28, 2001.)

White has added his own perspective on the validity of the model in a 1997 NEJM article with specific implications for population-based health care research (18). He takes great care to emphasize that the perspective presented in “The Ecology of Medical Care” drew attention to several distinct *denominators* (epidemiology is the science of denominators and numerators) that extended from general or geographically defined populations, to populations of sick people, those consulting physicians, those admitted to community hospitals, those referred to other physicians, and those referred to university medical centers. The three major classes of populations were: First, the general population denominator defined by a geopolitical jurisdiction such as a country, state, county, or metropolitan area. Second, there is the health care system, preferably a vertically integrated system, in which all of the enrollees

or subscribers constitute the denominator. Finally, there are specialized denominators such as all patients using specific practices, services, or institutions. A major question, of course, is where does the data come from? This includes death certificates, discharge hospital records, patients' records, and even the labeling of health and medical problems. Regarding this latter point, the *International Classification of Primary Care* was derived in 1993 based on the original *International Classification of Diseases* by the World Health Organization in 1975. This new classification scheme recognizes the long-standing observation that patients' problems, concerns, complaints, symptoms, and other conditions include a wide variety of social and psychological states that are not strictly biomedical.

In this paper White is primarily concerned about the implications of his model for population-based health care research. He states that there are three arenas in which the problems of health and disease may be studied: the laboratory, the one-to-one clinical settings, and the population. As biomedical research advanced in the study of microorganisms and their eradication there was a diminished study of health and disease in populations. It is only in the last few decades that the population perspective has returned for serious consideration.

White's contribution to the empirical and substantive effectiveness of population research is found in the personal collection of health resources he donated to the Claude Moore Health Sciences Library at the University of Virginia in 1992. Of particular significance to this discussion is the emergence of *health services research* as a new field for investigation. In many ways it has revolutionized the way to look at how medicine and its related fields are organized and made operational. The field has grown so much that virtually all academic health centers in the U.S. conduct health services research. Health services research is a worthy companion to biomedical research in improving individual and collective health. White's papers also include cogent analyses of the importance of *health statistics and epidemiology*, *primary medical care*, *public health and population health*, and *care and curing*. These separate fields are subsumed under the recent construct of the *health of the public research* as: population-based research into the promotion and maintenance of health; the frequency, burden, and causal pathways of ill health; and effectiveness of interventions designed to reduce or prevent ill health.

A synthesis with implications for disease prevention and health promotion

Before continuing, a summary of what's been said so far is needed. This essay is framed as a "thinking person's paper" because this approach to the topic that overarches this book's major thesis requires a systematic critique of the knowledge and assumptions surrounding the nature of health and illness in the 21st century. It begins by giving a brief historical description of evolving conceptualizations of the "human condition." It is followed by showing the need to assess the current status of biology, psychology, culture, social status, and behavior for explaining health and illness. Short commentaries on the dominance ascribed to each discipline and how that dominance or its decline has evolved is also presented. In light of what we know about human nature, the shortcomings and reductionism of each field if taken by itself as the explanatory force is critically reviewed. When applicable, examples like the health belief model are used. Following the assessment of these underlying factors, attention is turned to two important perspectives that provide worthwhile insights for addressing the challenges of promoting health and preventing disease in our rapidly changing world. *Social medicine* is then described as a discipline with principles and methods that integrate the biosocial factors that had tended to be given little if any attention when it comes to understanding the health

of the public. Finally, the health ecology model is presented as a way of providing structure and space for empirical analysis. Other evolving fields such as public health, epidemiology, and primary care fit nicely into this paradigm.

A *synthesis* of these various conceptualizations allows us to develop a more crucial and efficacious approach to health promotion and disease prevention. In short, it is a move from the theoretical to the programmatic. To achieve this, requires both horizontal and vertical integration. *Vertical* means two things: first, the interconnectedness from the individual to society, and, second, the specific area of study from biogenetic to public health. *Horizontal* means the convergence of these factors in time and space, which is manifested in the ecology of health care addressing disease and illness in a population and/or geographically defined area. Such an endeavor is based on multiple levels of interactive systems. As stated earlier, the conventional approach to health promotion and disease prevention tends to be unilateral with the focus on one particular discipline such as theories about a person's motivation for getting the individual to quite smoking. This narrowness excludes the social, cultural, environmental, and other factors that affect why an individual wants or continues to smoke regardless of the physical harm it does. What is proposed instead is to use *social medicine* as the conceptual framework for developing constructs and the *health ecology model* as a method for delineating particular segments—regions or population—for proposed interventions and evaluation.

If a state of well-being is our aim, then a *structure* is needed to see how these human factors interact. This structure can be diagrammed as a series of concentric circles with the individual in the center followed by the doctor-patient relationship, the family, the community, and society as the outer ring. The doctor-patient relationship is included because it is a dyad, that is, one construct removed from the individual. A short-hand device (19) is the *Mckinlay model* which consists of three levels: *downstream* where the focus is on the individual and his or her lifestyle or behavior; *midstream* where the focus is on communities and institutions within communities; and *upstream* where policies that support our endeavor must be made.

An important underlying concern, for our purpose, is to show how the distinction between disease prevention and health promotion operate in the process. Of course, they overlap in many ways and are also interdependent. Nonetheless, for explanatory reasons, it is possible to look at them independently and then show how they interact.

To foster *health* in the *individual* requires, at the basic level, self-awareness. In other words, how healthy am I and what can I do to remain so as I age. We know that key factors in a healthy life include diet, exercise, healthy living (sexually and interpersonally). Providing information is not enough; there is an emotional side to who we are and how we behave. Stress plays an important part in how healthy we are both physically and emotionally. The physical environment, where you live, and what kind of work you do also have a significant effect on your health.

In the *doctor-patient relationship* the health professional stresses the need to be healthy by focusing on getting us to quite smoking, cutting down on our alcohol consumption, eating a healthy diet, exercising, and trying to relax. The role of our *family and close friends* is to support us in these endeavors. In some cases it might mean literally looking after us. At the *community level* local, trained health care workers and an atmosphere of concern serve as support mechanisms. Community institutions such as places of worship, social centers, schools, and other places where people gather voluntarily are important sources of reaffirmation and support. At the *societal level*, the government must support social institutions invested in

keeping society physically and emotionally well. Personal health and hygiene are important topics in public education. The education of competent health professionals to understand sociocultural factors is a top priority. When there are proven methods to stop premature death and sustain quality of life, laws and regulations must be passed to assure the health of the public such as no smoking in public places.

When we experience *disease* (including anxiety about how we feel), we seek help from some knowledgeable source, primarily a health professional or, in some cases, a person with special status in the culture who is perceived to have healing powers. In developed countries it is the doctor who cures or prevents our ailment in two ways: prescribing medications and initiating procedures, if not personally, then through a specialist. Our own responsibility is to comply with “the doctor’s orders.” We are taught that if we don’t take the prescribed medications our blood pressure will remain high and the HDL “good cholesterol” will remain bad. We are told that it is essential to understand that controlling chronic diseases can be a lifetime undertaking. Family and friends fill the gap between the diagnosis and treatment prescribed by the physician and the personal responsibility to follow the regimen. Ideally, there would be local clinics in the community, teams of local health care workers, and social settings where systematic screening and interventions are accessible. Society’s duty is to make sure all members receive fundamental preventive care, from childhood immunizations to “flu shots” for the elderly. The national government also has the responsibility to detect and remedy environmental hazards such as air pollution and poor sanitation.

Clearly these distinctions between health and disease are arbitrary whereas in reality they are closely intertwined and interconnected. Nonetheless, they provide a first-level approximation of the complexity of the situation and what needs to be taken into account to be successful in promoting a healthy society and stopping preventable diseases. The health ecology model serves adequately as a frame for organizing the multiplicity of components essential for effectiveness. This model is especially useful in differentiating particular geographical areas such as a community. Even a sample population of 1000 (a neighborhood) represents a unit that is manageable for assessment. To follow the paradigm components—the defined population, the proportion who are sick, those who seek professional care, are referred to a specialist, and end up in a tertiary medical center—allows a basis for finding where and how to best intervene from a health and disease perspective. This approach gives specificity to the interventions. For example, if the population under evaluation are elderly, poor, disadvantaged, and alien to the predominant culture, we need to understand these social, economic, and cultural factors in designing our approach. From a societal level, there are significant political and ethical considerations, for example, finding a non-threatening way of reaching the Roma regarding their health and well-being. Also, whatever the level of the approach—small community or entire country—it cannot be static, i.e., it must be capable of formulating as well as instituting change and potential reform.

Regardless of where we start, we need to remain holistic, that is, keep the total picture with all of its interactive elements in mind. White’s analysis (18) of the power of his model has direct application to health promotion and disease prevention. “Health care can be organized effectively and managed efficiently . . . through comparisons of these interventions over time, place, institutions, and systems. [This evaluation] requires *rates* that are appropriately standardized or adjusted for differences in the distribution of groups by age, sex, and other attributes.” He goes on to say, “Such interventions require rational distribution of energy and resources in education, services, and research”.

With this overarching perspective in mind, it is possible “to identify effective programs or program elements and to disseminate them, to scale them up to the state and national level, and to ensure that the programs reach the populations most at risk is the ultimate objective”. A practical and substantive place to start is the “community model of health promotion and disease prevention including educating individuals and changing the social and physical milieu that cue and reinforce health-related behavioral choices”.

Taylor (20), in his review of *Radical Hope: Ethics in the Face of Cultural Devastation*, by Jonathan Lear, offers two final important points that are relevant to my thesis. “If we interpret people’s attitudes and behaviors psychologically [as in the HBM] we are being guided by our own sense of what is true and ignoring the particular cultural circumstances of those people”. This is a major mistake health professionals make in health promotion and disease prevention activities even though they are convinced they are doing the right thing for the right reasons. If this were so, then people would adhere to their prescribed medical regimens, put in the needed energy to live healthy lives, and sustain those behaviors for themselves, their loved ones, and their fellow travelers.

To further quote Taylor:

Along the same lines, many well-meaning (and sometimes not so well-meaning) interventions from governments [as well as NGOs, and philanthropic organizations] not only don’t work but in some cases make the situation worse. One main reason for the failure of many of these interventions is that they don’t manage to imagine the lives of the supposed beneficiaries themselves or engage with their feelings; and so they can’t break the cycle of apathy, despair, and self-destructive behavior, and this induces further apathy and despair. A program imposed from the *outside* can only help if it can support a project espoused by the group itself.” [Italics added.]

The take-home message is simple, and hopefully, straightforward. Checklists, formulae, and protocols can’t capture the rich, full meaning of a cultural narrative. Even within what seem to be rigidly defined social structures, there is some fluidity and change. Interventions to improve people’s health and help them deal with their illnesses must grasp the totality of such conditions if they are to succeed. The health practitioner must strive to know his or her patient as a person influenced by one’s status in a socio-cultural system. The health education and public health specialists must design and implement programs that can reach the most vulnerable populations and not only the educated and informed. Health services research provides the data needed for program design and evaluation. Assessments must be perceived as longitudinal and dynamic. In democratic societies governments must sponsor health-related programs through established institutions such as education, law, and health. Regarding the latter, the model is public health which serves as the primary mechanism for reaching all the people.

Task: Hypothetically, or when possible using available data, design a health promotion and/or disease prevention program utilizing the concepts of social medicine and health care ecology for a particular geographical or population group. Describe the area, the salient characteristic of the population, and provide mortality and morbidity rates for the different population cohorts (e.g., asthma among children). Propose interventions that incorporate individual responsibility, doctor-patient interaction, familial and community support, and societal authority.

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Recommended readings

1. *Health Services Research: An Anthology*, Kerr L. White, Editor in-chief, Pan American Health Organization, WHO, Scientific Publication No. 534, 1992.
This 1081 page anthology contains Kerr White's original paper on the health care ecology model. In addition, it is superb compendium of a broad range of research studies, articles, and essays that include disease prevention and health promotion.
2. Marmot M. *The Status Syndrome: How Social Standing Affects our Health and Longevity*. New York: Times Books; 2004.
Marmot is recognized for his ground-breaking research showing the relationship between social status and health and illness.
Good BJ. *Medicine, rationality, and experience*. New York: Cambridge University Press: 1994.
The brilliant book contains Good's Lewis Henry Morgan Lectures on the role of culture in all aspects of how we perceive states of health and illness. The chapter on how medicine constructs in objects is especially illuminating.
3. Fadiman A. *The Spirit Catches You and You Fall Down*. New York: Farrar, Straus, and Giroux: 1998.

The beautifully written book tells the story of a Hmong child, her American doctors, and the collision of two cultures.

Chapter

1

**HEALTH
PROMOTION:
CONCEPTS,
PRICIPLES AND
STRATEGIES**

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Concepts and Principles in Health Promotion
Module: 1.1	ECTS: 1
Author(s), degrees, institution(s)	Gordana Pavlekovic , MD, PhD, Assistant Professor Andrija Stampar School of Public Health, Medical School, University of Zagreb, Croatia Doncho Donev , MD, PhD, Professor Institute of Social Medicine, Institutes, Medical Faculty, University of Skopje, Macedonia Lijana Zaletel Kragelj , MD, PhD, Assistant Professor Chair of Public Health, Faculty of Medicine University of Ljubljana, Slovenia
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Key words	Health promotion, health promotion principles, health promotion concepts, health promotion development, health promotion documents
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none"> • Be aware of the theoretical principles and concepts of Health Promotion; • Understand the current issues and ethical dilemmas facing the health promotion practitioner • Fully understand and different terms (Health promotion vs. Disease Prevention, Public Health, Health Education) • Improve knowledge about development of Health promotion movement and main documents in this field. • Critically appraise the historical development of, and current practice in, health promotion ; • Reflect one's own position and perspectives within the health promotion context.

Abstract	<p>This module provides a theoretical background to the concepts and principles of health promotion as a foundation for good practice. Current concepts of health promotion, approaches and international targets are addressed together with discussion of debates and dilemmas facing health promotion practitioners.</p> <p>This module is the introduction to the Chapter Health Promotion and covers the topics such as: From Public Health to New Public Health and Health Promotion. The Evolution of Health Promotion. The Ottawa Charter, Bangkok Charter and Beyond. Health Promotion in Europe. Main principles and concepts in health promotion, strategies and areas. The scope of Health promotion in the future.</p>
Teaching methods	<p>Teaching methods could include lectures, exercises, individual work, interactive methods such as small group discussions, seminars, critical readings..</p>
Specific recommendations for teachers	<p>It is strongly recommended to use the text “Health Promotion Documents”, as a trigger for individual I small group work (exercise with two tasks described).</p>
Assessment of students	<p>Assessment could be based on structured essay, seminar paper, and case problem presentation.</p>

CONCEPTS AND PRINCIPLES IN HEALTH PROMOTION

Gordana Pavlekovic, Doncho Donev, Lijana Zaletel Kragelj

Health Promotion: What does it mean?

Perhaps no other term has been more frequently used in the last decades than that of “health promotion”. It can be said without a doubt it is currently one of the most popular word not only in the World Health Organization documents, declarations, recommendations and guidelines. National and regional documents advocating health promotion principles in their legislations, plans and programmes, the new professional training programmes are offering for health promoters, public health associations are adding “health promotion” in existing titles, etc. In summary – this term is on the marketplace. The questions are: “Is health promotion something new?”. “Are we using this term for political or semantically reasons?”

Instead of answer, we should read the papers written by two health professionals. Hans Saan, one of the leading person in the health promotion movement, wrote his paper in 2007, reflecting back on Conference in Ottawa in 1986 (1). Andrija Stampar, one of the leading person in social medicine and people’s health in Europe and in the world, wrote his paper in 1926 (2).

They wrote:

Hans Saan: “I took from the Charter three lessons: First, the salutogenic approach taught me to put much more trust in the positive, in people’s capacities and taught me to look beyond disease-focussed prevention“(1).

Andrija Stampar: “Goldscheid points out that we are living in a world blind to true value. We can see only sudden catastrophes and have lost the power of sensing hidden, continuous misery every-were in present-day economic and social life. We have understanding only of inorganic capital and know nothing about human capital“(2).

Hans Saan: “The second lesson (I took from the Charter) was the extension of health determinants with the political factors; not only party politics in parliament, but also how capitalism shapes our society and how that creates the rich-poor divide“(1).

Andrija Stampar: “All our efforts made so far towards the promotion of public health have been considered as charity, as acts of humanity, and that is why the budget allotted for those efforts has bee so small...Social politics has not shown any remarkable results eater, because they have been conducted along the same lines; a turning point will occur only when health policy is looked upon as the most important part of national economy...“(2).

Hans Saan: “The third (lesson I took from the Charter) it made me aware of how we used a pair of golden blinkers in HIM: we were not wrong, but just limited in our scope. If we want people to join us for health, we have to see how their history, their opportunities and preferences are shaped not just only by their individual psychology, but how peer pressure are economic and political forces shape the conditions of living“(1).

Andrija Stampar: “Health education has so far been carried out only by private initiative. The present time, however, calls for a more comprehensive participation ...It would be a mistake if health education were restricted to the four walls of the classroom. Health education should continue and be carried out most intensively out-side walls, in communities...“(2).

It seems the idea of health promotion is not something new. Health promotion is not a new discipline. It is an integration of the existing knowledge base in areas such as community

development, health education, social work, political science and social marketing.

However, in the past years and even today, the term health promotion has have a variety of meanings and many of them are based on different philosophies. The reason for this uncoordinated terminology is that terms are taken over from different other scientific fields and/or created according to historical needs and circumstances in different professions, countries, etc.

Very often, *health promotion* as a term is associated with *health education* (3). Historically, there has been a shift from health education to health promotion. The aim of health education in its early days was to make people aware of the health consequences of their behaviour. People were considered as “empty vessels” that process information in a logical manner and subsequently act accordingly. Changes in individual opinion attitudes and behaviours were seen to result of information and knowledge (4). The line of thought was that if you provide people with knowledge, they could make good decisions regarding their health. In the seventies the insight grew that providing knowledge alone was not enough. To be able to live a healthy life, individual motivation, skills and the influence of the social environment were recognized as very important determinants as well. Just informing people is not enough. They also have to be encouraged, educated, trained and facilitated in order to be able to improve their health and change the environment they live in. In addition to this, it become recognized that individuals can not be isolated from their social environment and that a single behaviour cannot be isolated from the context. The approach of the health professionals changed from an educational into a more health promotional one (3).

In Health Promotion Glossary, “Health education is not only concerned with the communication of information, but also with fostering the motivation, skills and confidence (self-efficacy) necessary to take action to improve *health*. Health education includes the communication of information concerning the underlying social, economic and environmental conditions impacting on *health*, as well as individual *risk factors* and *risk behaviours*, and use of the health care system. Thus, health education may involve the communication of information, and development of skills which demonstrates the political feasibility and organizational possibilities of various forms of action to address social, economic and environmental *determinants of health*. In the past, health education was used as a term to encompass a wider range of actions including social mobilization and *advocacy*. These methods are now encompassed in the term *health promotion*, and a more narrow definition of health education is proposed here to emphasize the distinction “(5). However, in some contexts and languages the term “promotion” is considered synonymous with “marketing” and “selling” rather than “enhancement” and “empowerment”(6).

Additional challenge is the relationship between *public health* and *health promotion*, particularly in the South Eastern Europe. Public health (very often translated from English to maternal tongue as a public health care) rose from the past hygiene, preventive and social medicine disciplines with a strong emphasis on the state responsibility for the care of population/nations health, mainly in the hands of health sector and medical professionals. During the political, social and economic transitions, the term «new public health» was becoming increasingly used by a new wave of public health activists who were dissatisfied with the rather traditional and top-down approaches of “health education” and “disease prevention”. Majority of professionals in this part of the Europe are still linking closely health education and health promotion, or accepting health promotion as a tool within public health aiming to facilitate changes.

The review of the health promotion definitions made by Rootman and colleagues showed

that definitions and concepts of health promotion have differed in goals, objectives, process and actions (table 1) (7).

Table 1. Definitions of health promotion

Source and date	Definition (emphasis added)
Lalonde, 1974	A strategy “aimed at informing, influencing and assisting both individuals and organizations so that they will accept more responsibility and be more active in matters affecting mental and physical health“
US Department of Health, Education and Welfare, 1979	“A combination of health education and related organizational, political and economic programs designed to support changes in behavior and in the environment that will improve health“
Green, 1980	“Any combination of health education and related organizational, political and economic interventions designed to facilitate behavioural and environmental changes that will improve health“
Green & Iverson, 1982	“Any combination of health education and related organizational, economic and environmental supports for behaviour conducive to health“
Perry & Jessor, 1985 (22)	“The implementation of efforts to foster improved health and well-being in all four domains of health (physical, social psychological and personal)“
Nutbeam, 1985	“The process of enabling people to increase control over the determinants of health an thereby improve their health“
WHO, 1984, 1986	“The process of enabling people to increase control over, and to improve their health“
Goodstadt et al., 1987	“The maintenance and enhancement of existing levels of health through the implementation of effective programs, services and policies“
Kar, 1989	“The advancement of wellbeing and the avoidance of health risks by achieving optimal levels of the behavioural, societal, environmental and biomedical determinants of health“
O’Donnell, 1989	“The science and art of helping people choose their lifestyles to move toward a state of optimal health“
Labont’e & Little, 1992	“Any activity or program designed to improve social and environmental living conditions such that people’s experience of well-being is increased“

Source: Rootman et al, 2001 (7)

Most definitions express the desired end (terminal goal) in terms of improved health or wellbeing, although several also give health maintenance as a goal (). Just a few definitions identify the process as a key word, as the official definition given in the Health Promotion Glossary (5):

“Health promotion is the process of enabling people to increase control over the determinants of health and thereby improve their health”.

Health promotion development: From Ottawa to Bangkok

Although the idea of health promotion is not new, its rise as an organized field can be traced to 1974 when Marc Lalonde, the Canadian health minister of the time, released a paper entitled “A new perspective on the health of Canadians” (8). This was the first national government policy document to identify health promotion as a key strategy. His report was both a concept and an approach that could be used by governments, organizations, communities and individuals.

In 1986, the First International Conference on Health promotion captured this growing interest and endorsed the Ottawa Charter for Health Promotion (9). After Ottawa Charter, health promotion movement has become a complementary framework to the traditional focus on health protection and disease prevention

For Catford, Ottawa is a starting pistol who fired in the snow blizzards and the fulcrum of global health development (6). Ottawa Charter has created the vision by clarifying the concept of health promotion, highlighting the conditions and resources required for health and identifying key actions and basic strategies to pursue the WHO policy of Health for All. The Charter identified the prerequisites for health including peace, a stable ecosystem, social justice and equity, and resources such as education, food and income. It highlighted the role of organisations, systems and communities, as well as individual behaviours and capacities in creating opportunities and choices for better health.

People are using the Ottawa Chapter in his or her own manner. Some people are describing the Chapter as a reference framework, orientation, direction, guideliness, an intervention tool to be used directly in the field, even as a manifesto in practice, but Chapter must be perceived more as a conceptual or theoretical instrument (10).

After Ottawa Conference, the World Health Organization has organized, in partnership with national governments and associations, a series of follow up conferences, which have focused on each of Ottawa’s five health promotions strategies.

Building healthy policy was explored in depth at the Second International Conference on Health Promotion. Adelaide Recommendations on Healthy Public Policy called for political committeemen to health by all sectors (11).

The locus of the Third International Conference on Health Promotion was on *creating supportive environments*. It was considered that environments, whether physical, social, economic or political can be made more supportive for health. The Sundsvall Statement on Supportive Environments for Health stressed the importance of sustainable development and urged social action at community level with people as the driving force of development. This statement contributed to the development of Agenda 21 (12).

All those conferences, Adelaide, Sundsvall and Jakarta emphasized the need to evaluate the impact of policy, and the need of collaboration and developing partnership for a new health alliance for the commitment to a global public health; governments need to invest resources in healthy public policy and health promotion in order to raise the health status of all their citizens, ensuring people to have access to the essentials for a healthy and satisfying life, giving priority to underprivileged and vulnerable groups and recognizing the unique culture of indigenous peoples, ethnic minorities, and immigrants. The social, political and economic dimension were highlighted and the empowerment of people and community participation were seen as essential factors in a democratic health promotion approach. The three conferences provided an opportunity to reflect on what has been learned about effective health promotion, to re-examine determinants of health, and to identify the directions and strategies which are required to address the challenges of promoting health in the 21st

Century, listing five priority areas.

The fourth International Conference on Health Promotion in Jakarta reviewed the impact of the Ottawa Charter and engaged *new players* to meet global challenges. In this conference, developing countries and private sectors were involved (13).

In *Bangkok Charter* for Health Promotion in a Globalized World four new commitments were identified: make the promotion of health central to the global development agenda, a core responsibility for all government, a key focus of communities and civil society and a requirement for good corporate practices.

Health promotion: Concepts and principles

The health promotion principles are based on human rights, seeing people as active participating subjects - professionals and people are mutually engaged in an empowering process. The role of the professionals is to support and provide options that enable people to make their own choices and to make people aware of determinants of health and able to use them (15).

- *Health is a positive value*

The Ottawa Charter goes beyond healthy life-styles in that it defines health as a state of complete physical, mental and social well-being. This *positive concept* of health sees the individual as a whole person in a social context. Health promotion goes beyond healthy life-styles to well-being in order to reach a state of complete physical, mental, social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is created and lived by people within the settings of their life. Also, positive health is emphasizing social and personal resources, as well as physical capacities. Good health is a major resource for social, economic and personal development and an important dimension of quality of life. Political, economic, social, cultural, environmental, behavioural and biological factors can all favour health or be harmful to it. Therefore it is an important issue to enable people to manage the different stages in their lives and to cope with chronic illness and injuries.

- *Health is not just an individual responsibility*
- *Health promotion focuses on achieving equity in health*

Health promotion action aims at reducing differences in current health status and ensuring equal opportunities and resources to enable all people to achieve their fullest health potential.

- *Health promotion demands coordinated action and intersectoral collaboration*

Health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by nongovernmental and voluntary organization, by local authorities, by industry and by the media. People in all walks of life are involved as individuals, families and communities. Professional and social groups and health personnel have a major responsibility to mediate between differing interests in society for the pursuit of health. The fundamental conditions and resources for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity.

- *Health promotion strategies are based on local needs*

Health promotion strategies and programmes are adapted to the local needs and possibilities of individual countries and regions to take into account differing social, cultural and economic systems.

- *Health promotion works through community action*

Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities - their ownership and control of their own endeavours and destinies.

- *Empowering individuals and communities, valuing the assets they bring to improve health, is a fundamental health promotion principles.*

Empowerment is a process through which people gain greater control over decisions and actions affecting their health. Empowerment may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs. Through such a process people see a closer correspondence between their goals in life and a sense of how to achieve them, and a relationship between their efforts and life outcomes. Health promotion not only encompasses actions directed at strengthening the basic life skills and capacities of individuals, but also at influencing underlying social and economic conditions and physical environments which impact upon health. In this sense health promotion is directed at creating the conditions which offer a better chance of there being a relationship between the efforts of individuals and groups, and subsequent health outcomes in the way described above. A distinction is made between *individual and community empowerment*. *Individual empowerment* refers primarily to the individuals' ability to make decisions and have control over their personal life. *Community empowerment* involves individuals acting collectively to gain greater influence and control over the determinants of health and the quality of life in their community, and is an important goal in community action for health (5).

The salutogenic framework in the context of HP

The Ottawa Charter proposed a salutogenic view on health which focuses on strengthening peoples' health potential and which is aimed at whole populations over the life-course.

The salutogenesis could be considered as a theoretical framework for health promotion. The salutogenic perspective focuses on three aspects: first, the focus is on problem solving/ finding solutions, second, it identifies GRRs (General Resistance Resources) that help people to move in the direction of positive health. Third, it identifies a global sense in individuals, groups, populations or systems that serves as the overall mechanism or capacity for the process, the Sense of Coherence (SoC). The combination of salutogenesis and quality of life catches the core components of the principles of health promotion where salutogenesis is the process leading to Sense of Coherence (15).

Health promotion: Basic strategies and action areas

The Ottawa Charter identifies three basic strategies for health promotion:

- **advocacy** for health to create the essential conditions for health;
- **enabling** all people to achieve their full health potential;
- **mediating** between the different interests in society in the pursuit of health.

Advocacy is a "combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or programmed. Advocacy can take many forms including the use of the mass media and

multi-media, direct political lobbying, and community mobilization through, for example, coalitions of interest around defined issues. Health professionals have a major responsibility to act as advocates for health at all levels in society. Health advocacy is the action of health professionals and others with perceived authority in health to influence the decisions and actions of communities and governments which have some control over the resources which influence health” (5).

The Ottawa Charter aims at advocating a clear political commitment to health and equity in all sectors. It puts health on the agenda of policy makers in all sectors and at all levels in order *to make the healthier choice the easier choice* for all and the policy makers as well. And it also aims at sharing power with other sectors, other disciplines and – most importantly – with people themselves (17).

Enabling means “taking action in partnership with individuals or groups to empower them, through the mobilization of human and material resources, to promote and protect their health” (5). The Ottawa Charter focuses on enabling all people to achieve their fullest health potential in order to take control of those things which determine their health. People are acknowledged as the main health resource. The most important goal of all health promotion activities is to support and enable people to keep themselves healthy, as well as their families and friends through financial and other means. Health promotion activities have to turn to the community as the essential voice in matters of health, living conditions and well-being. The key-word here is empowering people (17).

Mediating is a process through which the different interests (personal, social, economic) of individuals and communities, and different sectors (public and private)

are reconciled in ways that promote and protect health. According to the Ottawa Charter politicians, professional and health personnel have a major responsibility to **mediate** between differing interests in society for the pursuit of health. Health promotion action programmes are to *create supportive environments* – which means to generate living and working conditions that are safe, stimulating, satisfying and enjoyable by active participation of all people who are involved and addressed. To strengthen community actions is the heart of this process that can be called: empowerment of communities – their ownership and control of their own endeavours and destinies (17).

These strategies are supported by *five priority action areas*:

- *Build healthy public policy*
- *Create supportive environments for health*
- *Strengthen community action for health*
- *Develop personal skills*
- *Re-orient health services*

Health promotion technology

The best developed amongst health promotion’s technologies is setting’s based action Settings are ubiquitous in our lives, as they are the physical and social environments within which we carry out our daily activities, and settings themselves can influence our health directly and indirectly. The technology of health promotion in settings includes participative processes that help organizations decide on and implement their policies, use research-derived evidence to inform policy development, and undertake routine measurement of progress and outcomes. The examples of Health promotion in settings are Healthy City, Health promoting school, Health promoting hospitals and so on.

Shaping the future of health promotion: Priorities for action

(adopted from: IUHPE and CCHPR, 2007)(18)

In 2007, International Union for Health Promotion and education (IUHPE), the leading association in promotion global health and to contribute to the achievement of equity in health between and within countries of the world, proposed the list of priorities for action in the 21st century for health promotion researchers, practitioners and policy-makers as follows:

Putting healthy public policy into practice

“Health improvement should be a stated objective of policies in all sectors based on the solid evidence that healthy and more equitable societies are successful societies.”

Strengthening structures and processes an all sectors

“To act actively on the determinants of health, all sectors including healthcare, education, environment, transport, housing and commerce must take responsibility for promoting health”

Towards knowledge-based practice

“Knowledge-based practice necessitates a rapid increase in the proportion of research funding spent on evaluating complex, community-based health promotion interventions, longitudinal studies, impacts of policy and effect on health inequalities.

Building competent health promotion work-forces

“In all parts of the world there is a pressing requirement for further investment in the education and training of health promotion specialists, practitioners and other workers. Essential training should include developing knowledge and skills for advocacy and mediation with politicians and the private sector, assessing the impact of policies on health and its determinants, assessing and using available information and evidence, and evaluating interventions.”

Empowering communities

“To influence future healthy public policy we must work hand to hand with communities and civil societies and ensure that our communications are accessible to all and understood by all”.

Exercise: Individual and small group work

Task 1.

Made your own definition of health promotion and share your reflection with others.

Task 2.

Reflect briefly on the context of health promotion policies and practices in your country and think about your own position in relation to that context. Discuss questions with others such as: What are your personal views on the concepts of health promotion and what are your personal and political expectations to the further development of health promotion in your country?

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1.1.1 HEALTH PROMOTION CONFERENCES AND KEY DOCUMENTS

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The history and the development of the health promotion movement can be traced through its six major health promotion conferences in Ottawa (1986), Adelaide (1988), Sundsvall (1991), Jakarta (1997), Mexico (2000) and Bangkok (2005).

The Ottawa Charter for Health Promotion

The First International Conference on Health Promotion, Ottawa, 1986

The key concepts of health promotion were defined by the *Ottawa Charter for Health Promotion* (1986). Within the context of health promotion, health has been considered less as an abstract state and more as a means to an end which can be expressed in functional terms as a resource which permits people to lead an individually, socially and economically productive life. Thus, health is a resource for everyday life, not the object of living. It is a positive concept emphasizing social and personal resources as well as physical capabilities. In keeping with the concept of health as a fundamental human right, the *Ottawa Charter* emphasises certain pre-requisites for health which include peace, adequate economic resources, food and shelter, a stable eco-system, sustainable resource use, social justice and equity. Recognition of these pre-requisites highlights the inextricable links between social and economic conditions, the physical environment, individual lifestyles and health. These links provide the key to a holistic understanding of health which is central to the definition of health promotion.

The *Ottawa Charter* stressed that health promotion is not just the responsibility of the health sector, but that it goes beyond healthy life-styles to well being. It identifies three basic strategies for health promotion: advocacy for health to create the essential conditions for health, enabling all people to achieve their full health potential and mediating between the different interests in society in the pursuit of health. Key actions to promote health included building healthy public policy, creating supportive environments, strengthening community actions, developing personal skills, and reorienting health services.

The logo, created for the First Conference on Health Promotion in Ottawa, World Health Organization kept as the Health Promotion symbol (HP logo). The logo represents a circle with three wings. It incorporate five key action areas in Health Promotion and three basic health promotion strategies (to enable, mediate and advocate). More specifically:

- the upper wing that is breaking the circle represents that action is needed to "strengthen community action" and to "develop personal skills". This wing is breaking the circle to symbolise that society and communities as well as individuals are constantly changing and, therefore, the policy sphere has to constantly react and develop to reflect these changes: a "Healthy Public Policy" is needed;
- the middle wing on the right side represents that action is needed to "create supportive environments for health"
- the bottom wing represents that action is needed to "reorient health services" towards preventing diseases and promoting health.

*The Ottawa Charter for Health Promotion
First International Conference on Health Promotion,
Ottawa, 21 November 1986 –WHO/HPR/HEP/91.1*



The first International Conference on Health Promotion, meeting in Ottawa this 21st day of November 1986, hereby presents this CHARTER for action to achieve Health for All by the year 2000 and beyond.

This conference was primarily a response to growing expectations for a new public health movement around the world. Discussions focused on the needs in industrialized countries, but took into account similar concerns in all other regions. It built on the progress made through the Declaration on Primary Health Care at Alma-Ata, the World Health Organization's Targets for Health for All document, and the recent debate at the World Health Assembly on intersectoral action for health.

Health Promotion

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being.

Prerequisites for Health

The fundamental conditions and resources for health are:

- *peace,*
- *shelter,*
- *education,*
- *food,*
- *income,*
- *a stable eco-system,*
- *sustainable resources,*
- *social justice, and equity.*

Improvement in health requires a secure foundation in these basic prerequisites.

Advocate

Good health is a major resource for social, economic and personal development and an important dimension of quality of life. Political, economic, social, cultural, environmental, behavioural and biological factors can all favour health or be harmful to it. Health promotion action aims at making these conditions favourable through advocacy for health.

Enable

Health promotion focuses on achieving equity in health. Health promotion action aims at reducing differences in current health status and ensuring equal opportunities and resources to enable all people to achieve their fullest health potential. This includes a secure foundation in a supportive environment, access to information, life skills and opportunities for making healthy choices. People cannot achieve their fullest health potential unless they are able to take control of those things which determine their health. This must apply equally to women and men.

Mediate

The prerequisites and prospects for health cannot be ensured by the health sector alone. More importantly, health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by nongovernmental and voluntary organization, by local authorities, by industry and by the media. People in all walks of life are involved as individuals, families and communities. Professional and social groups and health personnel have a major responsibility to mediate between differing interests in society for the pursuit of health.

Health promotion strategies and programmes should be adapted to the local needs and possibilities of individual countries and regions to take into account differing social, cultural and economic systems.

Health Promotion Action Means:

Build Healthy Public Policy

Health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health.

Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organizational change. It is coordinated action that leads to health, income and social policies that foster greater equity. Joint action contributes to ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments.

Health promotion policy requires the identification of obstacles to the adoption of healthy public policies in non-health sectors, and ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well.

Create Supportive Environments

Our societies are complex and interrelated. Health cannot be separated from other goals. The inextricable links between people and their environment constitutes the basis for a socioecological approach to health. The overall guiding principle for the world, nations, regions and communities alike, is the need to encourage reciprocal maintenance - to take care of each other, our communities and our natural environment. The conservation of natural resources throughout the world should be emphasized as a global responsibility.

Changing patterns of life, work and leisure have a significant impact on health. Work and leisure should be a source of health for people. The way society organizes work should help create a healthy society. Health promotion generates living and working conditions that are safe, stimulating, satisfying and enjoyable.

Systematic assessment of the health impact of a rapidly changing environment - particularly in areas of technology, work, energy production and urbanization - is essential and must be followed by action to ensure positive benefit to the health of the public. The protection of the natural and built environments and the conservation of natural resources must be addressed in any health promotion strategy.

Strengthen Community Actions

Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities - their ownership and control of their own endeavours and destinies.

Community development draws on existing human and material resources in the community to enhance self-help and social support, and to develop flexible systems for strengthening public participation in and direction of health matters. This requires full and continuous access to information, learning opportunities for health, as well as funding support.

Develop Personal Skills

Health promotion supports personal and social development through providing information, education for health, and enhancing life skills. By so doing, it increases the options available to people to exercise more control over their own health and over their environments, and to make choices conducive to health.

Enabling people to learn, throughout life, to prepare themselves for all of its stages and to cope with chronic illness and injuries is essential. This has to be facilitated in school, home, work and community settings. Action is required through educational, professional, commercial and voluntary bodies, and within the institutions themselves.

Reorient Health Services

The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments.

They must work together towards a health care system which contributes to the pursuit of health. The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. Health services need to embrace an expanded mandate which is sensitive and respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components.

Reorienting health services also requires stronger attention to health research as well as changes in professional education and training. This must lead to a change of attitude and organization of health services which refocuses on the total needs of the individual as a whole person.

Moving into the Future

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love. Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members.

Caring, holism and ecology are essential issues in developing strategies for health promotion. Therefore, those involved should take as a guiding principle that, in each phase of planning, implementation and evaluation of health promotion activities, women and men should become equal partners.

Commitment to Health Promotion

The participants in this Conference pledge:

- to move into the arena of healthy public policy, and to advocate a clear political commitment to health and equity in all sectors;*
- to counteract the pressures towards harmful products, resource depletion, unhealthy living conditions and environments, and bad nutrition; and to focus attention on public health issues such as pollution, occupational hazards, housing and settlements;*

- to respond to the health gap within and between societies, and to tackle the inequities in health produced by the rules and practices of these societies;
- to acknowledge people as the main health resource; to support and enable them to keep themselves, their families and friends healthy through financial and other means, and to accept the community as the essential voice in matters of its health, living conditions and well-being;
- to reorient health services and their resources towards the promotion of health; and to share power with other sectors, other disciplines and, most importantly, with people themselves;
- to recognize health and its maintenance as a major social investment and challenge; and to address the overall ecological issue of our ways of living.

The Conference urges all concerned to join them in their commitment to a strong public health alliance.

Call for International Action

The Conference calls on the World Health Organization and other international organizations to advocate the promotion of health in all appropriate forums and to support countries in setting up strategies and programmes for health promotion.

The Conference is firmly convinced that if people in all walks of life, nongovernmental and voluntary organizations, governments, the World Health Organization and all other bodies concerned join forces in introducing strategies for health promotion, in line with the moral and social values that form the basis of this CHARTER, Health For All by the year 2000 will become a reality.

CHARTER ADOPTED AT AN INTERNATIONAL CONFERENCE ON HEALTH PROMOTION*
The move towards a new public health, November 17-21, 1986 Ottawa, Ontario, Canada.

* Co-sponsored by the Canadian Public Health Association, Health and Welfare Canada, and the World Health Organization.

Adelaide Recommendations on Healthy Public Policy

The Second International Conference on Health Promotion, Adelaide, 1988

Building healthy public policy was the central topic of the *Second International Conference on Health Promotion in Adelaide* (2). Public policies in all sectors were identified as a major influence on the determinants of health and as a major vehicle for actions to reduce social and economic inequities, for example by ensuring equitable access to goods and services as well as health care. The *Adelaide Recommendations on Healthy Public Policy* called for a political commitment to health by all sectors. Policy-makers in diverse agencies working at various levels (international, national regional and local) were urged to increase investments in health and to consider the impact of their decisions on health. The *Adelaide Recommendations on Healthy Public Policy* stresses that Healthy public policy is characterized by an explicit concern for health and equity in all areas of policy and by accountability for health impact. Furthermore, in the pursuit of healthy public policy, government sectors concerned with agriculture, trade, education, industry, and communications need to take into account health as an essential factor when formulating policy. These sectors should be accountable for the health consequences of their policy decisions. They should pay as much attention to health as to economic considerations.

The Adelaide conference proclaimed that health is both a human right and a sound social investment. A basic principle of social justice is to ensure that people have access to the

essentials for a healthy and satisfying life. At the same time, this raises overall societal productivity in both social and economic terms. Healthy public policy in the short term will lead to long-term economic benefits. Furthermore, according to the first target of the European Region of the World Health Organization, in moving towards Health for All: “by the year 2000” the actual differences in health status between countries and between groups within countries should be reduced by at least 25% by improving the level of health of disadvantaged nations and groups, the Adelaide conference accentuated the importance of equity in health and stressed that healthy public policies should assign high priority to the underprivileged and vulnerable groups in the society.

The Adelaide conference identified community actions as central to the fostering of health public policies and emphasised the need to evaluate their impact. Four priority areas for action were identified: supporting the health of women; improving food security, safety and nutrition; reducing tobacco and alcohol use; and creating supportive environments for health. Developing new health alliances was also placed high on the agenda, as the commitment to healthy public policy demands an approach that emphasizes consultation and negotiation.

***Adelaide Recommendations on Healthy Public Policy
Second Inter***

The value of health

Health is both a fundamental human right and a sound social investment. Governments need to invest resources in healthy public policy and health promotion in order to raise the health status of all their citizens. A basic principle of social justice is to ensure that people have access to the essentials for a healthy and satisfying life. At the same time, this raises overall societal productivity in both social and economic terms. Healthy public policy in the short term will lead to long-term economic benefits as shown by the case studies presented at this Conference. New efforts must be made to link economic, social, and health policies into integrated action.

Equity, access and development

Inequalities in health are rooted in inequities in society. Closing the health gap between socially and educationally disadvantaged people and more advantaged people requires a policy that will improve access to health-enhancing goods and services, and create supportive environments. Such a policy would assign high priority to underprivileged and vulnerable groups. Furthermore, a healthy public policy recognizes the unique culture of indigenous peoples, ethnic minorities, and immigrants. Equal access to health services, particularly community health care, is a vital aspect of equity in health.

New inequalities in health may follow rapid structural change caused by emerging technologies. The first target of the European Region of the World Health Organization, in moving towards Health for All is that:

“by the year 2000 the actual differences in health status between countries and between groups within countries should be reduced by at least 25% by improving the level of health of disadvantaged nations and groups.”

In view of the large health gaps between countries, which this Conference has examined, the developed countries have an obligation to ensure that their own policies have a positive health impact on developing nations. The Conference recommends that all countries develop healthy public policies that explicitly address this issue.

Accountability for Health

The recommendations of this Conference will be realized only if governments at national, regional and local levels take action. The development of healthy public policy is as important at the local levels of government as it is nationally. Governments should set explicit health goals that emphasize health promotion.

Public accountability for health is an essential nutrient for the growth of healthy public policy. Governments and all other controllers of resources are ultimately accountable to their people for the health consequences of their policies, or lack of policies. A commitment to healthy public policy means that governments must measure and report the health impact of their policies in language that all groups in society readily understand. Community action is central to the fostering of healthy public policy. Taking education and literacy into account, special efforts must be made to communicate with those groups most affected by the policy concerned.

The Conference emphasizes the need to evaluate the impact of policy. Health information systems that support this process need to be developed. This will encourage informed decision-making over the future allocation of resources for the implementation of healthy public policy.

Moving beyond health care

Healthy public policy responds to the challenges in health set by an increasingly dynamic and technologically changing world, with its complex ecological interactions and growing international interdependencies. Many of the health consequences of these challenges cannot be remedied by present and foreseeable health care. Health promotion efforts are essential, and these require an integrated approach to social and economic development which will re-establish the links between health and social reform, which the World Health Organization policies of the past decade have addressed as a basic principle.

Partners in the policy process

Government plays an important role in health, but health is also influenced greatly by corporate and business interests, nongovernmental bodies and community organizations. Their potential for preserving and promoting people's health should be encouraged. Trade unions, commerce and industry, academic associations and religious leaders have many opportunities to act in the health interests of the whole community. New alliances must be forged to provide the impetus for health action.

Action Areas

The Conference identified four key areas as priorities for health public policy for immediate action:

Supporting the health of women

Women are the primary health promoters all over the world, and most of their work is performed without pay or for a minimal wage. Women's networks and organizations are models for the process of health promotion organization, planning and implementation. Women's networks should receive more recognition and support from policy-makers and established institutions. Otherwise, this investment of women's labour increases inequity. For their effective participation in health promotion women require access to information, networks and funds. All women, especially those from ethnic, indigenous, and minority groups, have the right to self-determination of their health, and should be full partners in the formulation of healthy public policy to ensure its cultural relevance.

This Conference proposes that countries start developing a national women's healthy public policy in which women's own health agendas are central and which includes proposals for:

- *equal sharing of caring work performed in society;*
- *birthing practices based on women's preferences and needs;*

- *supportive mechanisms for caring work, such as support for mothers with children,*
- *parental leave, and dependent health-care leave.*

Food and nutrition

The elimination of hunger and malnutrition is a fundamental objective of healthy public policy. Such policy should guarantee universal access to adequate amounts of healthy food in culturally acceptable ways. Food and nutrition policies need to integrate methods of food production and distribution, both private and public, to achieve equitable prices. A food and nutrition policy that integrates agricultural, economic, and environmental factors to ensure a positive national and international health impact should be a priority for all governments. The first stage of such a policy would be the establishment of goals for nutrition and diet. Taxation and subsidies should discriminate in favour of easy access for all to healthy food and an improved diet.

The Conference recommends that governments take immediate and direct action at all levels to use their purchasing power in the food market to ensure that the food-supply under their specific control (such as catering in hospitals, schools, day-care centres, welfare services and workplaces) gives consumers ready access to nutritious food.

Tobacco and alcohol

The use of tobacco and the abuse of alcohol are two major health hazards that deserve immediate action through the development of healthy public policies. Not only is tobacco directly injurious to the health of the smoker but the health consequences of passive smoking, especially to infants, are now more clearly recognized than in the past. Alcohol contributes to social discord, and physical and mental trauma. Additionally, the serious ecological consequences of the use of tobacco as a cash crop in impoverished economies have contributed to the current world crises in food production and distribution.

The production and marketing of tobacco and alcohol are highly profitable activities - especially to governments through taxation. Governments often consider that the economic consequences of reducing the production and consumption of tobacco and alcohol by altering policy would be too heavy a price to pay for the health gains involved.

This Conference calls on all governments to consider the price they are paying in lost human potential by abetting the loss of life and illness that tobacco smoking and alcohol abuse cause.

Governments should commit themselves to the development of healthy public policy by setting nationally-determined targets to reduce tobacco growing and alcohol production, marketing and consumption significantly by the year 2000.

Creating supportive environments

Many people live and work in conditions that are hazardous to their health and are exposed to potentially hazardous products. Such problems often transcend national frontiers.

Environmental management must protect human health from the direct and indirect adverse effects of biological, chemical, and physical factors, and should recognize that women and men are part of a complex ecosystem. The extremely diverse but limited natural resources that enrich life are essential to the human race. Policies promoting health can be achieved only in an environment that conserves resources through global, regional, and local ecological strategies.

A commitment by all levels of government is required. Coordinated intersectoral efforts are needed to ensure that health considerations are regarded as integral prerequisites for industrial and agricultural development. At an international level, the World Health Organization should play a major role in achieving acceptance of such principles and should support the concept of sustainable development.

This Conference advocates that, as a priority, the public health and ecological movements join together to develop strategies in pursuit of socioeconomic development and the conservation of our planet's limited resources.

Developing New Health Alliances

The commitment to healthy public policy demands an approach that emphasizes consultation and negotiation. Healthy public policy requires strong advocates who put health high on the agenda of policy-makers. This means fostering the work of advocacy groups and helping the media to interpret complex policy issues.

Educational institutions must respond to the emerging needs of the new public health by reorienting existing curricula to include enabling, mediating, and advocating skills. There must be a power shift from control to technical support in policy development. In addition, forums for the exchange of experiences at local, national and international levels are needed.

The Conference recommends that local, national and international bodies:

- *establish clearing-houses to promote good practice in developing healthy public policy;*
- *develop networks of research workers, training personnel, and programme managers to help analyse and implement healthy public policy.*

Commitment to Global Public Health

Prerequisites for health and social development are peace and social justice; nutritious food and clean water; education and decent housing; a useful role in society and an adequate income; conservation of resources and the protection of the ecosystem. The vision of healthy public policy is the achievement of these fundamental conditions for healthy living. The achievement of global health rests on recognizing and accepting interdependence both within and between countries. Commitment to global public health will depend on finding strong means of international cooperation to act on the issues that cross national boundaries.

Future Challenges

- *Ensuring an equitable distribution of resources even in adverse economic circumstances is a challenge for all nations.*
- *Health for All will be achieved only if the creation and preservation of healthy living and working conditions become a central concern in all public policy decisions. Work in all its dimensions - caring work, opportunities for employment, quality of working life - dramatically affects people's health and happiness. The impact of work on health and equity needs to be explored.*
- *The most fundamental challenge for individual nations and international agencies in achieving healthy public policy is to encourage collaboration (or developing partnerships) in peace, human rights and social justice, ecology, and sustainable development around the globe.*
- *In most countries, health is the responsibility of bodies at different political levels. In the pursuit of better health it is desirable to find new ways for collaboration within and between these levels.*
- *Healthy public policy must ensure that advances in health-care technology help, rather than hinder, the process of achieving improvements in equity.*

The Conference strongly recommends that the World Health Organization continue the dynamic development of health promotion through the five strategies described in the Ottawa Charter. It urges the World Health Organization to expand this initiative throughout all its regions as an integrated part of its work. Support for developing countries is at the heart of this process.

Renewal of Commitment

In the interests of global health, the participants at the Adelaide Conference urge all concerned to reaffirm the commitment to a strong public health alliance that the Ottawa Charter called for.

*EXTRACT FROM THE REPORT ON THE ADELAIDE CONFERENCE * HEALTHY PUBLIC POLICY, 2nd International Conference on Health Promotion April 5-9, 1988 Adelaide South Australia*

- *Co-sponsored by the Department of Community Services & Health, Canberra, Australia and the World Health Organization Regional Office for Europe, Copenhagen, Denmark*

Sundsvall Statement on Supportive Environments for Health The Third International Conference on Health Promotion, Sundswall, 1991

The Third International Conference on Health Promotion was held in Sundsvall, Sweden, in 1991. Armed conflict, rapid population growth, inadequate food, lack of means of self determination and degradation of natural resources were among the environmental influences identified at the conference as being damaging to health. The *Sundsvall Statement on Supportive Environments for Health* stressed the importance of sustainable development and urged social action at the community level, with people as the driving force of development. This statement and the report from the meeting were presented at the Rio Earth Summit in 1992 and contributed to the development of *Agenda 21*.

Sundsvall Statement on Supportive Environments for Health Third International Conference on Health Promotion, Sundsvall, Sweden, 9-15 June 1991

The Third International Conference on Health Promotion: Supportive Environments for Health - the Sundsvall Conference - fits into a sequence of events which began with the commitment of WHO to the goals of Health For All (1977). This was followed by the UNICEF/WHO International Conference on Primary Health Care, in Alma-Ata (1978), and the First International Conference on Health Promotion in Industrialized Countries (Ottawa 1986). Subsequent meetings on Healthy Public Policy, (Adelaide 1988) and a Call for Action: Health Promotion in Developing countries, (Geneva 1989) have further clarified the relevance and meaning of health promotion. In parallel with these developments in the health arena, public concern over threats to the global environment has grown dramatically. This was clearly expressed by the World Commission on Environment and Development in its report Our Common Future, which provided a new understanding of the imperative of sustainable development.

Third International Conference on Health Promotion: Supportive Environments for Health - the first global conference on health promotion, with participants from 81 countries - calls upon people in all parts of the world to actively engage in making environments more supportive to health. Examining today's health and environmental issues together, the Conference points out that millions of people are living in extreme poverty and deprivation in an increasingly degraded environment that threatens their health, making the goal of Health For All by the Year 2000 extremely hard to achieve. The way forward lies in making the environment - the physical environment, the social and economic environment, and the political environment - supportive to health rather than damaging to it.

This call for action is directed towards policy-makers and decision-makers in all relevant sectors and at all levels. Advocates and activists for health, environment and social justice are urged to form a broad alliance towards the common goal of Health for All. We Conference participants have pledged to take this message back to our communities, countries and governments to initiate action. We also call upon the organizations of the United Nations system to strengthen their cooperation and to challenge each other to be truly committed to sustainable development and equity.

A Call for Action

A supportive environment is of paramount importance for health. The two are interdependent and inseparable. We urge that the achievement of both be made central objectives in the setting of priorities for development, and be given precedence in resolving competing interests in the everyday management of government policies. Inequities are reflected in a widening gap in health both within our nations and between rich and poor countries. This is unacceptable. Action to achieve social justice in health is urgently needed. Millions of people are living in extreme poverty and deprivation in an increasingly degraded environment in both urban and rural areas.

An unforeseen and alarming number of people suffer from the tragic consequences for health and well-being of armed conflicts.

Rapid population growth is a major threat to sustainable development. People must survive without clean water, adequate food, shelter or sanitation.

Poverty frustrates people's ambitions and their dreams of building a better future, while limited access to political structures undermines the basis for self-determination. For many, education is unavailable or insufficient, or, in its present forms, fails to enable and empower.

Millions of children lack access to basic education and have little hope for a better future. Women, the majority of the world's population, are still oppressed. They are sexually exploited and suffer from discrimination in the labour market and many other areas, preventing them from playing a full role in creating supportive environments. More than a billion people worldwide have inadequate access to essential health care. Health care systems undoubtedly need to be strengthened. The solution to these massive problems lies in social action for health and the resources and creativity of individuals and their communities. Releasing this potential requires a fundamental change in the way we view our health and our environment, and a clear, strong political commitment to sustainable health and environmental policies. The solutions lie beyond the traditional health system.

Initiatives have to come from all sectors that can contribute to the creation of supportive environments for health, and must be acted upon by people in local communities, nationally by government and nongovernmental organizations, and globally through international organizations. Action will predominantly involve such sectors as education, transport, housing and urban development, industrial production and agriculture.

The Sundsvall Conference identified many examples and approaches for creating supportive environments that can be used by policy-makers, decision-makers and community activists in the health and environment sectors. The Conference recognized that everyone has a role in creating supportive environments for health.

Dimensions of Action on Supportive Environments for Health

In a health context the term supportive environments refers to both the physical and the social aspects of our surroundings. It encompasses where people live, their local community, their home, where they work and play. It also embraces the framework which determines access to resources for living, and opportunities for empowerment. Thus action to create supportive environments has many dimensions: physical, social, spiritual, economic and political. Each of these dimensions is inextricably linked to the others in a dynamic interaction. Action must be coordinated at local, regional, national and global levels to achieve solutions that are truly sustainable.

The Conference highlighted four aspects of supportive environments

- he social dimension, which includes the ways in which norms, customs and social processes affect health. In many societies traditional social relationships are changing in ways that threaten health, for example, by increasing social isolation, by depriving life of a meaningful coherence and purpose, or by challenging traditional values and cultural heritage.*
- he political dimension, which requires governments to guarantee democratic participation in decision-making and the decentralization of responsibilities and resources. It also requires a commitment to human rights, peace, and a shifting of resources from the arms race.*
- The economic dimension, which requires a re-channelling of resources for the achievement of Health for All and sustainable development, including the transfer of safe and reliable technology.*
- The need to recognize and use women's skills and knowledge in all sectors - including policy-making, and the economy - in order to develop a more positive infrastructure for supportive environments. The burden of the workload of women should be recognized and shared between men and women. Women's community-based organizations must have a stronger voice in the development of health promotion policies and structures.*

Proposals for Action

The Sundsvall Conference believes that proposals to implement the Health for All strategies must reflect two basic principles:

- *Equity must be a basic priority in creating supportive environments for health, releasing energy and creative power by including all human beings in this unique endeavour. All policies that aim at sustainable development must be subjected to new types of accountability procedures in order to achieve an equitable distribution of responsibilities and resources. All action and resource allocation must be based on a clear priority and commitment to the very poorest, alleviating the extra hardship borne by the marginalized, minority groups, and people with disabilities. The industrialized world needs to pay the environmental and human debt that has accumulated through exploitation of the developing world.*
- *Public action for supportive environments for health must recognize the interdependence of all living beings, and must manage all natural resources, taking into account the needs of future generations. Indigenous peoples have a unique spiritual and cultural relationship with the physical environment that can provide valuable lessons for the rest of the world. It is essential, therefore, that indigenous peoples be involved in sustainable development activities, and negotiations be conducted about their rights to land and cultural heritage.*

It Can be Done: Strengthening Social Action

A call for the creation of supportive environments is a practical proposal for public health action at the local level, with a focus on settings for health that allow for broad community involvement and control. Examples from all parts of the world were presented at the Conference in relation to education, food, housing, social support and care, work and transport. They clearly showed that supportive environments enable people to expand their capabilities and develop self-reliance. Further details of these practical proposals are available in the Conference report and handbook.

Using the examples presented, the Conference identified four key public health action strategies to promote the creation of supportive environments at community level.

- *Strengthening advocacy through community action, particularly through groups organized by women.*
- *Enabling communities and individuals to take control over their health and environment through education and empowerment.*
- *Building alliances for health and supportive environments in order to strengthen the cooperation between health and environmental campaigns and strategies.*
- *Mediating between conflicting interests in society in order to ensure equitable access to supportive environments for health. In summary, empowerment of people and community participation were seen as essential factors in a democratic health promotion approach and the driving force for self-reliance and development.*

Participants in the Conference recognized, in particular, that education is a basic human right and a key element in bringing about the political, economic and social changes needed to make health a possibility for all. Education should be accessible throughout life and be built on the principle of equity, particularly with respect to culture, social class and gender.

The Global Perspective

People form an integral part of the earth's ecosystem. Their health is fundamentally interlinked with the total environment. All available information indicates that it will not be possible to sustain the quality of life, for human beings and all living species, without drastic changes in attitudes and behaviour at all levels with regard to the management and preservation of the environment.

Concerted action to achieve a sustainable, supportive environment for health is the challenge of our times.

At the international level, large differences in per capita income lead to inequalities not only in access to health but also in the capacity of societies to improve their situation and sustain a decent quality of life for future generations. Migration from rural to urban areas drastically increases the number of people living in slums, with accompanying problems - including lack of clean water and sanitation.

Political decision-making and industrial development are too often based on short-term planning and economic gains which do not take into account the true costs to people's health and the environment. International debt is seriously draining the scarce resources of the poor countries. Military expenditure is increasing, and war, in addition to causing deaths and disability, is now introducing new forms of ecological vandalism.

Exploitation of the labour force, the exportation and dumping of hazardous substances, particularly in the weaker and poorer nations, and the wasteful consumption of world resources all demonstrate that the present approach to development is in crisis. There is an urgent need to advance towards new ethics and global agreement based on peaceful coexistence to allow for a more equitable distribution and utilization of the earth's limited resources.

Achieving Global Accountability

The Sundsvall Conference calls upon the international community to establish new mechanisms of health and ecological accountability that build upon the principles of sustainable health development. In practice this requires health and environmental impact statements for major policy and programme initiatives. WHO and UNEP are urged to strengthen their efforts to develop codes of conduct on the trade and marketing of substances and products harmful to health and the environment.

WHO and UNEP are urged to develop guidelines based on the principle of sustainable development for use by Member States. All multilateral and bilateral donor and funding agencies such as the World Bank and International Monetary Fund are urged to use such guidelines in planning, implementing and assessing development projects. Urgent action needs to be taken to support developing countries in identifying and applying their own solutions. Close collaboration with nongovernmental organizations should be ensured throughout the process.

The Sundsvall Conference has again demonstrated that the issues of health, environment and human development cannot be separated. Development must imply improvement in the quality of life and health while preserving the sustainability of the environment. Only worldwide action based on global partnership will ensure the future of our planet.

Document resulting from the Third International Conference on Health Promotion 9-15 June 1991, Sundsvall, Sweden*

- *Co-sponsored by the United Nations Environment Programme, the Nordic Council of Ministers, and the World Health Organization*

Jakarta Declaration on Leading Health Promotion into the 21st Century The Fourth International Conference on Health Promotion, Jakarta, 1997

The Fourth International Conference on Health Promotion held in Jakarta, Indonesia, in 1997 reviewed the impact of the *Ottawa Charter* and engaged new players to meet global challenges (3). It was the first of the four International Conferences on Health Promotion to be held in a developing country and the first to involve the private sector in an active way. The evidence presented at the conference and experiences of the previous decade showed that health promotion strategies contribute to the improvement of health and the prevention of diseases in developing and developed countries alike. These findings helped to shape renewed commitment to the key strategies and led to further refinement of the approaches in order to ensure their continuing relevance. Five priorities were identified in the *Jakarta Declaration on Leading Health Promotion into the 21st Century*. These were confirmed in the following year in the Resolution on Health Promotion adopted by the World Health Assembly in May 1998: Promoting Social Responsibility for Health, Increasing Community

Capacity and Empowering the Individual, Expanding and Consolidating Partnerships for Health, Increasing Investment for Health Development, and Securing an Infrastructure for Health Promotion.

***Jakarta Declaration on Leading Health Promotion into the 21st Century
The Fourth International Conference on Health Promotion: New Players for a New Era -
Leading Health Promotion into the 21st Century, meeting in Jakarta from 21 to 25 July 1997***

The Fourth International Conference on Health Promotion: New Players for a New Era - Leading Health Promotion into the 21st Century, meeting in Jakarta from 21 to 25 July 1997, has come at a critical moment in the development of international strategies for health. It is almost 20 years since the World Health Organizations Member States made an ambitious commitment to a global strategy for Health for All and the principles of primary health care through the Declaration of Alma-Ata. It is 11 years since the First International Conference on Health Promotion was held in Ottawa, Canada. That Conference resulted in proclamation of the Ottawa Charter for Health Promotion, which has been a source of guidance and inspiration for health promotion since that time. Subsequent international conferences and meetings have further clarified the relevance and meaning of key strategies in health promotion, including healthy public policy (Adelaide, Australia, 1988), and supportive environments for health (Sundsvall, Sweden, 1991). The Fourth International Conference on Health Promotion is the first to be held in a developing country, and the first to involve the private sector in supporting health promotion.

It has provided an opportunity to reflect on what has been learned about effective health promotion, to re-examine the determinants of health, and to identify the directions and strategies that must be adopted to address the challenges of promoting health in the 21st century. The participants in the Jakarta Conference hereby present this Declaration on action for health promotion into the next century.

Health promotion is a key investment

Health is a basic human right and is essential for social and economic development. Increasingly, health promotion is being recognized as an essential element of health development. It is a process of enabling people to increase control over, and to improve, their health. Health promotion, through investment and action, has a marked impact on the determinants of health so as to create the greatest health gain for people, to contribute significantly to the reduction of inequities in health, to further human rights, and to build social capital. The ultimate goal is to increase health expectancy, and to narrow the gap in health expectancy between countries and groups.

The Jakarta Declaration on Health Promotion offers a vision and focus for health promotion into the next century. It reflects the firm commitment of participants in the Fourth International Conference on Health Promotion to draw upon the widest possible range of resources to tackle health determinants in the 21st century. Determinants of health: new challenges

The prerequisites for health are peace, shelter, education, social security, social relations, food, income, the empowerment of women, a stable eco-system, sustainable resource use, social justice, respect for human rights, and equity. Above all, poverty is the greatest threat to health.

Demographic trends such as urbanization, an increase in the number of older people and the high prevalence of chronic diseases pose new problems in all countries. Other social, behavioural and biological changes such as increased sedentary behaviour, resistance to antibiotics and other commonly available drugs, increased drug abuse, and civil and domestic violence threaten the health and well-being of hundreds of millions of people.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Healthy Public Policy
Module: 1.2	ECTS: 0.5
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Key words	Policy, health policy, healthy public policy
Learning objectives	After the completed module students and professionals in public health will: <ul style="list-style-type: none">• broaden their knowledge on healthy public policy;• be able to differentiate healthy public policy from health policy;• recognizing the role of all participants and stakeholders in healthy public policy;• be able to understand the importance of reorientation from health policy to healthy public policy in respect of health of the population.

<p>Abstract</p>	<p>A supportive environment, which enables people to lead healthy lives is of utmost importance for populations being healthy. Healthy public policy is one of the most important approaches to achieve this goal.</p> <p>Healthy public policy is a policy “characterized by an explicit concern for health and equity in all areas of policy, and by accountability for health impact.</p> <p>Main building blocs of healthy public policy are:</p> <ul style="list-style-type: none"> • societal goals focused in health of the population, • enhancement of public opinion for health., • gaining support of economy in implementation of healthy public policy, • funding for health, • creating health-supportive informational systems, and • civil society enrolment.
<p>Teaching methods</p>	<p>Introductory lectures, focus group discussion, case studies</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students’ work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are mainly available in the internet; • target audience: master degree students according to Bologna scheme.
<p>Assessment of Students</p>	<p>The final mark should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work and final discussion, and quality of the seminar paper.</p>

HEALTHY PUBLIC POLICY

Marjan Premik, Gordana Pavlekovic, Lijana Zaletel Kragelj, Doncho Donev

Healthy public policy or Health policy, what makes the difference?

A supportive environment, which enables people to lead healthy lives, is of utmost importance for populations being healthy. Healthy public policy is one of the most important approaches to achieve this goal. Unfortunately, the concept of “healthy public policy” is rather difficult to understand and it is frequently misunderstood (unfortunately sometimes also deliberately confounded).

To answer the main question of this module, we need to properly understand basic definitions of terms, used.

Basic definitions

Four basic terms to be distinguished after completion of this module are policy, politics, health policy, and healthy public policy. Of essential importance is not to confound the concept of “healthy public policy” with the concept of “health policy” what is the case in many situations.

1. Policy.

According to Oxford Advanced Learners Dictionary (1), policy is “*a plan of action agreed or chosen by a political party, a business, etc.*”. Other definitions fit for use in this module are:

- policy is a plan of action to guide decisions and actions. The term may apply to government, private sector organizations and groups, and individuals. The policy process includes the identification of different alternatives, such as programmes or spending priorities, and choosing among them on the basis of the impact they will have. Policies in short can be understood as political, management, financial, and administrative mechanisms arranged to reach explicit goals (2);
- policy is a plan or a course of action designed to define issues, influence decision making and promote broad community actions beyond those made by individuals.

In different words, building a policy is a societal process of harmonizing different societies to achieve the common goal.

2. Politics.

The term “policy” should not be confounded by the term “politics”. The latter is, according to Oxford Advanced Learners Dictionary (1), defined as “*the activities involved in getting and using power in public life, and being able to influence decisions that affect a country or a society*”.

3. Health policy.

According to the Health Promotion Glossary (3), health policy is “*a formal statement or procedure within institutions which defines priorities and the parameters for action in response to health needs, available resources and other political pressures*”.

Health policy is often enacted through legislation or other forms of rule-making which define regulations and incentives which enable the provision of health services and programmes, and access to those services and programmes.

Health policy should be distinguished from healthy public policy by its primary concern with health services and programmes.

4. Healthy public policy.

According to the Health Promotion Glossary (3), healthy public policy is a policy “characterized by an explicit concern for health and equity in all areas of policy, and by accountability for health impact”. Healthy public policies promote the health of individuals and communities by (3):

- giving opportunity to people to adopt healthy lifestyle;
- preventing people to adopt unhealthy lifestyle; and
- creating healthy physical and social environments.

In practice, healthy public policy has been given a number of slightly different connotations (4). World Health Organization (WHO) has tended to use it interchangeably with health promotion policy, while Health Canada has used it to refer to public policies for health, using health in a broad ecological sense (policies that are ecological in perspective, multisectoral in scope, and participatory in strategy).

Answer to the question

As explained, the differences between “health policy” and “healthy public policy” are obvious. In Table 1, these differences are summarized.

Table 1. Summary of main differences between health policy and healthy public policy.

Characteristic	Health policy	Healthy public policy
Primary concern	Functioning of health care system	Creating health supporting environment; Enabling equity in health
Activity orientation	Organisation of health services and programmes	Empowerment of societies, communities and individuals to take responsibility for their health
Health explanatory model basis	Predominantly biomedical	Predominantly bio-psycho-social (socio-environmental)
Health/disease orientation	Disease (curing the disease)	Health (preserving, enhancing health)
Sector responsibility	Health sector	Several sectors (intersectoral concern)
Duration/sustainability	Short-term	Long-term

Trying to comment these characteristics, we could expose three of them:

- health/disease orientation – healthy public policy is explicitly oriented in health, explicitly dedicated to the production of health and health gain. This orientation is tightly connected to the concept of »investment for health«, which will be discussed later on;
- sector responsibility - intersectoral collaboration in action for health, with primary goal to achieve healthier population, is essential in achieving greater equity in health.

A major goal in intersectoral action is to achieve greater awareness of the health consequences of policy decisions and organizational practice in different sectors, and through this, movement in the direction of healthy public policy and practice. Not all intersectoral action for health need involve the health sector (3).

- duration/sustainability – healthy public policy is characterised by sustainability, which refers to the use of resources, direction of investments, the orientation of technological development, and institutional development in ways which ensure that the current development and use of resources do not compromise the *health* and well-being of future generations.

Health promotion and healthy public policy

The basic WHO health promotion document, The Ottawa Charter (5), identified three basic strategies for health promotion, being advocacy for health to create the essential conditions for health; enabling all people to achieve their full health potential; and mediating between the different interests in society in the pursuit of health. These strategies are supported by five priority action areas one of them being building healthy public policy. Thus, in health promotion (and disease prevention), enacting healthy public policy is essential for being efficient and effective. In health promotion, sustainable development is particularly important in terms of building healthy public policy, and supportive environments for health in ways which improve living conditions, support healthy lifestyles, and achieve greater equity in health for present and future generation of populations.

Building blocks of healthy public policy

At least six main building blocks of healthy public policy could be identified: societal goals focused in health of the population, enhancement of public opinion for health., gaining support of economy in implementation of healthy public policy., funding for health, creating health-supportive informational systems, and civil society enrolment.

1. Societal goals focused in health of the population.
An effective approach to health development requires all sectors of society to be accountable for the health impact of their policies and programs and recognition of the benefits to themselves of promoting and protecting health. The Member States of WHO's European Region have come together and embraced a common policy framework for health development, which represents guidance for countries to formulate national health policies. Important part of accountability therefore rests with government leaders who create policy, allocate resources and initiate legislation.
2. Enhancement of public opinion for health.
The understanding of determinants of health sets the basic framework for the scope and nature of policies to address health issues. In biomedical sciences, health and disease have predominantly been seen as the result of genetic and environmental influences. However, social determinants of health reflect some of the most powerful influences on health. Financial deprivation leads to prejudice and social exclusion, with increased rates of violence and crime. It is therefore imperative that healthy public policies address different determinants of health and empower people to make and support healthy choices.
3. Gaining support of economy in implementation of healthy public policy.
The relationship between health and the economy is very complex. While it has long

been recognized that increased economical wealth is associated with improved health, it is only more recently that the contribution of better health to economic growth has been recognized. The aim of healthy public policies should be not just to reduce exposure to risks, but also to increase the participation of employers and employees in promoting a safer and healthier working environment and reducing stress. A company culture needs to be promoted that favours teamwork and open debate, on the understanding that better health for all staff and better social relationships at work will contribute to higher staff morale and productivity. Finally, companies should adopt a »healthy company or enterprise« concept with three basic elements: health promotion for their staff; making the company's products as health-supportive as possible; and being socially responsible by supporting local community or countrywide health initiatives.

4. Funding for health.

In this place we need to emphasize the concept of »investment for health«. Investment for health refers to resources which are explicitly dedicated to the production of health and health gain.. They may be invested by public and private agencies as well as by people as individuals and groups.

Investment for health is not restricted to resources which are devoted to the provision and use of health services and may include, for example, investments made by people (individually or collectively) in education, housing, empowerment of women or child development. Greater investment for health also implies reorientation of existing resource distribution within the *health sector* towards *health promotion* and *disease prevention*. A significant proportion of investments for health are undertaken by people in the context of their everyday life as part of personal and family health maintenance strategies.

5. Creating health-supportive informational systems.

Although large amounts of population health data are collected, there is still lack of comprehensive information about health situation. Healthy public policies could aim to prevent not only premature mortality but also to improve conditions for the elderly and increase their quality of life, for example. However, these improvements which would result in health gains cannot be achieved without health-supportive informational systems. Health-supportive informational systems are oriented towards health by providing wide range of data about different determinants of health. In future, integration of data about educational level, socioeconomic position, residence community, working environment and lifestyle will be of grate importance in developing effective healthy public policies.

6. Civil society enrolment.

Healthy public policy development is the collaboration not only of government, but also businesses, non-governmental organizations, the media and other communities, as well as civil society. Civil society can influence the conditions for public health through both local and central government. Key decisions in this respect include those that impact working and living conditions; that direct the provision of welfare services; that create jobs; and that relate to social security.

Healthy public policy development

The main steps involved in healthy policy development are (6):

- analyzing the problem - the development of any health-related policy begins with an analysis of the health issue or problem the policy is designed to address.
- identifying stakeholders - a key step in the development of any policy is the identification of individuals who will be affected by the policy, as well as those with an interest in the issues addressed by the policy. The identification of stakeholder groups as part of the policy development process helps to determine who should be consulted in the development of a policy, and assess the degree of support and opposition for the policy among different groups.
- evaluating policy – once a policy has been implemented, it's important to take some time for reflection – looking back and looking ahead. Effective healthy public policies are not static; they are flexible enough to incorporate insights gained from past experience while responding to future developments and trends.

Historical perspective

Historically, the concept of “healthy public policy” was developed in the context of activities, related to the global strategy of Health for All. In this context the broad definition of health combined with intersectoral action has been a starting point (4).

The official history of healthy public policy dates more than three decades in the past, though some ideas are even older. In continuation we will present the most prominent initiatives/document dealing with healthy public policy.

1. Lalonde's report.

More than three decades ago, in 1974, the Lalonde's report “A New Perspective on the Health of Canadians” (7) highlighted the significance of other determinants than the healthcare system.

2. Early stages of WHO Health for All policy.

In 1977, the WHO Assembly stated that the major social goal of governments and WHO should be by the year 2000 achieving a level of health that would permit people to lead a socially and economically productive life. The adoption of the Declaration of Alma-Ata was a major milestone in the Health for All movement.

In 1981, the global strategy Health for All was unanimously adopted. Within Europe, the WHO Regional Office out of this global strategy developed its own strategy with 38 regional Health for All targets. From the perspective of healthy public policy, the Target 13 is important. This target stated that by 1990, national policies in all Member States should ensure that legislative, administrative and economic mechanisms provide broad intersectoral support and resources for the promotion of healthy lifestyles and ensure effective participation of the people at all levels of such policy-making. Additionally, it was stated also that the attainment of this target could be significantly supported by strategic health planning to cover broad intersectoral issues that affect lifestyle and health, the periodic assessment of existing policies in their relationship to health, and establishment of effective machinery for public involvement in policy planning and development (8).

3. Ottawa Charter.

In 1986 at the First International Conference on Health Promotion in Ottawa, Canada, The Ottawa Charter was adopted (5, 9). The importance of healthy public policy in the context of this document was already described.

4. Adelaide recommendations on Healthy Public Policy.

Building healthy public policy was explored in greater depth at the Second International Conference on Health Promotion in Adelaide, Australia in 1988 (5, 10). This conference continued in the direction set at Alma-Ata and Ottawa.

On this conference, the document entitled the Adelaide Recommendations on Healthy Public Policy was adopted. It called for a political commitment to health by all sectors. Policy-makers in diverse agencies working at various levels (international, national, regional and local) were urged to increase investments in health and to consider the impact of their decisions on health. Two things related to public healthy policy were explicitly emphasized, being:

- the value of health – in this context on this conference was stated that healthy public policy in the short term will lead to long-term economic benefits as shown by the case studies presented at this conference, and that new efforts should be made to link economic, social, and health policies into integrated action;
- the problem of inequalities - in view of the large health gaps between countries, which the Adelaide conference has examined, the developed countries were obliged to ensure that their own policies have a positive health impact on developing nations. This conference also recommended that all countries develop healthy public policies that explicitly address the issue of inequalities.

5. Health 21.

At the end of the old millennium, the targets set by WHO, Regional Office for Europe, set at the beginning of eighties, were reassessed and a new set was proposed. It was adopted in a document, entitled Health 21: the health for all policy framework for the WHO European Region (HEALTH21) in 1999. The set of targets was diminished from 38 to 21. These targets could be clustered in three main groups being basic health targets, essential changes, and of health care system development support. In Table 2 the targets are presented in details.

Table 2. The 21 targets for for 21st century of WHO European Region (11).

Group of targets	Subgroup	Target
Basic health targets		1. Solidarity for health in the European Region
		2. Equity in health
		3. Healthy start in life
		4. Health of young people
		5. Healthy aging
		6. Improving mental health
		7. Reducing communicable diseases
		8. Reducing noncommunicable diseases
		9. Reducing injury from violence and accidents
Essential changes	Healthy lifestyle	11. Healthier living
		12. Reducing harm from alcohol, drugs and tobacco
	Healthy environments	10. A healthy and safe physical environment
		13. Settings for health
	Adequate and appropriate health care	14. Multisectoral responsibility for health
		15. An integrated health sector
Health care system development support		16. Managing for quality of care
		17. Funding health services and allocating resources
		18. Developing human resources for health
		19. Research and knowledge for health
		20. Mobilizing partners for health
		21. Policies and strategies for health for all

From the perspective of healthy public policy, the Target 21 is important. This target states that by the year 2010, all Member States should have and be implementing policies for health for all at country, regional and local levels, supported by appropriate institutional infrastructures, managerial processes and innovative leadership (11). In particular:

- policies for health for all at country level should provide motivation and an inspirational, forward looking framework for policies and action in regions, cities, and local communities and in settings such as schools, workplaces and homes;
- structures and processes should be in place for health policy development at country and other levels that bring together a broad range of key partners – public and private – with agreed mandates for policy formulation, implementation, monitoring and evaluation;
- short-, medium-, and longer-term policy objectives, targets, indicators and priorities should be formulated, as well as the strategies to achieve them, based on the values of health for all, and progress towards their achievement should be regularly monitored and evaluated.

The proposed strategies for achieving this target was that all Member States of the European Region should ensure their health policies to be broadly in line with the Health for All principles and strategies, so as to adapt their approaches to the health development needs and particular characteristics of today's democratic and pluralistic societies (adapting

the strategies for dealing with lifestyles, environment and health issues; as well as embrace the concept of partnerships for planning and implementation, focused on the major settings/ levels where action should take place).

6. The Verona Challenge.

In 2000, The Verona Challenge, undertaken under the umbrella of the WHO, was adopted (12). It represents one of the results of three years work by over 51 nations, which in 1998 established so called Verona Initiative.

The creators of this document confirmed that every policy decision has an impact on the health of the population. According to this statement, one of the Verona Challenge principles is that all current and future policies should be assessed for their influence upon determinants of population health. They recognised that investing for health is both, an ethical responsibility, and an investment in sustainable social and economic development.

7. Millenium Development Goals.

At the Millennium Summit in September 2000 the largest gathering of world leaders in history United Nations (UN) adopted the UN Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets, with a deadline of 2015, that have become known as the Millennium Development Goals (MDGs) (13). The eight MDGs are build on agreements, and represent commitments:

- to reduce poverty and hunger;
- to achieve universal primary education;
- to tackle ill-health,
- to tackle gender inequality;
- to tackle lack of education;
- to tackle lack of access to clean water, and
- to tackle environmental degradation.

MDG are the world's time-bound and quantified targets for addressing extreme poverty in its many dimensions-income poverty, hunger, disease, lack of adequate shelter, and exclusion-while promoting gender equality, education, and environmental sustainability. They are also basic human rights-the rights of each person on the planet to health, education, shelter, and security.

8. Bangkok Charter.

Another important health promotion conference was The 6th Global Conference on Health Promotion held in Bangkok in 2005 (5).

On this conference, the document entitled the Bangkok Charter was adopted (14). This charter urges:

- all sectors and settings to invest in sustainable policies, actions and infrastructure;
- to build capacity to promote health;
- to regulate, including through legislation, for a high level of protection against harm;
- to build alliances with public and other sectors.

Exercise

Task 1:

Carefully read the contents of the module. Supplement this knowledge with recommended readings:

Task 2:

Discuss with other students the characteristics of health and healthy public policies. Identify pros and contras for both kinds of policies.

Task 3:

Chose with two to three other students one country of the WHO European Region (preferably from SEE regin) and try to find out its orientation in respect of health policies. Present your findings to other students and discuss the differences.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Advisable Guidelines for Reducing Inequalities in Health
Module: 1.2.1	ECTS: 1.0
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Key words	Equity, socio-economic inequalities, health policy, policymaking
Learning objectives	The educational objectives of this module are: <ul style="list-style-type: none">• to increase awareness among health professionals of the negative effects of persisting inequalities in health;• to assess the data currently available;• to collect additional data if necessary;• to analyse, interpret and present the data;• to formulate a policy response to the results.
Abstract	Socio-economic inequalities in health are a major challenge for health policy, not only because most of these inequalities can be considered unfair, but also because reducing the burden of health problems in disadvantaged groups offers a great potential for improving the average health status of the population as a whole. However, it seems that public health professionals are not enough aware of inequalities in health or they are not trained enough to handle them. It can be partially explained by the fact, that there is neither postgraduate education nor training in the field of socio-economic inequalities for public health personnel. This module consists of four workshops, one workshop for every learning objective (workshop 1 - Assessment process of the availability of data, Workshop 2 - Existing data resources, Workshop 3 - Methodological guidelines, Workshop 4 - Formulating a public health policy.

Teaching methods	<p>For the purposes of this training programme four workshops should be executed (Four weekends of training course(on Friday afternoon and on Saturday) within four months.</p> <p>The whole programme is carried out as a discussion led by moderator. After every workshop specific learning objectives are to be determined for every participant and until the next workshop their professional tasks should be performed. Their achievements should be reported (within 10 minutes) and discussed with other participants at the next workshop. The formulated document should be submitted to policy-makers;</p>
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 67%/33%;• facilities: a computer room for 20 participants;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• target audience: master degree students according to Bologna scheme;• special recommendation: It is recommended that participants (group of 15 to 20) are all familiar with statistical package SPSS for Windows.
Assessment of Students	<p>Changes in attitude of participants will be examined with the attitude test. The questionnaires will be applied at the beginning of the first workshop and at the end of this training course.</p>

ADVISABLE GUIDELINES FOR REDUCING INEQUALITIES IN HEALTH

Barbara Artnik

Rationale

There is a consistent evidence throughout the world that people at a socio-economical disadvantage suffer a heavier burden of illness and have higher mortality rates than better off counterparts (1,2,3). Socio-economic inequalities in health are a major challenge for health policy not only because most of these inequalities can be considered unfair (4), but also because reducing the burden of health problems in disadvantaged groups offers a great potential for improving the average health status of the population as a whole (5).

The international community and national governments are turning to the scientific community for advice on how to reduce inequalities in health. Governments are looking, in the worlds of WHO's strategy for Europe, for *«a scientific framework for decision makers»* and *«a science-based guide to better health development»* (6). As recommended by the WHO for European Region (6), policy-makers should develop a systematic strategy for monitoring socio-economic inequalities in health. Action should be taken on different levels. Inequalities should be reduced by the means of the state strategy, city and community policies, using intersectional co-operation. Extend of the health and social activities should be planned, coordinated and enlarged in a professional and a precise manner, with the special emphasis laid on children, invalids, pregnant women and elder persons. People as individuals should be aware and ensured better information on growth and development of children, life-style and health, endangerment at work, etc. Taking the measures stated hereabove is conditioned by structural and etiological familiarity with inequality between individual groups of population in a certain place and time. Research programmes for studying the condition and for reducing health inequalities have already been introduced by the Netherlands, Finland and New Zealand (7,8,9,10). These countries were recently joint by the UK Government with its programme (11). However, in other countries it was too little done to solve the problem of inequalities in health. It seems that public health professionals are not enough aware of inequalities in health or they are not trained enough to handle them. It can be partially explained by the fact, that there is neither postgraduate education nor training in the field of socio-economic inequalities for public health personnel.

Learning objectives

Domain of intellectual skills:

The first two educational objectives of this module are:

1. to increase awareness among health professionals of the negative effects of persisting inequalities in health within and among countries;
2. to sensitise the health professionals to develop the attitude that reducing inequalities in health is very important task of their work and that they represent the bridge to policy-makers in the sense of thought-transference and putting research achievements into practice.

Domain of intellectual, practical and also communication skills:

After this module the participants will be capable:

- to assess the data currently available;

- to collect additional data if necessary;
- to analyse, interpret and present the data;
- to formulate a policy response to the results.

Content

WHO: Health for all in the 21st century

The policy of the World Health Organization (12) is based on the fact that the world is one and indivisible. As stated in the 1998 World Health Declaration, the enjoyment of health is one of the fundamental rights of every human being. Health is a precondition for well-being and the quality of life. It is a benchmark for measuring progress towards the reduction of poverty, the promotion of social cohesion and the elimination of discrimination.

Health status differing significantly between the Member States of European Region (51 countries) and within them is representing the major obstacle to development. The regional policy for *health for all* is a response to the World Health Declaration (12). To achieve *health for all* in the 21st century, the European Region of WHO has set 21 targets (6), which Member States are supposed to achieve between the years 2005 and 2020 (depending on individual target) by the means of the national policy and regional development's orientations. For equity in health, the first two targets are of the main importance. Equity in health is supposed to be attained by the means of solidarity at country level and in the European Region as a whole.

Target 1: Solidarity for health in the European Region

Poverty is the major cause of ill health and lack of social cohesion. One third of population of the eastern part of the European Region, 120 million people, live in extreme poverty. Health has suffered most where social systems have collapsed, and where natural resources have been poorly managed. This is clearly demonstrated by the wide health gap between the western and eastern parts of the Region. The differences in infant mortality rates are the most significant (from 3 to 43 per 1000 live births) as well as in life expectancy at birth (from 79 to 64 years). According to the plans of the WHO (6), the present gap in health status between Member States of the European Region should be reduced by at least 30 %. In order to reduce these inequities and to maintain the security and cohesion of the European Region, a much stronger collective effort needs to be made by international institutions, funding agencies and donor countries. Furthermore, external support should be much better integrated through joint inputs into government health development programmes that are given high priority and are firmly based on a national *health for all* policy in the receiving country.

Target 2: Equity in health

Second target of the WHO aims to ensure the differences between socio-economic groups to be decreased, since even in the richest countries in the European Region, the better off live several years longer and have fewer illnesses and disabilities than the poor. The health gap between socioeconomic groups within countries are supposed to be reduced by at least one fourth in all Member States, by substantially improving the level of health of disadvantaged groups of inhabitants.

Poverty is the biggest risk factor for health, and income-related differences in health – which stretch in a gradient across all levels of the social hierarchy – are a serious injustice and reflect some of the most powerful influences on health. Financial deprivation also leads

to prejudice and social exclusion, with increased level of violence and crime.

There are also great differences in health status between women and men in the European Region. Other health-risk factors, which are determining association with a certain socio-economic group, are educational level, nationality, etc.

Conclusion

The targets of WHO in the European Region (6) are clearly very ambitious, that may not be realistic everywhere. Nevertheless, it gives a clear focus to health policy and promotes the monitoring of quantitative changes over time in socio-economic inequalities in health, which is essential to assess the effects of health policy interventions. This will only work, however, if ways can be found of quantifying the “size” of socio-economic inequalities in health (13).

Teaching methods

For the purposes of this training programme four workshops will be executed, one workshop for every learning objective. The whole programme will be carried out as a discussion led by moderator. After every workshop specific learning objectives will be determined for every participant and until the next workshop their professional tasks should be performed. Their achievements will be reported (within 10 minutes) and discussed with other participants at the next workshop.

Workshop 1

Stimulating introduction by moderator: key words will be used as a target to sensitise the participants that the inequalities in health exist.

Discussion: The assessment process of the availability of data.

The task students have to achieve until the Workshop 2:

- to inventory the data that are already being collected and that can be used to measure the magnitude of socio-economic inequalities in health (from socio-economic registries, mortality registries, health interview surveys, etc.);
- to assess the informative value of these data;
- to make provisions for generating new data.

Workshop 2

Reports presented by every participant.

Discussion: Existing data sources.

The results of the first workshop will determine whether additional data need to be collected or just data from different registries or surveys should be linked.

The task they have to achieve until the Workshop 3 (if necessary):

- to add variables to existing data sources;
- to link data from different registries.

Workshop 3

The reports presented by every participant.

Methodological guidelines should be discussed and refined. It has to be decided:

- which morbidity and mortality indicators will be used and how the socio-economic status of subject will be measured and classified;
- are absolute or relative differences (or both) to be measured;

- should the analysis be limited to measuring the effect of lower socio-economic status on health of people of lower socio-economic status, or should it also aim at measuring the total impact these inequalities have on the health of the population;
- the choice of an adequate level of analysis and the application of multilevel analysis.

The task they have to achieve until the Workshop 4:

- to analyse socio-economic inequalities in health;
- to interpret the results carefully;
- to prepare the results for clear and understandable presentation.

Workshop 4

The results have to be presented clearly and understandably (e.g. to use graphical displays) by every participant.

Discussion: Formulating a public health policy response to the results:

- to what extent has the state identified inequalities in health as an important health and social problem until now;
- what are the objectives for any interventions;
- who are the main groups with a concern for inequalities in health;
- what are their interests, priorities, and commitments;
- what is the context within which interventions need to be considered; etc.

The formulated document should assure that public health policy satisfies identified needs and finally it should be submitted to policy-makers.

Follow up workshops on health policy development

Every six months, follow-up workshops on health policy development should be performed.

Planning of implementation

In Table 1 the proposed agenda is presented.

Table 1. Proposed agenda for the training programme.

Workshop	Agenda
Workshop 1	Friday 15.00-16.00 Introduction 16.00-17.00 Discussion: The assessment process of the availability of data 17.00-17.30 Coffee break 17.30-19.00 Discussion (cont.) Saturday 9.00-10.30 Discussion (cont.) 10.30-11.00 Coffee break 11.00-13.00 Determination of the professional tasks

Workshop 2

Friday
15.00-17.00 Reports
17.00-17.30 Coffee break
17.30-19.30 Reports (cont.)
Saturday
9.00-10.30 Discussion: Data sources
10.30-11.00 Coffee break
11.00-13.00 Discussion (cont.)
13.00-14.30 Lunch
14.30-16.00 Determination of the professional tasks

Workshop 3

Friday
15.00-17.00 Reports
17.00-17.30 Coffee break
17.30-19.30 Reports (cont.)
Saturday
9.00-10.30 Discussion: Methodological guidelines
10.30-11.00 Coffee break
11.00-13.00 Discussion (cont.)
13.00-14.30 Lunch
14.30-16.30 Discussion (cont.)
16.30-17.00 Coffee break
17.00-19.00 Determination of the professional tasks

Workshop 4

Friday
15.00-17.00 Reports
17.00-17.30 Coffee break
17.30-19.30 Reports (cont.)
Saturday
9.00-10.30 Health policy formation
10.30-11.00 Coffee break
11.00-13.00 Health policy formation (cont.)
13.00-14.30 Lunch
14.30-16.30 Health policy formation (cont.)
16.30-17.00 Coffee break
17.00-19.00 Health policy formation (cont.)
19.00-19.30 Conclusions

Assessment of participants

Changes in attitude of participants will be examined with the attitude test. The questionnaires will be applied at the beginning of the first workshop and at the end of this training course.

Module evaluation

Questionnaires will be distributed during the course to assess satisfaction of the participants with the programme. However, the most important evaluation of the module will be the final outcome – health policy formation.

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Recommended readings:

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Supportive Environments for Health
Module: 1.3	ECTS: 0.5
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Key words	environmental health, hazard, risk, environmental burden, action plan, local community, air pollution
Learning objectives	After completing this module students should: <ul style="list-style-type: none">• identify environmental factors that potentially affect human health and explain the relationship between risk and hazard;• recognize the impact of environment on health and be able to list diseases with the largest environmental contribution worldwide and in developed countries as well;• acknowledge the significance of local community and importance of intersectoral approach in implementing measures to reduce environmental risks.

<p>Abstract</p>	<p>The environment influences our health in many ways through exposures to physical, chemical and biological risk factors, and through related changes in our behavior in response to those factors.</p> <p>Globally, nearly one quarter of all deaths and of the total disease burden can be attributed to the environment. These findings have important policy implications, because the environmental risk factors can be modified by established, cost-effective interventions. The process of building an intersectoral approach, which recognizes all facets of a community, helps in both making and implementing a LEHAP. Coordinated actions can promote development strategies with multiple social and economic co-benefits, in addition to global health gains, both immediate and long term. Repositioning the health sector to act more effectively on preventive health policies, while enhancing intersectoral partnerships, is thus critical to addressing the environmental causes of disease and injury, and achieving better health for all.</p> <p>Our case study presents an example of intersectoral approach that resulted in a successful implementation of measures at different levels in local community to reduce air pollution in the urban area of Celje.</p>
<p>Teaching methods</p>	<p>Teaching methods include introductory lectures, exercises, and interactive methods such as small group discussions.</p> <p>After introductory lectures students should discuss etiology of diseases with the largest environmental contribution.</p> <p>Afterwards students should develop a model of local environmental health action plan for various environmental issues.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are mainly available in the internet; • target audience: master degree students according to Bologna scheme.
<p>Assessment of students</p>	<p>Assessment is based on seminar paper and oral exam.</p>

SUPPORTIVE ENVIRONMENTS FOR HEALTH

Jerneja Farkas, Pia Vracko, Ivan Erzen

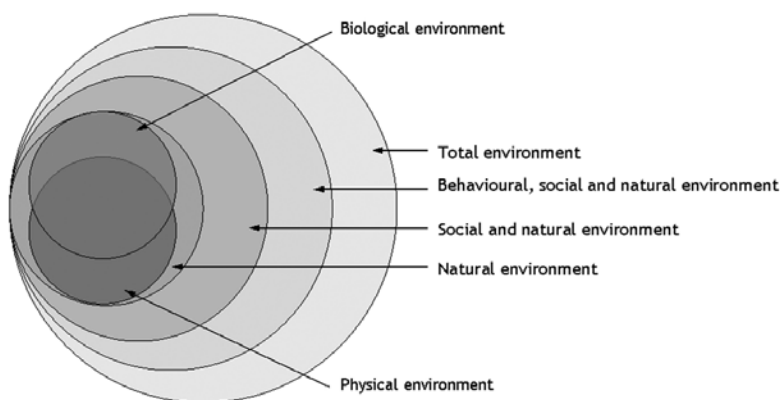
Theoretical background

Basic definitions

Environment

In the medical sense, the environment includes the surroundings, conditions or influences that affect an organism (1). Along these lines, Last defined the environment as: “All that which is external to the human host. It can be divided into physical, biological, social, cultural; any or all of which can influence health status of populations”(2). According to this definition, the environment would include anything that is not genetic, although it could be argued that even genes are influenced by the environment in the short or long term. Figure 1 shows one way to represent the environment, from the most inclusive to the most restrictive definition (3).

Figure 1. Definition of the environment (Adapted from Smith, Corvalan and Kjellstrom, 1999).



Environmental health

In 1989, World Health Organization (WHO) defined environmental health as comprising those aspects of human health and disease that are determined by factors in the environment (4). It also refers to the theory and practice of assessing and controlling environmental factors that have the potential to affect health.

List of basic environmental factors with potential to affect health:

- pollution of air, water, or soil with physical, chemical or biological agents;
- UV and ionizing radiation;
- electromagnetic fields;
- noise;
- built environments, including housing, land use patterns, roads;
- agricultural methods, irrigation schemes;
- man-made climate change, ecosystem change;
- emergencies related to bioterrorism and chemical terrorism.

Extended list of environmental factors with potential to affect health:

- alcohol and tobacco consumption, drug abuse;
- diet (although it could be argued that food availability influences diet);
- the natural environments of vectors that cannot reasonably be modified (e.g. in rivers, lakes, wetlands);
- natural biological agents, such as pollen in the outdoor environment;
- occupational risks.

Environmental health comprises those aspects of human health, including quality of life, that are determined by physical, biological, social, and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations (5). Environmental health science is therefore essentially about two things: hazards in the environment, their effects on health, and the variations in sensitivity to exposures within populations, and the development of effective means to protect against hazards in the environment (6).

To establish environmental health in a country or region, governments must set and then implement policies to control environmental factors. The services needed to implement such policies can be developed in a variety of ways, depending on a number of social, economic and cultural factors.

Hazard, exposure and risk

How an environmental factor can affect human health could be described in terms of hazard, exposure and risk.

A hazard is defined as a factor that may adversely affect health (2); it is basically a source of danger. A hazard is a qualitative term expressing the potential of an environmental agent to harm the health of certain individuals if the exposure level is high enough and/or other conditions apply.

An exposure is defined as a condition of being subjected to an influencing experience.

Human exposure can occur through several routes, most importantly, inhalation, ingestion and skin contact (6).

A risk is defined as the probability that an event will occur, e.g., that an individual will become ill or die within a stated period of time; the probability of an unfavorable outcome (2). It is the quantitative probability that a health effect will occur after an individual has been exposed to a specified amount of a hazard. A hazard results in a risk if there has been exposure.

Exposure can occur in different environmental settings:

- homes;
- kindergartens and schools;
- working places;
- outdoor environments (playgrounds, recreational areas, roads, etc.);
- indoor recreational, hobby, entertainment environments;
- shopping centers;
- industrial, urban or rural settings.

Impact of environment on health

Worldwide, an estimated 24% of the disease burden (healthy life years lost) and an estimated 23% of all deaths (premature mortality) was attributable to environmental factors. Among children 0-14 years of age, the proportion of deaths attributed to the environment was as high as 36%. There were large regional differences in the environmental contribution to various disease conditions due to differences in environmental exposures and access to health care across the regions. For example, although 25% of all deaths in developing regions were attributable to environmental causes, only 17% of deaths were attributed to such causes in developed regions (7).

In many cases, the causal pathway between environmental hazard and disease outcome is complex. Therefore the exact estimates of disease burden attributable to environmental factors are difficult to observe.

Globally, diseases with the largest absolute burden attributable to environmental factors included: diarrhea, lower respiratory infections, other unintentional injuries, and malaria (Table 1). In developed countries, however, among the most frequent diseases related to environmental factors are cancer, allergies, asthma, chronic obstructive pulmonary disease and other respiratory diseases, and road traffic injuries (6, 7).

Table 1. List of diseases with the largest environmental contribution (Adapted from Pruss-Ustun A and Corvalán FC, 2006; Figure 5).

Disease	Environmental fraction	Fraction of total global burden of disease in DALYs
Diarrhoea	3.85	4.15
Lower respiratory infections	2.45	6.10
Other unintentional injuries	1.40	3.30
Malaria	1.25	3.10
Road traffic injuries	1.05	2.60
Chronic obstructive pulmonary disease	0.80	1.80
Perinatal conditions	0.75	6.50
Ischaemic heart disease	0.75	3.90
Childhood cluster diseases	0.70	2.75
Lead-caused mental retardation	0.70	0.60
Drownings	0.55	0.70
HIV/AIDS	0.50	5.65
Malnutrition	0.50	1.15
Cerebrovascular disease	0.50	3.25
Asthma	0.45	1.05
Tuberculosis	0.45	2.25
Suicide	0.40	1.40
Depression	0.35	4.50
Poisonings	0.30	0.50
Falls	0.30	1.10
Hearing loss	0.25	1.75
Violence	0.25	1.45
Lymphatic filariasis	0.20	0.40
Lung cancer	0.20	0.75

Source: Pruss-Ustun A and Corvalán FC, 2006.

What can policymakers and the public do about environmental risks

If the burden of disease from environmental risks can be estimated, the most important priorities for targeted environmental protection can also be evaluated, while helping to

promote the idea that sound environmental management plays a key role in protecting people's health (7). The role of environmental health professionals is to apply their knowledge and experience to help the community understand the environmental health hazards they face and to analyze the technical and social approaches to reducing or eliminating human exposure to environmental hazards and the resulting adverse health effects. On the basis of this analysis, other people in other jobs, some of them very far removed from environmental health can take appropriate action to protect a community's health (8,9). At the same time, actions by sectors such as energy, transport, agriculture, and industry are urgently required, in cooperation with the health sector, to address the root environmental causes of ill health. Acting together on the basis of coordinated health, environment and development policies, we can make a real difference in human well-being and quality of life.

Implementing environmental measures in local communities

Local authorities and their communities have assumed new responsibilities for global environmental problems, such as climate change, air and water pollution. They have joined some already existing international programs and established their own projects to address these challenges. Local communities with greater ecological awareness and a better information system can play a major role in solving environmental problems in heavily polluted areas (10). Local authorities are central to local environmental health planning because they often operate the economic, social and environmental infrastructure, oversee planning processes, establish local policies and regulations, determine parameters for economic development, are important vehicles in the development and implementation of local, regional and national policies, and work in a democratic manner (8, 11, 12). The process of implementing environmental measures in local communities is shown in Figure 2 and briefly described below.

Figure 2. Local environmental health action plan (LEHAP) process (Adapted from MacArthur, 2002).



Initially, a small group of committed professionals needs to come together to discuss and prepare the ground for the planning process. The group needs to have a basic level of information before making any approach to the political level. To secure political support, it must have some idea of the planning process, the time scales involved and, most importantly, the costs in financial and human resources. All of this undoubtedly helps the presentation of any proposed planning process to decision making politicians. Municipalities often have the main responsibility for ensuring healthy living environments, but they can only achieve this by working in partnership with other tiers of government, non governmental organizations, community based organizations, the private sector and so on. The idea that partnerships are essential to addressing environmental health issues effectively is now well established and widely accepted (8,13). The process of building an intersectoral approach, which recognizes all facets of a community, helps in both making and implementing a local environmental health action plan (LEHAP). The following list of organizations, which should participate in LEHAP:

- state or public health organizations and agencies;
- state environmental protection organizations and agencies;
- organizations and agencies responsible for: housing provision, transport, occupational health and safety, the supply and treatment of drinking-water, the treatment of wastewater, and the collection and disposal of solid industrial and domestic wastes;
- organizations and agencies representing particular sectors: commerce and business, industry, trade unions, agriculture and energy;
- NGOs addressing environmental health issues;
- community groups active in the locality;
- relevant departments or faculties in universities and schools;
- relevant international agencies active in the locality;
- neighboring local authorities or municipalities; and
- the mass media.

Case study - an example of a community action in controlling air pollution

Introduction

Environmental health issues are by nature multisectoral. Experience has shown that progress and success in addressing environmental health issues come only when all agencies, at all levels, work together. Another essential element of the environmental health approach is community participation. It not only involves local people more deeply, but also develops mutual understanding and respect among stakeholders, which can lead to greater local commitment and participation in solutions.

This case study presents an example of intersectoral approach that resulted in a successful implementation of measures at different levels in local community to reduce air pollution in the urban area of Celje, a Slovenian city with 55.000 inhabitants.

Celje has been an industrial city (production of TiO_2 , ironworks) since the beginning of last century. The desire for industrial progress and development was so strong that almost no attention was paid to the damage caused to the environment. Unfortunately, the geographical position of Celje is not favorable; the city lies in a basin where the winds are weak, aggravating the concentration peaks of air pollutants. As a result, extensive pollution of air, surface waters, drinking water, and soil soon became the main limiting factor of further economic development of the region (14). For more than 30 years the community of Celje

has been making great effort to reduce all kinds of environmental pollution. The greatest improvement was made in reduction of air pollution.

Throughout all these years the emission and imission concentrations of sulfur dioxide (SO_2) have been reduced for more than 70%. Reduction of imission concentrations of SO_2 , nitrogen oxides, and total air deposition followed the reduction of air emissions (14).

Now, 20 years later, the first results can be seen. Great progress has been made concerning the awareness of the population and the involvement of politicians in solving the problems. People have become more aware of the problems and are now determined to live in a healthier environment.

Chronological overview of systematic approach to reduce air pollution

The air in the city was polluted by more than 7000 small domestic furnaces, some tens of commercial furnaces, with the power of more than 0.2 MW, and by numerous industrial sources. The greatest were the production of titanium white based on sulfate procedure (1% of the world production of TiO_2), sulfuric acid production, ironworks, enamel factory, and ceramic industry.

The imission concentrations of SO_2 in winter used to exceed critical values stated by the national legislation. In the late 1970's the imission concentrations exceeded values as high as $4600 \text{ mgSO}_2/\text{m}^3$ (15).

It was very soon obvious that that air pollution has a considerable impact on other environmental elements especially such as soil, ground, and surface waters. Health problems related to air pollution were exceeding in comparison to other parts of Slovenia. This all together forced the local community to apply measures to reduce emissions in the air.

In 1968 a Commission was established by the city authorities to carry out clean up programs for water and air. One of the main objectives of this Commission was to identify sources of air pollution in Celje. In 1976 intensive measurements and analyses started to collect data to support public decisions.

A further step in this systematic approach was made in the year 1981 when Public Agreement for Conservation of Environment was reached. For ten years this agreement obliged all air and water polluters to take action to reduce pollution. The result was a considerable reduction in emission concentrations from industries and more powerful commercial furnaces. However, this Public Agreement had a major drawback: it neglected the problem of small domestic furnaces. One of the main reasons for this is the public misconception according to which industry (the production of TiO_2 and H_2SO_4) was the only air polluter in the city, which, of course, was not true.

The problem of small domestic furnaces was first dealt systematically by the Clean Air Program for the period between 1993 and 2000 (16,17). This program started in 1993 with the main objective to reduce emission concentrations to such an extent that by the year 1995 the 24-hour average imission concentrations of SO_2 would not exceed $375 \text{ mgSO}_2/\text{m}^3$ (critical value). In addition, by the year 2000 the average imission concentrations would be further reduced to $125 \text{ mgSO}_2/\text{m}^3$ (limited value).

The clean air plan

The technical basis for the development of the clean air program was a mathematical model for working out the imission concentrations of SO_2 based on the emission data. The amount of used fossil fuels was the basis for establishing the use of energy, which was later

converted into the use of another fuel. The equivalent use of other fuels was the basis on which corresponding emissions and imissions were worked out. The results showed that the emission concentrations in Celje must be reduced to less than 600 tons of SO₂ per heating season. To achieve this goal we had to set limits to the emissions from all industries and carry out the gasification of most furnaces in Celje (18).

The industries in Celje have been making efforts to reduce the emissions of SO₂ for years. After 1990 the intensive gasification of small domestic furnaces started. Between 1988 and 1996 more than 45 kilometers of gas pipeline network was built, the price of gas was subsidized by the local authorities, bank loans were available at a low interest rate so that individuals could connect to the gas pipeline network. The gasification network system was planned and developed according to the extent of SO₂ emissions at a certain city area.

Reductions in emissions of SO₂

The first SO₂ emission concentrations from industries were recorded back in 1945. In 1979 the first complete inventory of air pollutants was made. Initially this inventory included industries only, but was later on added with emissions data from furnaces. A complete emission inventory was also made in the years 1984, 1988 and 1993. Emissions of SO₂ in Celje between the years 1945 and 1993 can be seen in Table 2.

Table 2. Emissions of SO₂ in Celje between 1945 and 1993 (in tons of SO₂/year)

YEAR	Production of TiO ₂ and H ₂ SO ₄	Other industries	Commercial furnaces	Small domestic furnaces	TOTAL
1945	3000				
1956	8300				
1961	14000				
1979	4125	1002	430	450	6007
1981	3400	427	263	539	4620
1984	2783	427	288	830	4328
1988	2320	427	230	797	3774
1993	1160	5	103	499	1767

The total emission of SO₂ has constantly been reduced since 1979 and was, in 1993, lower by 70% compared to fourteen years earlier. However, the emissions increased in small domestic furnaces, which was due to a fault in the Public Agreement for Conservation of Environment (19).

Between the years 1979 and 1993 the relationship between polluters was changed. In the heating season of 1979 the proportion of SO₂ emissions was as follows: 60% of the total emission was caused by factory producing TiO₂ and H₂SO₄, 25% by furnaces, and 15% by other industries. Today the proportion of the rest of the industries can be neglected, the proportion between emission by factory producing TiO₂ and H₂SO₄ and furnaces is 50:50.

Changes in imission concentrations

The lower level of SO₂ emissions was necessarily reflected in the degree of air pollution. The measurements of SO₂ imission concentrations, which were carried out in the late 1960s, show a very high degree of air pollution by SO₂. In 1977 measurements at regular intervals started. The results of the latter show constant decrease in the imission concentrations of SO₂ in Celje and surrounding suburbs - Teharje (Table 3).

Table 3. Imission concentrations of SO₂ at the measuring sites of Celje and Teharje as measured at national network measuring station (µg SO₂/m³).

Celje				Teharje			
year	annual average	24-h avg. 98-percentile	24-h avg. max. conc.	year	annual average	24-h avg. max. conc.	24-h avg. max. conc.
Oct.67-sept.68 ⁺	280	1150	1570	1979	158	579	940
1978	160	530	740	1980	108	414	960
1979	150	750	1230	1981	123	616	890
1980	130	490	810	1982	78	267	400
1981	150	600	950	1983	66	270	380
1982	120	390	440	1984	73	268	360
1983	120	470	600	1985	70	359	600
1985	130	610	1060	1986	75	330	590
1986	60	230	480	1987	83	429	590
1987	100	410	680	1988	48	200	500
1988	50	250	380	1989	67	295	330
1989	60	360	470	1990	53	260	390
1990	50	270	360	1991	52	270	580
1992	30	70	220	1992	40	250	250
1993	50	200	340	1993	35	158	352
1994	38	147	237	1994	29	113	192
1995*	28	97	213	1995	40	111	192
1996*	25	74	88				

⁺ data from study »Air pollution in Celje and Štore (Hraševac 1968)

* data from EIS Celje

As one may observe, the imission concentrations (annual average values, concentrations of C98 and 24-hour maximum concentrations) showed a clearly decreasing trend.

Apart from measurements of imission concentrations of SO₂, the degree of air pollution in Celje was measured by series of other measurements organized in a local measuring network. The existing quantity and the types of measurements can be seen in Table 4.

Table 4. Air pollution measurements carried out by the local measuring network.

LOCATION	TYPE OF MEASUREMENT	PERIOD OF TIME
EIS Celje	SO ₂	throughout the year
city's central automated measuring site; system is equipped with public display	NO ₂ , NO, NO _x	throughout the year
	CO	throughout the year
	suspended particles	throughout the year
	Ca, Pb, Zn, Ti (particles)	throughout the year
Additional measuring network		
• four measuring sites	SO ₂ , black smoke	throughout the year
• one measuring site	NO ₂	throughout the year
• twelve measuring sites	total deposit + Cd, Pb, Zn; Ti in deposit	throughout the year

The local measuring network results

The most significant conclusions made by the local measuring network are as follows:

SO₂

Since 1995 the ambient air concentrations have not exceeded the maximum allowable concentrations (MAC).

Table 5. Average annual ambient air concentrations of SO₂ in µg /m³.

Year	1968	1978	1994	1995	1996
Max. conc.	280	260	57	48	32

MAC = 50 µg SO₂/m³ per year

Black smoke

Since 1990 black smoke has been reduced due to widespread use of light fuel oil or gas instead of coal. Since 1993 the annual ambient air concentrations have not exceeded the MAC.

Table 6. Average annual ambient air concentrations of black smoke in µg /m³.

Year	1978	1993	1994	1995	1996
Max. conc.	37	20	20	21	17

MAC = 50 µg of black smoke /m³ per year

The concentration of nitrogen dioxide and carbon monoxide (data not shown) in the center of the city did not exceed the maximum guideline levels (MGL) in a few past years. However, the results of measurements of imission concentrations of suspended particles show that the problem of air pollution with particles in Celje remains unsolved.

It has been found out by the measurements of the amount of cadmium, lead, and zinc in suspended particles that the imission concentrations vary considerably (data not shown). The precise evaluation of the results will be possible after a longer, solid period of measuring (20, 21).

The measurements of the total air deposition have shown that the imission concentrations decreased significantly in industrial zone of the city, while in residential areas changes were not so significant. In some parts of the city MGL values are still exceed occasionally. This is not the case only in industrial zones, but also in densely populated areas in other parts of the city.

Cadmium, lead, and zinc in total deposits have shown that the imission concentrations did not decrease significantly in any part of the city since last two or three years when decrease of about 50% of former concentrations was observed at almost all measuring sites.

Conclusion

A clean environment is the basis for healthy and happy lives for people and other living beings. The community of Celje has only become aware of its importance to the environment when they have already inflicted serious damage on it and were afterwards paying a heavy price in order to remove consequences of environmental pollution in previous years.

The restoration of the environment is a complicated project that should include experts from the natural sciences as well as technical, economical, and political fields. The technological, economic, sociological, and psychological know-how are equally important.

The basis for successful work is the right information about pollution of a particular segment of the environment and regular monitoring of the effects of the measures taken.

Simultaneously with the measures to reduce pollution already inflicting damage on the environment, it is necessary to prevent further sources of pollution. The pollution of the environment has become a hindrance to further development. As a result, only energy-saving technologies should be used, which would enable us to use natural resources sensibly and reduce pollution. When planning and designing new buildings, they have to be carefully spaced and the communal infrastructure has to be expanded.

Willingness, expertise, good organization, creative co-operation of the parties involved and financial support are needed to find out the reasons for and to take measures against the consequences of pollution. If actions are taken in time, the ill effect of pollution on the environment can be prevented. Celje has the right conditions to act efficiently and thus reduce the present degree of pollution and prevent new mistakes.

Exercise

The main aim of the exercise is to get the students acquainted with the importance of environmental influences on health. They should understand that an intersectoral approach, which recognizes all facets of a community, helps in achieving better health for all.

Task 1:

Look at the Table 1. Name the diseases with the largest absolute burden attributable to environmental factors in developed countries and globally. Are there any differences? If yes, then explain reasons for differences.

Task 2:

Local authorities and their communities have assumed new responsibilities for global environmental problems. They were encouraged to join some already existing international programs and established their own projects to address these challenges. Try to develop a comprehensive LEHAP for the most important environmental problem in your local community.

Task 3:

Is air pollution an environmental problem in your local community? What are the main sources of air pollution? Explain the difference between hazard and risk of air pollution. List five solutions to reduce human exposure to polluted air.

After accomplishing this module students should be able to identify environmental factors that potentially affect human health and explain the relationship between risk and hazard. They should recognize the impact of environment on health and be able to list diseases with the largest environmental contribution worldwide and in developed countries as well. Finally, the significance of local community and importance of intersectoral approach in implementing measures to reduce environmental risks should be acknowledged.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Implementation of the Protocol on Water and Health in the Republic of Macedonia
Module: 1.3.1	ECTS: 1
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Key words	Public health, Protocol on water and health, CEHAPE, drinking water, sanitation
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none"> • develop their own case study that would illustrate the principles cited in this paper; • review the state of access to safe drinking water supply and related impact to children’s health; • review the state of access to improved sanitation and related impact to children’s health; • increase knowledge of the value of safe drinking water and sanitation, especially for children; and • recognize the importance of public health, especially preventative health programme with an ultimate goal of health promotion, improvement of access to safe drinking water and sanitation, and disease prevention activities especially in children.
Abstract	Childhood is a critical component of the health care life cycle. The objective of this Protocol is to promote at all appropriate levels, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective, within a framework of sustainable development, through improving water management, including the protection of water ecosystems, and through preventing, controlling and reducing water-related diseases. This is especially important for children as the most vulnerable group of population. Status of access to safe drinking water supply and improved sanitation in the Republic of Macedonia was reviewed, as well as the related health impacts.

<p>Teaching methods</p>	<p>Teaching methods:</p> <p><i>Lecture 1:</i> Health Promotion/Disease Prevention in Childhood – The Essence of Public Health.</p> <p><i>Lecture 2:</i> Evidence-based data on the benefits of safe drinking water supply and improved sanitation in childhood.</p> <p><i>Lecture 3:</i> Disease-specific recommendations for prevention and control of waterborne diseases.</p> <p><i>Exercise 1:</i> The purpose of the exercise is to provide students with basic information about relevant literature as a solid basis for health impact assessment</p> <p><i>Small group discussion:</i> The role of Protocol on Water and Health care in promoting quality of life in childhood.</p> <p><i>Practicum:</i> Students should be able to prepare essays in accordance to Task 1-3. Each of the group will oppose or accept the findings of the others.</p> <p><i>Exercise 2:</i> Students will identify status of access to safe drinking water in one city of their country and relevant health status of the local population, especially children.</p>
<p>Specific recommendations for teachers</p>	<p><i>Question and answer session to follow each lecture.</i> A question and answer session will follow each lecture to help students clarify key aspects of each topic.</p> <p><i>Lecture 1:</i> Provides an overview of how health promotion and disease prevention in childhood directly relate to the practices and principles of public health. Audiovisual equipment useful. Summary handouts to students in attendance based on this paper.</p> <p><i>Lecture 2:</i> Focuses on the role of Protocol on Water and Health and CEHAPE in childhood and their impact on morbidity and mortality. Audiovisual equipment useful. Summary handouts to students in attendance based on this paper.</p> <p><i>Lecture 3:</i> Summarizes selected disease specific recommendations to promote health and prevent waterborne diseases in children. Highlight evidence-based recommendations related to access to safe drinking water, improved sanitation and preventive health programmes.</p> <p><i>Exercise #1:</i> Regarding waterborne diseases, students should identify lifestyle changes that affect disease onset and control. They should be able to correlate morbidity of waterborne diseases with safe/unsafe access to drinking water supply. They should recommend how to promote health status of targeted population.</p> <p><i>Exercise #2:</i> Regarding waterborne diseases, students should identify lifestyle changes that affect disease onset and control. They should be able to correlate morbidity of waterborne diseases with improved/non-improved access to sanitation. They should recommend how to promote health status of targeted population.</p>

	<p><i>Small group discussion:</i> Mandatory participation. Interactive session. It is expected that students will have read the reference material pertaining to this topic prior to the session.</p> <p><i>Practicum:</i> Mandatory participation. Faculty will identify resources to present the importance of access to safe drinking water supply and improved sanitation. They will arrange for specific health professionals and civil engineers to work with students to achieve the programme goals.</p>
Assessment of students	<p><i>Pre/Post tests in association with each lecture.</i> Each student will complete a ten question pre-lecture test. This test will be repeated after the lecture is completed. Each post-test represent 10% of a student's grade.</p> <p><i>Small group discussion:</i> Mandatory participation. The small group discussion represents 20% of the student's grade.</p> <p><i>Practicum:</i> Mandatory participation. Synthesizing the material presented in class, the assigned readings, and their practical experience, students will write a two-page paper describing how safe access to drinking water and improved sanitation relates to health promotion and disease prevention. The summary paper represents 50% of a student's grade.</p>

IMPLEMENTATION OF THE PROTOCOL ON WATER AND HEALTH IN THE REPUBLIC OF MACEDONIA

Mihail Kochubovski

Introduction

The Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes is the first major international legal approach for the prevention, control and reduction of water-related diseases in Europe.

The Protocol was adopted in 1999 at the Third Ministerial Conference on Environment and Health, held in London, and entered into force in August 2005, becoming legally binding for the ratifying countries. So far, it has been signed by 36 countries in Europe and ratified by 21.

Signatories agreed to establish and maintain comprehensive national and/or local surveillance and early warning systems to prevent and respond to water-related diseases. They also agreed to promote international cooperation to establish joint or coordinated systems for surveillance and early warning systems, contingency plans, and responses to outbreaks and incidents of water-related diseases and significant threats of such outbreaks.

WHO/Europe and the United Nations Economic Commission for Europe (UNECE) provide the joint secretariat for the Protocol, coordinating activities for its implementation. WHO handles the health aspects, while UNECE takes care of the legal and procedural aspects (1).

In synthesis

By adopting the Protocol, the signatory countries agreed to take all appropriate measures to achieve:

- adequate supplies of wholesome drinking-water;
- adequate sanitation of a standard that sufficiently protects human health and the environment;
- effective protection of water resources used as sources of drinking-water, and their related water ecosystems, from pollution from other causes;
- adequate safeguards for human health against water-related diseases; and
- effective systems for monitoring and responding to outbreaks or incidents of water-related diseases.

Implementation

One representative from the Ministry of Health of the Republic of Macedonia has attended the UNECE-WHO *First meeting of the Parties to the Protocol on Water and Health*, held in Geneva, Switzerland on 17-19 January 2007. This First meeting of the Parties to the Protocol on Water and Health has tackled the issues about the influence of water pollution to the health and the environment.

The Republic of Macedonia has not signed yet the Protocol on Water and Health, but nevertheless it has worked hard to implement the targets made during the Third Ministerial Conference on Environment and Health by the Protocol on Water and Health, held in London, June 1999. In the near future there is a hope that the Republic of Macedonia will succeed to overcome broader issues that were obstacles for signing and ratification of the Protocol on Water and Health. Over the past years the Republic of Macedonia has worked on the

NPAA (National Programme of Approximation) to the EU's legislation, and the outcomes gave status of a Candidate Country in 2005. It is strongly believed that negotiations should continue on the necessity of becoming a Party to the Protocol, but there is a need of some interministerial negotiation process between the Ministry of Health, Ministry of Environment and Physical Planning, Ministry of Agriculture Forestry and Water Economy and Ministry of Foreign Affairs. Until now, progress has been made but due to incomplete new legislation, poor economic status and some other issues, the Protocol has not been signed yet.

The objective of this Protocol is to promote at all appropriate levels, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective, within a framework of sustainable development, through improving water management, including the protection of water ecosystems, and through preventing, controlling and reducing water-related disease (2).

I. Current situation concerning the access to water supply and sanitation in Macedonia

1. Water quality and safe sanitation seen as a priority

In the Republic of Macedonia drinking water quality has the highest priority. Concerning safe sanitation it is a top priority regarding the urban area, but the situation is different in the rural area, although there are some positive changes.

2. Challenges in relation to water and health

At the national level, there are not particular challenges in relation to drinking water and health. But, there is a problem for example in Sveti Nikole, a small town of 12,000 inhabitants (in the Central-East part of the country) where high level of aluminium and trihalomethanes (THM) was found in treated water from Drinking Water Treatment Plant. The high content of aluminium and THM are due to the fact that the Water Treatment Plant is conditioning surface water from the local Dam (built for irrigation in 1970s). This is a small dam with only 2,000,000 m³ water, and during the past three years the quality of raw water was very bad (high content of aluminium and natural organic matter in raw water). In 2003 drinking water from Water Treatment Plant was forbidden for use, and since then citizens drink water from water tanks filled-up with safe water from water supplying system in Shtip (neighboring city). A new Water Treatment Plant is being built but its construction is not finished yet (3).

3. Proportion of the population with continuous access to:

- an improved water supply
 - safe drinking - 93% (urban* 99% and rural** 78%) status in 2005
with prediction of 95% in 2010
 - unsafe drinking - 7%
 - rural 22%
 - *centralized piped water supply* 33%¹ (297,417 inhabitants - 14%²)
bacteriological improper samples - 2.3%
 - *local piped water supply* 54%¹ (489,213 inhabitants - 23%²)
bacteriological improper samples - 23%
 - *local water supply sources* 13%¹ (117,000 inhabitants - 6%²)
bacteriological improper samples - 30%

¹ percentage from rural population (903,630 inhabitants)

² percentage from total population (2,103,630 inhabitants)

* urban population 1,200,000

** rural population 903,630

29% of total populations that live in rural areas use drinking water from local piped water supply and local water supply sources. In these areas 26% of bacteriological improper samples have been registered. By approximation it could be estimated that about 239,303 inhabitants from rural areas (11% from the total population) are drinking potentially unsafe drinking water, because of lack of continuous chlorination which is a precondition for safe drinking water. Our Government has a goal to improve the access to safe drinking water by construction of new water supply systems and improvement of disinfection of drinking water.

- improved sanitation
 - urban 90% (in 2005) with prediction of 95% (in 2010)
 - rural 15% (in 2005) with prediction of 30% (in 2010)

4. Children affected by water-related diseases in the Republic of Macedonia

The Children Environmental Health Action Plan for Europe (CEHAPE) is a document for policy makers addressing the environmental risk factors that most affect the health of European children. It was developed on request of the member states and adopted by european ministers at the Fourth Ministerial Conference on Environment and Health, held in Budapest in 2004, with the main topic "The future for our children".

This action plan highlights the main commitments on children's health and environment and focuses on four regional priority goals (RPGs) for Europe:

- RPG I: ensure safe water and adequate sanitation
- RPG II: ensure protection from injuries and promote adequate physical activity
- RPG III: ensure clean outdoor and indoor air
- RPG IV: aim at chemical-free environments

By addressing environmental risk factors, the CEHAPE covers two of the seven priorities within the comprehensive WHO European strategy on child and adolescent health and development.

According to the CEHAPE the health status in the Republic of Macedonia referred to waterborne diseases is as following:

- Bacillary dysentery: in 2005 = 8 cases in children /0-19 age/ compared to 5 cases in adults/20->60 (61.54% in children/0-19 age, compared to 38.46% in adults/20->60).
- Enterocolitis: in 2005 = 4350 cases in children /0-19 age/ compared to 2501 cases in adults/20->60 (63.49% in children/0-19 age, compared to 36.51% in adults/20->60).
- Hepatitis A: in 2005 = 535 cases in children /0-19 age/ compared to 171 cases in adults/20->60 (75.78% in children/0-19 age, compared to 24.22% in adults/20->60).

5. Steps taken to reduce the burden of water-related diseases among children

There was a National Action Programme for Improvement of sanitary-hygienic situation in rural areas in the Republic of Macedonia in the period between 1971-1991. Principal research institution was the Republic Institute for Health Protection-Skopje, and the programme was financed by Water Economy Secretariat and Health Insurance Fund. During the implementation of this Action Programme the water supply networks in 850 villages have been built, as well as 25 sewerages.

In the period from 1991 to 2006 new water supply networks in 90 villages have been built.

In 1971 access to safe drinking water in the Republic of Macedonia was 64%, and after the implementation of the National Action Programme 1971-1991 and efforts from 1991-2003, access to safe drinking water in 2003 has been increased to 93% (4).

6. Progress has been made since 2004, on reducing the number of children suffering from water-related diseases

There was a significant progress in reducing the number of children with bacillary dysentery:

- (in 2004 = 14 cases in children /0-6 age/ compared to 2005 = 6 cases in children /0-6 age),
- (in 2004 = 5 cases in children /7-14 age/ compared to 2005 = 1 case in children /7-14 age),

There was decreasing in enterocolitis morbidity:

- (in 2004 = 3519 cases in children /0-6 age/ compared to 2005 = 3147 cases in children /0-6 age),
- (in 2004 = 1043 cases in children /7-14 age/ compared to 2005 = 820 cases in children /7-14 age).

But there was increasing of prevalence in hepatitis A:

- (in 2004 = 36 cases in children /0-6 age/ compared to 2005 = 283 cases in children /0-6 age),
- (in 2004 = 70 cases in children /7-14 age/ compared to 2005 = 181 cases in children /7-14 age).

7. National programme to improve continuity and quality in water supply

Now, the implementation of the improvement of the water supply is the responsibility of the Ministry of Environment and Physical Planning, Ministry of Agriculture, Forestry and Water Economy and Ministry of Transport. The role of the Ministry of Health, respectively Republic Institute for Health Protection-Skopje is to monitor the quality of drinking water from new sources, and the ten regional Institutes for Health Protection have the responsibilities to monitor water quality during the year according to the Preventive Health Programme (5).

The Government of the Republic of Macedonia represented by the Ministry of Agriculture, Forestry and Water Economy in cooperation with the Ministry of Environment and Physical Planning, Ministry of Health, Ministry of Local Self-Government and other relevant stakeholders, supported by Japan Bank for International Cooperation (JBIC) and Japan International Cooperation Agency (JICA) are working on the improvement of water supply systems and irrigation in north-eastern part of Macedonia for seven municipalities - Kratovo, Probitip, Zletovo, Lozovo, Stip, Karbinci and Sveti Nikole, with total number of around 100,000 inhabitants. This process has started in 2005, but there were some previous investigations in 2001 as well.

Special emphasis is put on children's health and drinking water quality.

8. Challenges and constraints

There is a high level of political support, and high level of public awareness and readiness for voluntary labor, however financing of construction of new water supply networks, as well as maintenance of the already built ones is a big problem.

II. Water quality

9. National microbial failure rate of the water supply system (measured against *E. coli*)
National microbial failure rate of the urban (1,200,000 population) water supply system is 0.8% because of the increased number of aerobic mesophilic bacteria. But, for rural areas (489,213 population) this is much higher, as 23% of samples have been improper because of microbial contamination, mostly as a result of lack of chlorination of drinking water. Only few percents are due to *E. coli* (6).
10. National chemical failure rate of the water supply system
Urban water supply system in the Republic of Macedonia had 5.6% improper samples because of lack of residual chlorine, and higher values of manganese and iron (in Kocani and Stip). Since 2003 the local water supply system has been forbidden for usage in Sveti Nikole because of higher levels of aluminium and trihalomethanes in treated drinking water. In rural areas water supply system had 19% improper samples because of physico-chemical analyses mainly due to lack of residual chlorine, and showing only few high level of nitrate (some villages in Strumica), and 20% improper bacteriological samples because of higher content of coliform bacteria (6).
11. Laboratories carrying out the water quality assessment internationally accredited
The Republic Institute for Health Protection-Skopje and its laboratories have been accredited for ISO 17025 (control of food quality - drinking water is a food according to the Food Safety Law in Macedonia (2002 and 2007). In addition, the ten regional Institutes for Health Protection are conducting the accreditation for ISO 17025 but only for the basic methods of food quality investigation.

III. Surveillance

The surveillance system is aimed at prevention and early alert, as well as outbreak detection and control/assessment of contagious diseases. There has already been established an ALERT System supported by the WHO in 2006.

12. Collection of data:
 - based on gender; and
 - based on age: 0-6, 7-14, 15-19 and 20-60>.
13. Standardized death rate in the below-5 population, per 100,000, of diarrheal diseases
There was a decreasing trend in standardized death rate under five (1990 = 730/100,000; in 1997 = 390/100,000; and in 2002 = 265/100,000), of all causes.
Standardized death rate under five population, per 100,000 of diarrheal diseases was 8.53 in 2002 (last available).
Mortality (total) of under five population per 1,000 live born in 2003 was 11.3.
In 2004 and 2005, there were no registered cases of deaths caused by diarrheal diseases in the Republic of Macedonia.
14. Incidence rate and case number of the following priority water-related diseases: cholera, enterohemorrhagic *E. coli*, hepatitis A, Shigellosis/bacillary dysentery, and typhoid

Overall:

- Bacillary dysentery: in 2004 = 20 cases in children/0-19 age/ compared to 9 cases in adults/20->60 (68.97% in children/0-19 age, compared to 31.03% in adults/20->60).
- Bacillary dysentery: in 2005 = 8 cases in children/0-19 age/ compared to 5 cases in adults/20->60 (61.54% in children/0-19 age, compared to 38.46% in adults/20->60).
- Enterocolitis: in 2004 = 5010 cases in children/0-19 age/ compared to 2832 cases in adults/20->60 (63.89% in children/0-19 age, compared to 36.11% in adults/20->60).
- Enterocolitis: in 2005 = 4350 cases in children/0-19 age/ compared to 2501 cases in adults/20->60 (63.49% in children/0-19 age, compared to 36.51% in adults/20->60).
- Hepatitis A: in 2004 = 144 cases in children/0-19 age/ compared to 76 cases in adults/20->60 (65.45% in children/0-19 age, compared to 34.55% in adults/20->60).
- Hepatitis A: in 2005 = 535 cases in children/0-19 age/ compared to 171 cases in adults/20->60 (75.78% in children/0-19 age, compared to 24.22% in adults/20->60).
- Cholera and typhoid were not registered.

15. Steps taken to reduce the endemic disease level, especially in children

Several steps have been taken to reduce the endemic diseases level, especially in children, mainly by improvement of access to safe drinking water and sanitation, raising public awareness, health education and training, etc. National Environmental Health Action Plan from 1999 made priorities to improve access to safe drinking water and sanitation (7).

16. Steps taken to reduce the number and severity of outbreaks

An alert system has been introduced since 2006 in order to reduce the number and severity of outbreaks, with the help of WHO. The Ministry of Health is working on improvement of the Health Information System.

IV. Education and awareness

17. Health education and awareness programmes on hygiene among public, parents, schools, communities included in professional training

There are topics about public health, hygiene, drinking water quality and management as educational programmes in schools (Green Packet), High Schools and Medical Faculty (Chair of Hygiene is teaching subjects - Environmental Health, Food Safety and Nutrition) and training programmes (150 hours) about water quality management for unemployed and professionals.

18. Involvement of local authorities, NGOs, research and academic bodies, media, private industry, and other sectors in water-related disease prevention activities

Local authorities, NGOs, research and academic bodies (medical), media, private industry food production by introducing Hazard Analysis Critical Control Point (HACCP), and other sectors are actively involved in water-related disease prevention activities.

19. Relevant national websites, publications or research

The Republic Institute for Health Protection-Skopje has its own web site (www.rzzz.org.mk) which offers important information about prevention of water-related diseases, as well as drinking water quality etc. There are also relevant data about most important environmental health issues, especially regarding children's health. Most of the data are

in Macedonian language, but there are some important topics in English. There is a plan of improving the web site content.

V. Institutional set-up

20. Departments responsible for drinking water supply

Public Enterprises of Communal Hygiene in all cities are responsible for safe drinking water supply, as well as for some villages. They are under responsibility of the Ministry of Transport.

21. Departments responsible for drinking water quality

The Republic Institute for Health Protection-Skopje and the ten Regional Institutes for Health Protection (in Skopje, Kumanovo, Kocani, Shtip, Veles, Strumica, Bitola, Ohrid, Prilep and Tetovo) are responsible for monitoring of drinking-water quality. They report to the Food Directorate, a constituent segment of the Ministry of Health. Food Directorate was established and started to work in 2005.

22. Interdepartmental coordination body

Minister of Health has established a multidisciplinary coordination body - Commission for drinking, bottled and natural mineral water safety, and has nominated 6 experts (specialists of hygiene, biologist, chemist, technologist and lawyer). This Commission's task is to solve any problem of high priority related to drinking water quality at the national level.

VI. Survey of drinking water quality in the Republic of Macedonia

23. Drinking water quality in urban areas for the period 2001-2005

Data presented in Tab. 1 show slight improvement in the bacteriological quality of the investigated samples of drinking water in urban areas from 2001 to 2005.

Table 1. Drinking water quality in urban areas in Macedonia for the period 2001-2005

Period of monitoring	Physical-chemical %	Bacteriological %	Number of samples
2001	4.2	1.3	11534
2002	5.3	1.5	10681
2003	7.5	1	11932
2004	5.6	1	12136
2005	5.6	0.8	11946

24. Drinking water quality in rural areas for the period 2001-2005

From 2001 to 2005 there was registered small declination of the drinking water quality in rural areas (Tab. 2).

Table 2. Drinking water quality in rural areas in Macedonia for the period 2001-2005

Period of monitoring	Centralized piped water supply		Local piped water supply		Local water supply sources		Total		
	p-h %	bact. %	p-h %	bact. %	p-h %	Bact. %	p-h %	bact. %	No. of samples
2001	9.2	2.1	12	28	25	39	15.4	23	7428
2002	6.9	3.5	11.8	29	16.9	49	11.8	27.1	7238
2003	11	4.5	12.4	24.5	26.5	42	15	24	7953
2004	10	8	18	32	25	42	17.5	27	8594
2005	5.8	2.3	19.6	23	29	30	19	20	9028

25. Water quality of natural lakes for the period 2001-2005

Data in table 3 obviously show some improvement in the physical-chemical quality of surface water from natural lakes in Macedonia during the investigated period.

Table 3. Water quality of natural lakes in Macedonia for the period 2001-2005

Period analyses	2001		2002		2003		2004		2005	
	class		class		class		Class		class	
	I-II	III-IV	I-II	III-IV	I-II	III-IV	I-II	III-IV	I-II	III-IV
physical-chemical	78%	22%	75%	25%	93.8%	6.2%	85.4%	14.6%	93.8%	6.2%
Bacteriological	98%	2%	97%	3%	96.4%	3.6%	88%	12%	96.4%	3.6%
No. of samples	216		218		195		178		195	

There are three natural lakes in the Republic of Macedonia: Ohrid, Prespa and Dojran. They are transboundary international lakes. Ohrid Lake usually belongs to the first, and Prespa Lake to the second class. Dojran Lake, because of natural enrichment concerning physical-chemical analyses, belongs to III-IV class (iron, manganese, iodine etc.). Monitoring of the bathing water quality is made by the Republic Institute for Health Protection and three regional Institutes for Health Protection (Ohrid, Bitola nad Veles).

In the case of improper results the above mentioned institutes inform the State Sanitary and Health Inspectorate, section of the Ministry of Health. State Sanitary and Health Inspectorate proclaim this potentially polluted surface water, and forbid its use for bathing, which is followed by information given to public by public media.

VII. Approximation status of drinking water quality, natural mineral water quality and bathing water quality in the Republic of Macedonia

26. Approximation in drinking water quality

The Republic of Macedonia as an accession country to European Union in 2004 had a goal to harmonize its national legislation related to the environmental protection. One of the achieved goals was a preparation of a new Book of Rules for Drinking Water Safety. The process has started with the translation of the Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for community action in the field of water policy, and Council Directive 98/83/EC on the quality of water intended for human consumption. A lot of work on preparation of the new Law on Waters was done during 2002-2003. There were three drafts prepared by the working group, that

consisted of nominated experts from the Ministry of Agriculture, Forestry and Water Economy, Ministry of Environment and Physical Planning and Ministry of Health, and in December 2003 was completed the Final version of the new Law on Waters. This process has been supported by the European Union and managed by the European Agency for Reconstruction. In autumn 2003 the Republic Institute for Health Protection-Skopje has started a preparation of the new Book of Rules for Drinking Water Safety, according to the nomination done by the Ministry of Health. The first Draft has been sent by the Ministry of Health to the other respective ministries, institutions and associations (of Specialists in hygiene and environmental health, microbiologists, chemists, etc.) in order to have an expert opinion and remarks. After collecting of all replies, the First Draft was revised and all other necessary issues were included in order to have a Book of Rules that would be applicable and recognized in practice by all stakeholders in the field of drinking water management. The Final Version was sent to the Ministry of Health on 26th December 2003. The new Book of Rules is not valid for natural mineral waters in accordance with the Council Directive 80/777/EEC, and waters which are medicinal products according to the Council Directive 65/65/EEC. WHO recommendations (Guidelines for drinking water quality, 2nd edition; Copenhagen; 1996) were also included in the new Book of Rules, as well the local circumstances and priorities. This was only one step in the process of the approximation and harmonization of the national legislation with the European Union's one, in order to have sustainable development in the field of protection of water sources, treatment and disinfection of water, as well as monitoring of the drinking water quality in order to protect human health. Public information and communication is a part of this sub-law, in accordance with the EU Directive 98/83/EC and Convention on access to information, public participation in decision making and access to justice for questions related to the environment, set-up at the Fourth Ministerial Conference "Environment for Europe" in Aarhus, 1998. The new Book of Rules for Drinking Water Safety was proscribed in the Official Gazette of the Republic of Macedonia No.57/2004 and it is a powerful tool for protection of human health. However new WHO recommendations (Guidelines for drinking water quality, 3rd edition; Geneva 2004) were published and there is a need for amending this Book of Rules and it is planned to be done in 2007 (8).

27. Approximation in natural mineral water quality

The Republic of Macedonia as a Candidate Country to European Union has a goal to harmonize its national legislation related to the environmental protection. One of the achieved goals was a preparation of a new Book of Rules for Natural Mineral Water Safety. The process has started with the translation of the Council Directive 80/777/EEC, 96/70/EEC and 2003/40/EC of the European Parliament and of the Council for natural mineral water quality intended for human consumption. The new Book of Rules was proscribed according to article 8, paragraph 1 of the Law for food safety and products and materials that are in contact with food ("Official Gazette of the Republic of Macedonia" No.54/2002). In spring 2004, the Republic Institute for Health Protection-Skopje started a preparation of the new Book of Rules, given the nomination by the Ministry of Health. The first Draft was sent to the members of the Committee for Natural Mineral Water, as well to different institutions and associations (of Specialists in hygiene and environmental health, microbiologists, chemists, etc.) in order to have an expert opinion and remarks. After collecting of all replies, the First Draft was revised and all other necessary issues

were included in order to have a Book of Rules that would be applicable and recognized in practice by all stakeholders in the field of natural mineral water management. The new Book of Rules applies to natural mineral waters in accordance with the Council Directive 80/777/EEC, 96/70/EEC and 2003/40/EC, but does not apply to waters which are medicinal products according to the Council Directive 65/65/EEC. WHO Guidelines for drinking water quality, 2nd edition; Copenhagen; 1996, and 3rd Edition; Geneva 2004, Codex Alimentarius Commission - Codex standards for natural mineral waters, Vol.XIII; Second Edition, Vol.XIII/1994, Methods of analysis and sampling; Codex standards for natural mineral waters, Vol.XII/1982 and Revision 1-11/1997; and Vol. XII/2001; General standard for bottled/packageged drinking waters (others than natural mineral waters, 227-2001); as well the local circumstances and priorities have been taken into consideration. This was only one step in the process of the approximation and harmonization of the national legislation with the European Union's one, in order to have sustainable development in the field of protection of sources and treatment of natural mineral water, as well as monitoring, in order to protect human health. Public information and communication is a part of this sub-law, in accordance with the EU Directives 96/70/EEC, 2003/40/EEC and Convention on access to information, public participation in decision making and access to justice for questions related to the environment, Aarhus, 1998. The new Book of Rules for special requirements for natural mineral water safety was proscribed in "Official Gazette of the Republic of Macedonia" No.32/2006 and is a powerful tool for protection of consumers' rights and human health (9).

28. Approximation in bathing water quality

Within the activities of NPAA for the period 2007-2008, it is planned a new Book of Rules for Bathing Water Quality harmonized with the Directive 2006/7 of the European Parliament and of the Council concerning the management of bathing water quality and WHO (10).

Ministry of Health is responsible for preparation and proscribing of this new Book of Rules in cooperation with the Ministry of Environment and Physical Planning.

The scope of this new Book of Rules should be:

- monitoring and classification of bathing water quality;
- management with the bathing water quality;
- public information concerning the bathing water quality.

The aim of this new Book of Rules will be to protect and promote environmental quality and to protect human health by complementing/upgrading the Directive 2000/60/EC.

This new Book of Rules shall cover surface water quality which huge number of people will use for bathing. Establishment of permanent prohibition for bathing, or permanent advice against bathing issuing will be done by responsible authorities.

Conclusion

Children Environmental Health Action Plan for Europe (CEHAPE) is a document for policy makers addressing the environmental risk factors that mostly affect the health of european children. It was developed on request of member states and adopted by european ministers at the Fourth Ministerial Conference on Environment and Health (2004) on "The future for our children". This action plan highlights the main commitments on children's health and environment and focuses on four regional priority goals (RPGs) for Europe. The

first regional priority goal is to ensure safe water and adequate sanitation. Within this context and the Protocol on Water and Health, Ministry of Health of the Republic of Macedonia its own drinking water quality and children's health has been evaluated in order to be able to improve the quality of life of the most vulnerable part of the population.

Student Assignment

Based on this case study concerning the drinking water quality and children's health, develop your own case study that would illustrate the principles cited in this paper.

Exercise: Systematic literature review

The purpose of the exercise is to provide students with basic information about relevant literature as a solid basis for health impact assessment.

Students should be able to prepare essays in accordance with Task 1-3. Each of the group will oppose or accept the findings of the others.

Task 1: *Determine the scope of the literature review*

Scope

- Inclusion criteria
- Exclusion criteria

Types of literature

- Inclusion criteria
- Exclusion criteria (such as excluding newspaper articles or non-peer reviewed material)

Task 2: *Determine the sources of relevant literature*

Primary sources (such as original peer-reviewed articles)

Secondary and tertiary sources, such as review articles, reports, citations in journal articles, books, literature directories, Internet databases, newspapers, personal communications and unpublished data

Task 3: *Review and evaluate literature*

Develop evaluation criteria

Evaluate each paper in relation to

- Methods used
- Relevance to local area
- Validity of findings

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Recommended readings

1. UNECE. Protocol on Water and Health. Available from: <http://www.unece.org/env/water/welcome.html>
2. United Nations. Millennium Development Goals (MDGs). Available from: http://www.euro.who.int/watsan/issues/20050518_1.
3. Children’s Environment and Health Action Plan for Europe (CEHAPE). Available from: http://www.euro.who.int/childhealthenv/Policy/20020724_2.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Community Development for Health Promotion
Module: 1.4	ECTS: 0.5
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Key words	Community development, health promotion, partnerships, program sustainability
Learning objectives	<p>After completing this module students should:</p> <ul style="list-style-type: none"> • be familiar with the »healthy community concept«; • explore the similarities and differences between different types of building healthy communities; • be able to initiate sustainability of healthy community programmes through the wide partnership; • accept the importance of project such as »Healthy Cities«, »Healthy Schools« »Healthy Kindergartens« »Healthy Hospitals«, »Healthy Universities «, etc; • summarize the needs for establishing such a programme.

<p>Abstract</p>	<p>Development of a healthy community today represents an important process from different stand point, especially for improvement of population health and for health promotion intervention among vulnerable population groups such as women and children, adolescents, poor people and refugees.</p> <p>Community orientated approach particularly ensures proper identification and meeting the needs of underserved population groups which are most often not recognised among under, either because they belong to special ethnical or cultural groups or to groups of poor. Community strengthening for improvement of their health is realised through the wide and sustainable partnership of local community members, their leaders, supportive organisations, financers and governmental institutions, which is present in all phases of health promotion intervention.</p> <p>Examples of community based health promotion programmes, in world and in Serbia, show that wide partnership ensures improvement of numerous health determinants which is impossible to achieve by isolated health service activities. Authentic community leaders that are educated for successful leadership during all phases have prominence in development of these programmes. Achievement of their long-term sustainability through the multidisciplinary approach is a constant challenge to community based health promotion programmes.</p>
<p>Teaching methods</p>	<p>Teaching methods include introductory lecture, exercises, and interactive methods such as small group discussions.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are available in the internet; • teacher should be ready to help students to explore the health promotion programmes and projects at WEB sites of WHO, CDC as well as the WEB site of Canada. • target audience: master degree students according to Bologna scheme.
<p>Assessment of students</p>	<p>Assessment is based on seminar paper and its presentation to other students, and oral exam.</p>

COMMUNITY DEVELOPMENT FOR HEALTH PROMOTION

Vesna Bjegovic, Milena Santric-Milicevic, Sanja Matovic-Miljanovic

Introduction

In the course of last two decades, after adoption of Declaration on Primary Health Care, community support has been recognised as exceptionally important element of population health improvement, especially of vulnerable population groups such as women and children, adolescents, poor people and refugees. But this interest of the health care for the community is not new and existed in previous centuries, when communities provided support to people's healers, as it is done today in some traditional cultures. At the end of 19th century participation of community was basic factor of public health movements that developed in European and other countries. However, in a first half of the 20th century development of big cities and achievements of medicine in treatment of infectious diseases limited activities of the community. Local and regional planning led to a separation of places where people live and where they work, and development of electronic media led to the loss of need to maintain relations with members of the local communities (1).

After the Second World War, the community is again re-affirmed since limited effects of the medicine based on curative approach are confirmed (hospital treatments, one-way relations doctor – patient and expensive technologies). Numerous surveys provide the evidences that efficiency of the medical technology for improvement of community health is by far lower in comparison with activities that such community can perform for its own health (2). Illustrative example is the difference in efficiency of intensive neonatal care for infants with lower body mass than normal and efficiency of community work with future mothers with provision of good prenatal care (3).

In addition to this, in spite of the development of the expensive health care it becomes less accessible to vulnerable individuals, families and community, not only in undeveloped, but also in highly developed countries. Large number of people affected by poverty lives in rural areas or city suburbs, not managing to satisfy the basic needs, and their communities are characteristic for numerous risks that endanger health: unsafe drinking water, lack of hygienic distribution of waste, bad living conditions, unemployment, malnutrition, violence, drug abuse, sexually transmitted diseases, teenage pregnancies (1).

For these reasons, building of *healthy communities* is today a leading goal of modern health systems and health institutions that recognise the importance of prevention of ill-health statuses through the development of healthy life styles and healthy environment. Modern reforms of the health system compulsorily consider the support of the community recognising that population health is also determined numerous factors outside medical care and that those factors can be controlled by community itself, through its cooperation with other sectors, such as sector of agriculture, water supply, education (4). Today, worldwide, many governmental and non-governmental organisations that develop models of health improvement and their implementation in local communities are established (5).

Community

Community concept itself is differently explained depending on discipline that is handling this term. Therefore, even in 1955, Hillery collected and analysed 94 definitions of this term, noticing three basic components of the community (6):

- people in social interaction;
- within geographical area, and
- those that have one or more common relations.

Much later, experts were also engaged in definition of this term. Bracht, for example, defined community as *»a group of people that shares common values and institutions«* (7). Nagy and Fawcett state that community most often entails group of people who share common place, experience or interest, so that it includes people who live in the same territory (same neighbourhood, same city or same state) (8). However, they emphasize that individuals can feel as a part of the community, above all since they share same experience, for example:

- racial and ethnical communities (Serbian community, European community or African);
- religious communities (Orthodox community, Catholic or Muslim);
- community of disabled individuals (with visual, developmental or mental disabilities).

One of newest is also Nutbeam's definition (9). He explains community as *»specific group of people who often live in defined geographical zone, share common culture, values and norms, and is organised through social structure according to the relationships that community developed over the time«*. Members of the community gain personal and social identity by sharing common beliefs, values and norms that are developed in past and can be modified in future. Individuals in community are aware of their identity as a group and share common needs and dedication to satisfy those needs. In modern communities, especially in developed countries, individuals do not only belong to one isolated community, but rather join into larger number of communities based on different features such as territory, occupation, social interests and use of spare time. Examples of these are business communities, working communities or different children's communities.

In last years, idea of community that reside a certain physical space is more and more received with reserve and the advantage is given to *»virtual«* communities (10). Development and expansion of interactive media and computer technology remove geographical differences among traditional communities. Development of Internet is the next example that shows that physical distance determines little differences among communities that use Internet, so that importance of component of geographical zones is more and more decreasing (11).

From the aspect of improvement of mother and child health, Rifkin emphasizes that it is necessary to abandon certain erroneous assumptions on community, that are often present in establishment of community based programmes (2):

1. *»Communities are homogeneous«*. In contrary, communities are most often not homogeneous, and interests of their members often exceeded community goals, especially if they are poor.
2. *»Knowledge automatically creates desired changes in behaviour«*. In reality, communities do not change adopted forms of behaviour when new ones are presented, and experience shows that traditional community behaviour often has certain value. Long time is needed for smaller or bigger desired change of behaviour.
3. *»Community leaders act with the aim to achieve highest interests for community members«*. Actions of leaders are not always for the benefit of whole community. What often happens is that persons with the influence on community members, redirect the

benefits of the preventive programme towards personal promotion or promotion of their families, neglecting the interests of the community.

4. »Financers and promoters of community programmes share same goals of community development«. Most often, this is not the case, since financers most often want to mobilise the resources of the community itself, as soon as it is possible, while promoters of the programme give advantage to development of the confidence among community members, which takes certain time, and for which the conflict of interest arises.
5. »Activities of community development do not create conflicts for planners«. In essence, management of community based programmes can have serious problems if it is not sufficiently flexible in adjusting defined goals to the dynamic development of activities in community. Above all, time is needed for activities to develop, and hence community give priority to other needs that were recognised in programme goals and individual interests may exceed those of the group.

From the aspect of improvement of mother and child health, important fact is that mothers and children represent most important segment of any community, and it is therefore needed to ensure their involvement in programmes, especially when it comes to the improvement of the health care for women. Pizurki and associates analyze several factors that determine involvement of women in community based programmes (12)

- their traditional and natural role in provision of health services;
- better possibilities for information flow towards female members of the community and children, with the creation of informal »network« of communications;
- women often have stronger roots in the community, especially in societies that are developing;
- many traditional activities of woman, such as preparation of meals, maintenance of hygiene or care for children, reflect aspects of the inter-sectoral cooperation for health improvement and finally;
- women's organisations that already exist in many communities provide ready structure for their participation in health improvement programme.

Development and enabling (strengthening) the community

Closely related to the community is a concept of the *community development*, which is affirmed in 1950s through the movement for community development under the auspices of United Nations. At that time, different initiatives based on community commenced, such as mothers' clubs in Europe, and interestingly, as stated by Tones (13), that for the first time this concept is considered in literature in an article by Leo Baric from 1955, under title »Health Education in community development«, in which the importance of the culture and dynamics of community on the territory of Yugoslavia is analysed. Also, one of first projects organised for development of the community in the world ran in 1950s in our country, in Ivanjica, with the goal of decreasing infant mortality through the community action, and improvement of infant, children, pregnant women and mothers' health care (14). Practice of development and effective involvement of the community through specific programmes that, partly or fully, were orientated to improvement of health of women and children in our country was present even later (15, 16, 17).

Firstly, term »community development« means mass health-educational activities in poor, rural areas, and later its meaning expanded to numerous joint activities of community,

governmental and non-governmental organisations that represent process for improvement of economic, social and cultural conditions of the community (18).

According to Sanders, community development may be regarded as a method, like programme and like concept (19). As a method, community development is similar to procedures, but in work with community, used by social workers in work with individuals when endeavouring to gain their confidence, define problem or needs, arouse their deliberation on solving problems and improvement of situation, to help in efforts in finding needed resources for improvement. When regarded as a programme, community development ensures improvement of the overall community life, planning on basis of recognised needs of its members, emphasizing the importance of »self-help«, encouragement and education of local leaders and provision of technical support for development in sense of human resources, equipment, material and money. As a concept, community development is similar to primary health care since it emphasizes activities that have multiple purpose, assumes that provision of basic services and material support is base for development and recognises that process by which the goals are reached (local initiatives, trust and cooperation) are more important than goals themselves (20). Tones states, that community development is a process, which starts with people and their needs, considers their values and dignity and promotes equal opportunities for improvement (13).

In process of community development, special place is given to *community actions for health* that represent collective efforts directed towards the increase of control over health determinants, and therefore over the health improvement (9). In Ottawa Charter, the significance of concrete and effective community in establishing priorities for health, adoption of decisions, planning of strategies and their implementation for achievement of better health is emphasized. Concept of *enabling (strengthening, recuperation) of the community* is closely related with definition of community actions for health, in accordance with Ottawa Charter. Capable community is the one in which individuals and organisations apply skills and resources in collective efforts directed towards health priorities and meeting of health needs. Enabling commences with development of community awareness that represents four-level process (13):

- consideration of aspects of reality and problem,
- collective identification and search for roots of reality and problem,
- research on inter-relations, and
- development of action plan for changing the reality.

In the same way as the community development, its enabling entails participation of its members in actions for health, through the active partnership with different sectors of society (21). In organisation of preventive programmes, health workers often neglect the importance of active partnership with the community. Illustrative example was given by Baker, analysing introduction of programme for decrease of incidence of breast and cervix cancer in a certain group of women or the community that most often begins by focus group discussions where health workers present frightening extent of the problem, inviting citizens for get involved in its resolution (22). Since they, most often, omit cultural, marital, religious and other barriers of the community in consideration of breast cancer problem, these programmes do not succeed in influencing the health status of the community significantly, since, regardless how high and tragic rates of breast and cervix cancer are, members of the community do not recognise this as a health priority. Therefore, efficient community based approach must ensure partnership

of its members with health professionals in identifying and solving community issues and must orientate towards health determinants in the way community sees them, even when it comes to the prevention programmes for specific diseases.

Building healthy communities through the wide partnership

People create healthy communities by demonstrating unity and by operating as accelerants of positive changes, finding new modes for actions with the goal of creating an environment that attends to healthy life styles and encourages people to effectuate their own potentials (23). Preconditions for such community improvement are efforts for defining more common problems that are related to each other and partnership (joint work) in their resolution (8). Partnership encourages people to associate and strengthen community capacity for positive changes over time, in different spheres. Also, associating/pooling up of people from different segments of community, by rule, leads to a success. For example, efforts made to improve health of children run through partnership of education authorities, teachers, business people, paediatricians, parents, young and old. Community, which developed successful partnership in one area (such as fight against drug abuse among youth), may easier recognise other priority (such as law immunisation coverage of children) and use gained experience for efficient action (improvement of immunisation coverage) (24).

In developing partnerships, it is extremely important that it is wide, i.e. that it involves representatives from largest possible number of different segments (school, workplace, ministry) and different community levels (neighbourhood, local community, municipality, city, republic). Key participants of such a wide partnership are (24):

- local members of the community - group of people from the community who directly work on health improvement programme, organised through non-profit, non-governmental organisation and state institutions (for example: partners for improvement of children health from this group include people from media, business companies, schools, citizens associations in community, youth organisations, local administration, health institutions, financial institutions);
- support organisations – local, regional or state institutions that provide advisory and technical assistance for running community programmes (for example: university research centre may provide advices in relation to community analysis, strategic planning, management development and evaluation; institutes of public health to provide community with necessary data, such as proportion of children without adequate immunisation); and
- financers, sponsors and governmental institutions – ensure financial resources needed for development of community based programmes, but also for activities of support organisations (these resources need not be continuous, but ensure credibility for groups in community and possibility to secure new resources by alluding the fact that they were financed by respectable foundation or ministry of health).

It is very important that wide partnership, which really represents the whole community, lasts long enough so that changes that lead to improvement of health are achieved, as well as to become accelerator of the community health action. It is considered that needed time is 5 to 10 years (8).

In world today, numerous programmes that include wide community partnership with goal of improving health of mothers and children have been running, regardless whether

they are orientated specifically to these groups or to general population, to numerous health determinants or specific health problem, and are initiated by international organisations, health institutions or local community itself. Typical such programmes that commenced in numerous countries, and in our country as well, are those conducted in accordance with World Health Organization (WHO) and European Union methodology, for example such as, »Healthy Cities« or »Healthy School«. In WHO documents dedicated to »Health for all in 21st century« specially emphasized is the importance of the community and its wide partnership as the basis of sustainable development of the mankind (25). Also, with existing search on Internet, one may notice plenitude of examples for community based projects, in developed as well as in underdeveloped countries. In addition to numerous individual and picturesque illustrations of the project, group descriptions/reviews may be found, such as Flower's who gave detailed examples of healthy community projects in nearly twenty cities in different countries (26).

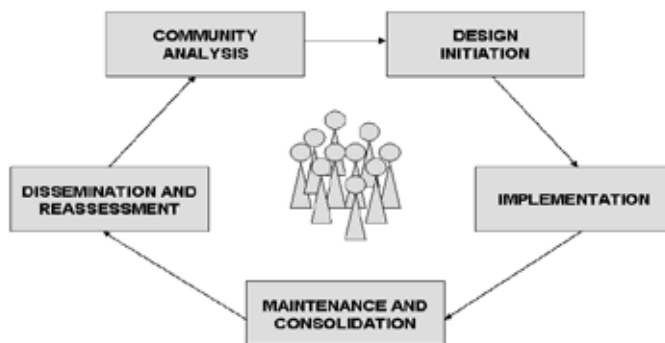
Community based interventions for health improvement

Community based health improvement is most often related to values of modern democracies, since in ideal conditions authority and responsibility for adoption of decisions on health improvement are delegated as closer to the population as possible, and approach favouring exclusively individual responsibility for health is avoided (27). Search of written and electronic publications shows that today numerous health-educational interventions in community have this orientation. Different level of support and participations of the community in project activities aligns them in one of five possible types (28):

1. Type 1.
Primary goal set for the community is enabling (strengthening) and improvement of socio—economic status, since it is equalised with health.
2. Type 2.
The same as previous one, but in the course of the community development and identification of needs, community itself discovers needs that are consistent with standards of preventive medicine and health education goals, i.e. needs for better primary health care service, prevention of accidents, through solving children's problem.
3. Type 3.
It is characterised by »health community projects« that improve health and prevent disease. This is done through building the health profile and assistance to community work much more by the emphasis of »perceived needs« than, for example, recognition of needs to improve cardio-vascular health.
4. Type 4.
Primary goals are in the sphere of preventive medicine, and this type of interventions is personified in cardio-vascular preventive programmes. Its approach is more »top to the bottom« than previous types, but it recognizes the importance of the community and utilisation of existing forms of leadership.
5. Type 5.
More limited programmes, with limited community participation, but with use of joint efforts of different organisations, for example media and schools, and residential area or working place service providers.

Since the complexity of implementation of above mentioned community interventions is recognised, numerous models representing guidelines for health workers and community members were developed with the aim of successful implementation and conduct of community health improvement programmes (2, 7, 8, 11, 27, 29, 30). All these models differ in theoretical basis and complexity, their common characteristics are that they emphasize the process, wide partnership with community members and their participation in all phases of programme development, especially in planning. According to Mittelmark (5), regardless to the number of steps, in all community based health improvement projects, especially those which are centrally initiated, following successive phases may be recognised (Figure 1):

Figure 1. Phases in community-based health improvement project – five stage model for community-based health promotion.



Adapted from: Mittelmark, 1996 (5)

1. Community analysis.

In almost all models, *community analysis* has exceptionally important place, because specific community actions are planned on the basis of it. In addition to defining needs for health improvement, community analysis also needs to enable defining of its »context« - beliefs and expectations, social structure, immediate issues (such as poverty), financial resources, formal and informal leadership, as well as the extent of experience in joint actions (establishing partnerships) (8). Also, it needs to explain immanent forms of behaviour, conditions of the environment and economical climate, as well as to indicate the capability and readiness of the community to participate in the programme, with recognition of potential barriers. In this phase, the assessment of capabilities of project organisers to implement the project in the community is considered important, which is, unfortunately, often forgotten (31). Community analysis is most often documented by *community level indicators* that serve for direct and indirect measurement of the magnitude of the problem at the local level and success in reaching the defined goals (for example, data on body injuries in schools may be an indicator of violence in the

community) (8).

2. Project initiation.

Project initiation is the phase during which all its initiators and community members work together. What precedes joint activities is the identification of interested citizens and their inclusion into working groups as per priorities. Following groups are formed: group for planning, group for selection of the organisational structure, group for defining the mission and goals of the project, group for determining specific strategies and methods for implementation phase, group for health improvement education and those that care for recognition and awarding of successful volunteers and other participants. In this phase, exceptionally important is the selection of the project coordinator, training and provision of the technical support and its activities. Such mobilisation of the community leaders, as well as community members, to contribute to the accomplishment of project goals with their time, resources and talent is known as the *organisation of the community* (32). Rifkin specifies five levels of the community members participation in health improvement programmes that may be active and passive, more or less persuasive for long-term community actions. Those are: participation in benefits of the programme (for example in immunisation), programme activities (for example in distribution of contraceptives), implementation of the programme (implies managerial responsibility for reaching goals that are planned at higher levels, for example organisation of the centre for free activities for youth), programme monitoring and evaluation (ensures modification of determined goals in accordance with process evaluation, which is the rarest form of participation) and programme planning (participation is most active, widest and entails participation in previous phases) (2).

3. Implementation.

Implementation is the phase during which, through the operational plans and with established priorities, previously jointly planned activities are effectively conducted. This is the phase in which wide participation of citizens and community partnership are realised, and resources, process evaluation and feedback information on possible problems and their resolution are ensured. Although the community is mobilised at the very beginning, its participation is here even more broaden and community health improvement network is generated (33). Special responsibility and obligations for the success of this phase are with the project coordinator who has communication and negotiation skills.

4. Maintenance and consolidation.

Maintenance and consolidation is the phase in which participants successfully integrate intervention project into the existing community structures, create atmosphere of cooperation that sometimes exceeds conflicting interests of different groups in the community, recruit new volunteers and disseminate information on project activities. This obtains wide acceptability and continuous community involvement. Measure of the success of this phase is the conduct of project activities in community even many years after the project ends (34). Unfortunately, many community projects fail in this phase, which is why many are today interested in solving this problem.

5. Dissemination and reassessment.

Dissemination and reassessment is continuous process during which the community analysis is renewed, and effectiveness of the intervention project, future courses of community development, management and long-term sustainability of achieved changes are assessed. Project results are summarised and disseminated to community members,

sponsors and anyone interested in health improvement. Endeavour to institutionalise the project is most often in this phase, however much more realistic effect is the inducement community receives with the project to continue with actions for health (5).

Sustainability of community programmes

In addition to the design itself, planning and goals, insurance of the community programme continuity also largely depends on political and social stability of the community as well as on its socio-economic conditions. Previous experiences in improvement of health of women and children, as well as of other community members imply that, regardless how well programmes were designed and planned, longevity and sustainability in community become preconditions for their efficiency and effectiveness (34). Although significant assets are invested in implementation of health programmes in developed countries, those programmes do not sustain long after their initial phase (35,36,37). Primary focus of many programmes for health improvement in community was efficiency while longevity did not have major importance. Programmes were mainly designed as demonstrational or institutional.

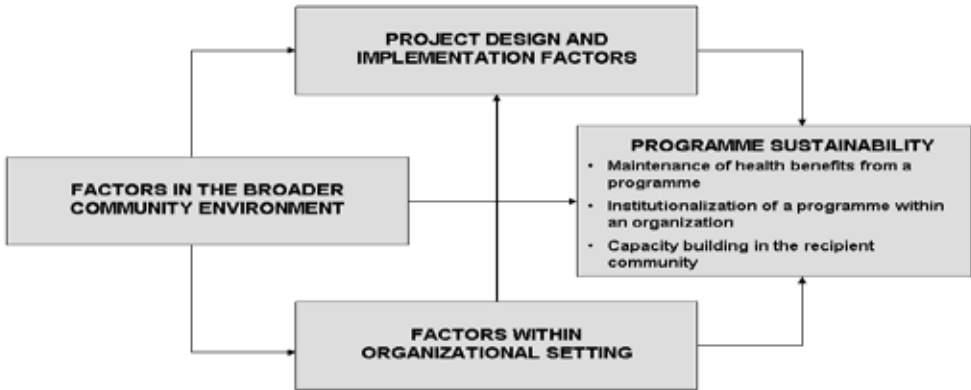
It is believed that there are at least three reasons for which some community health improvement programmes cannot sustain (34, 38, 39):

- programme is ending, but the disease of which the prevention was envisaged in the programme is still preserving;
- many programmes lose their basic resources before their community activities develop, regardless where they take place and which target groups they have, and
- many new programmes suffer due to consequences of previous ones that were stopped or inadequately ended, and therefore lose support and confidence of the community.

Community support today ensures continuity of the health improvement programmes, and therefore represents compulsory goal in intervention planning, and especially planning of necessary resources for running the community programme. One example is the experience from the community project for breast and cervical cancer control (40). This five-year-programme was conducted in Baltimore and was based on education of educators who came from the target community. They educated women emphasizing the importance of screening. At the same time numerous activities ran in cooperation with health service, community volunteer groups and sponsors, such as for example, guided group discussions. They led to expansion of the programme onto other areas of women's health and its popularity in medical circles. However, non-existence of careful resource planning in initial phase conditioned their lack in the phase of implementation of mechanisms for expansion of the community programmes, and therefore programme was not sustainable anymore, i.e. lost the continuity.

Literature quotes different methods for reaching the phenomenon of sustainability of community based health improvement programme, and for the success, what is needed is their combination, since there are no »golden standards«. According to some authors (34), the most important are the following (Figure 2):

Figure 2. Different methods for reaching the phenomenon of sustainability of community based health improvement programme – a framework for conceptualizing programme sustainability.



Adapted from: Shediac-Rizkallah MC, Bone LR. 1998 (34).

- design and programme implementation with the benefit in respect to community health (development of healthy life styles, prevention and mortification of communicable diseases by their eradication);
- its institutionalisation (integration of the programme within governmental and non-governmental organisations that already exist in the community or with existing state programmes for community health);
- inclusion of the whole community and its support to the programme (through the training of community members to provide information or to be leaders for promotion of community health), and
- support of the wider community environment (insurance of socio-economic and political preconditions, support of state institutions, especially of the Government and relevant Ministries).

It is believed, on the basis of existing experience, that optimal period for achieving the programme sustainability, when it can also be evaluated, is five to seven years (34). Important examples of sustainable community programmes exist, especially when it comes to the mother and child health improvement (41, 42, 43, 44).

Exercise

Task 1:

Carefully read the contents of the module and recommended readings.

Task 2:

Discuss with other students the concept of “healthy community” and its importance for the health of the population, especially vulnerable groups.

Task 3:

Visit the nearest healthy community (e.g. a kindergarten, school, university, etc.) in your residence settlement and identify the key features of a process in this community.

Task 4:

Write short seminar paper and resent your findings to other students. Compare your findings to the findings of other students.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Community Participation: Role-playing Exercise
Module: 1.4.1	ECTS: 0.25
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Key words	community participation, community involvement, community action, health promotion, community health, participatory approach
Learning objectives	After completing this exercise, students and public health professionals should: <ul style="list-style-type: none"> • To identify different areas, types and other characteristics in organizing community participation • To understand different factors important in initiating , supporting, sustaining and spreading community participation • To identify common obstacles to community participation • To review different goals and strategies in implementing the participatory approach.
Abstract	Three different situations (tasks) are described. All of them are based on decision-making process given by professionals and/or local community members. Beside described three real life situations, a different levels and approaches in community participation should be presented, using students' experiences and attitudes.
Teaching methods	Role-playing exercise. Video (camera and videoplayer) (not necessary)
Specific recommendations for teachers	After role-playing, it is strongly recommended to analyse different situations and different solutions, obstacles and prerequisites for community participation and community action (What we did learn?).
Assessment of students	Observation of the role-playing exercise and group discussion

COMMUNITY PARTICIPATION: ROLE-PLAYING EXERCISE

Zelimir Jaksic

Note:

This text is prepared from Jaksic Z. Community participation. In: Jaksic Z, Folmer H, Kovacic L, Sosic Z, eds. Planning and management of primary health care in developing countries. Zagreb: Andrija Stampar School of Public Health, 1996.

Task

Each of the following tasks is given to two groups. These two groups discuss the given task and together define circumstances and setting. After that, every group should decide separately about their goals and strategies.

Nota bene:

The groups are not homogenous. In every group individuals have their own interests and strategies. From each group 2-3 members will be elected for the role-playing of a joint meeting as described by the tasks below. The role-playing is presented in the plenary session for 10-15 minutes. The preparation and presentation of role-playing should follow the real-world experiences of participants in the group, avoiding artificial «psychological» constructions.

After the presentation, members of the group who have not participated in role-playing comment the play and particularly the probable consequences of the planned participatory project 6 months after the shown meeting.

TASK 1

The district governor was given instructions to organize a campaign in rural sanitation to prevent further threat of diarrhoeal diseases in his district, a poor rural area with 500.000 inhabitants. His orders were to involve the local communities, because only 30% of estimated total costs should be covered by the government. The villagers are disappointed with previous governmental actions, when high expectations were raised, and promises not fulfilled. However, he has to try again and he might succeed this time, because villagers feel badly the need for improvement of sanitary conditions. He organized a meeting of representatives of different sectors and agencies. Among other decisions, they decided to form a working group to elaborate the community involvement strategy. The working group should consist of 3 experts from the health sector (district health officer, health educator and sanitary technician) and 3 experts from other sectors (agriculture, education and water administration). They have to propose a plan jointly but it is Obvious that a hidden interest of every participant is to manage the whole project. The questions given to them are:

- Propose the strategy and mechanisms for community involvement (raising funds and mobilizing people)
- Propose the managerial structure of the project to support community involvement in the best Possible way...

Group A: health workers

Group B: other members

TASK 2

There is a campaign going on in spacing the pregnancies (family planning). Because it is a repeated experience, the local community is divided, doubtful and disturbed. The local midwife and the teacher organize a meeting, following the instructions of the district authorities, but only few people come. Among those who are attending the meeting, there are people with quite opposite attitudes and beliefs. Few of them have a genuine interest and others, although not directly concerned, think that family planning is against the traditions and dangerous for the future of their community.

Group A: midwife, a young woman, several other supporters of family planning

Group B: teacher, religious leader and several other opponents to the idea

TASK 3

A donating agency, very interested in participatory development in a slum area decided to stimulate the development by investing into a project useful for the majority of people and also stimulating further cooperative undertakings. The condition is that people themselves decide and propose what it should be, and are willing to contribute to it by personal involvement, when the project starts. The representative of the donating agency decided to start the first preparatory meeting of the local Governmental Committee, appointed two years ago, but never very active or concordant. After the last unsuccessful campaign called «Healthy environment, healthy children», suggested by and international agency, the committee has never met again. The chairman is the local priest, very cooperative. Some of the other members represent the local elite, but there is also a very critical group of representatives of youth organization led by the local teacher and community health worker raising unpleasant social and political questions. It is expected that repairs of the roads and houses, improvement in nutrition, safe water, repairs of the school building and other projects will be brought in for consideration. It is clear to the representative that behind many of these projects there are some special interests of individuals and groups. However, he is resolute to insist on a consensus of the Development Committee about what to do and how to plan further involvement of people, against different individual, group, political or pecuniary interests.

Group A:

donor's representative, chairman of the development committee, and 2-3 wealthy people like the local merchant, owner of several houses, et. and several other good-wishing, unsuspecting people

Group B:

teacher, community health worker, members of youth organization, several other good-wishing, unsuspecting people.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Reorientation of Health Services
Module: 1.5	ECTS: 0.5
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Key words	health service, health service reform, primary health care, health promotion
Learning objectives	After completing this module students should: <ul style="list-style-type: none">• recognize the importance of re-orientation of health service in order to foster health promotion and to achieve better health situation in the population;• differentiate between comprehensive and selective health care models;• understand that the process of re-orientation of health services, implementation itself as well as development and evaluation is an extremely complex task where all partners need to be fully involved and where new working methods need to be introduced.

<p>Abstract</p>	<p>Health promotion is from one point of vision defined in terms of the several action areas among others comprising re-orientation of health services toward health promotion. According to this concept, health services were encouraged to move increasingly from predominantly curative approach to more preventive approach. The idea of comprehensive primary health care was launched. The paper is presenting problems related to application of comprehensive primary health care in practice in the period after adoption of Alma Ata Declaration. The case of Slovenia health care system and characteristics of its transition is presented as an example. Presented are current situation as well as broader context and possible solution in the future.</p>
<p>Teaching methods</p>	<p>Teaching methods include introductory lectures, exercises, and interactive methods such as small group discussions. Students after introductory lectures first carefully read the recommended papers on comprehensive and selective models of health care. Afterwards they discuss the concept of comprehensive health care with other students, and identify the pressures contemporary health systems are facing and the challenge of re-orientating health services towards comprehensive health care and health promotion.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are mainly available in the internet; • target audience: master degree students according to Bologna scheme.
<p>Assessment of students</p>	<p>Assessment is based on seminar paper and oral exam.</p>

RE-ORIENTATION OF HEALTH SERVICES

Ivan Erzen, Lijana Zaletel Kragelj, Jerneja Farkas

Theoretical background

Basic definitions and explanation of terms

Re-orientation of health services

According to World Health Organization (WHO) (1, 2), re-orientation of health services is defined as a process which is characterized by a more explicit concern for the achievement of population health outcomes in the ways in which the health system is organized and funded. In this context the health needs of the individual as a whole person are in the central position, balanced against the needs of population groups.

This definition is strongly related to several relevant concepts among which the following are important for understanding of this module:

- the concept of health explanatory models;
- the concept of health needs, since the re-orientation of health services should lead to a change of attitude and organization of health services, which focuses on the needs of the individual as a whole person (1); and
- the concept of investment for health.

Health explanatory models

There exist several perspectives or approaches on what health is. Contemporary approaches in health promotion are (3):

- medical or biomedical approach – this approach views health as an absence of diseases or disease-producing physiological conditions. In this approach the centre of orientation is disease and selective disease treatment the key strategy;
- behavioural approach – this approach views health in terms of the behaviour and lifestyle of individuals. In this approach the centre of orientation is individual's behaviour;
- socio-environmental or bio-psycho-social approach – according to this approach health is being influenced by internal and external environment and therefore this is the most comprehensive approach. In this approach health is the centre of orientation and comprehensive influence on health determinants the key strategy.

Health needs

Among definitions of health need the most simple is a desire of people to remain healthy. However, health need is extremely complex entity and when it is related to the individual as a whole person it is composed of several components which include medically defined need or medical need, socially determined need and perceived need (4).

There exist several perspectives on health needs: a citizen (a »consumer«) perspective, health professional (a »provider«) perspective, and a payer perspective. In this context along with the expression “a need” the expression “a demand” is used.

The definition of these two terms is not unified since it depends on our stand-point perspective. For example, medical need is mostly defined as medically modifiable morbidity burden while medical demand is defined as the request of the citizen, this time in the role of patient (a »consumer«) for medical care services (5). This definition is primarily related to payer's perspective.

Investment for health

Investment for health refers to resources which are explicitly dedicated to the production of health and health gain (1).

Investment for health strategies are based on knowledge about the determinants of health and seek to gain political commitment to healthy public policies.

Investors could be public or private agencies as well as people as individuals or groups (communities).

Health services, health needs and a need for re-orientation of health services

Traditionally, health services are intrinsically oriented in disease (biomedical approach) and consequently in satisfying medically defined needs. In most but not all cases (e.g. vaccinations or screenings) satisfying these needs coincides with satisfying self-perceived needs of patients. On the other hand, health services are mostly not interested in considering social needs. If we sum up these characteristics, traditional health services hardly meet the demands of comprehensive approach to serve the health of the citizens.

As health care costs have skyrocketed in last half of a century, health services started to face enormous financial and ethical problems. On one hand this happened owing to improvements in medical technology, which made it possible to treat distinct diseases and disabilities with increasingly sophisticated equipment, for both diagnostic and therapeutic purposes. Since recent advances in clinical medicine improved prognosis of people with acute and chronic diseases, there is an increased need for specific training of health care providers. Rehabilitation and long-term care are in particularly important, which eventually leads to higher costs for health care.

How to solve the problem

Health care system with its health services has an important influence on health of the population. Nevertheless, we should keep in mind that it represents only one, although very important determinant of health. It is the interaction between the environment in which people live, work and play (natural and social environment, including economic, and cultural environment) and individual factors or inner environment (inherited factors e.g. genetics or acquired factors) have a marked influence on health status of an individual and of a population.

Beside health care system, one of the extremely important determinants of health is an economic system. Health care and economic systems are not independent (6). In fact they are closely related: healthier populations are more productive populations. Thus, from the economy perspective, the process of continuous, progressive improvement of the health status of individuals and groups in a population should be of enormous importance. Finally, both systems have enormous influence on health of the population.

The interrelationship of health, health care and the economy is one of the major themes of WHO's Health for All Strategy (2). The concept of investment for health that requires health to be put at the core of social, economic and human development was introduced (2, 7).

Although important, these two determinants are still not enough to achieve good health of a population. For achieving it (either, good health of individuals or a population as a whole) several determinants of health should be addressed and responsibility for health issues needs to be shared between many partners including individuals and communities.

Regarding health services this will require an expansion in health promotion and disease prevention action to achieve an optimal balance between investments in different types of health services: health promotion, disease prevention, diagnosis, treatment, care, and rehabilitation (1).

Whatever the process, it is necessary to keep in mind that health inequalities should be avoided and great attention on social responsibility for health should be emphasized.

Health promotion and re-orientation of health services

The basic WHO health promotion document, The Ottawa Charter (8), in 1986 defined health promotion in terms of the several action areas include beside building of healthy public policy, creation of supportive environments, strengthening of community action and democratic planning processes, developing of personal skills, re-orientation of health services toward health promotion as well. This last action area in fact means that health services were encouraged to move increasingly from predominantly curative approach to more preventive approach. The process of re-orientation of health services to health promotion was understood as a core element of a comprehensive approach to maximize the health capacity of a community (8, 9).

Historical perspective

The Ottawa Charter actually was not the first WHO document to introduce the idea of comprehensive primary health care¹. This in fact was the core idea of The Alma Ata declaration (10). According to this declaration:

- everyone should have access to primary health care, and everyone should be involved in it. In another words, people have the right and duty to actively participate, individually and collectively, in the planning and implementation of their health care (1);
- people were treated as subjects and not merely as object in the health care process.

Primary health care was in this context seen as set of activities addressing the main health problems in the community, providing comprehensive approach and pointed out promotive, preventive, curative and rehabilitative role of health services. The key components of primary health care should be equity, community involvement and participation, intersectorality, appropriateness of technology and affordable costs (1).

But in opposition to the comprehensive primary health care approach, the selective health care approach was posed (11). Both approaches are distinctly different. The selective health care approach, for example, is basing on medical interventions and is oriented in curing the disease (basing on biomedical model of health) while the comprehensive approach rests on engagement with local communities, involvement of many sectors and dealing the underlying health determinants (basing on bio-psychosocial model of health). In fact, the selective health care approach could be understood more as primary medical care than primary health care. Since the adoption of Alma Ata Declaration the struggle between these two approaches is present and over time the selective approach started to prevail.

The First International Conference on Health Promotion with its sound document Ottawa Charter (8) could be understood as the first visible response to this departure from the Alma

¹ According to WHO, primary health care is essential health care made accessible at a cost a country and community can afford, with methods that are practical, scientifically sound and socially acceptable (1).

Ata vision. The comprehensive approach has got new impulsion. But unfortunately, in few years after launching the concept of health promotion, the selective approach became again more powerful than comprehensive.

The next response in WHO European Region was The Ljubljana Charter on Reforming Health Care (12), which was adopted in 1996. This Charter addresses health care reforms in the specific context of Europe and is centred on the principle that health care should first and foremost lead to better health and quality of life for people. It was stressed that health services are important, but they are not the only sector influencing peoples' wellbeing. Other sectors also have a contribution to make and responsibility to bear in health and intersectorality must therefore be an essential feature of health care reform. This Charter was characterized by 5 principles of re-organization of health care services: health care reforms should be driven by values, targeted on health, centred on people, focused on quality, based on sound financing, and oriented towards primary health care. The later should ensure that health services at all levels protect and promote health, improve the quality of life, prevent and treat diseases, rehabilitate patients and care for the suffering and terminally ill, and they should promote the comprehensiveness and continuity of care within specific environments. For a while, this was fresh impetus to comprehensive approach. The same was again repeated in the Jakarta declaration adopted in 1997 (13).

In following years, the idea of "investing in health" strengthened. This idea, unfortunately, meant new departure from comprehensiveness of health care, being driven by profits gained by investing in health (not for health) (11). This resulted in disadvantageous health phenomena in many countries. By the end of the twentieth century, for example, it was evident that Health for All by the Year 2000 would not be achieved and that for some countries life expectancy and some other health indicators were going backwards. As a response to this unfavourable trend the People's Health Movement was raised (14). This Movement draws its inspiration from Alma Ata declaration. The First People's Health Assembly was held in Bangladesh in December 2000, and the People's Health Charter was adopted there (15). It calls for a people centered health sector that is based on comprehensive primary health care.

What could be done

Certainly, there is a strong need for health care services reforms. Greater investment for health implies re-orientation of existing resource distribution within the health sector towards health promotion and disease prevention. A significant proportion of investments for health should be undertaken by people in the context of their everyday life as part of personal and family health maintenance strategies. This was realized in many different countries (5, 16-20).

There are several reasons for going this direction. They include the rise of new public health challenges anticipated for new millennium, like aging of the population in developed countries associated with higher prevalence of chronic non-communicable diseases (e.g. cardiovascular diseases and cancer), or emerging infectious diseases (e.g. BSE, SARS, avian influenza), as well as strengthening the ability of societies to reduce inequities in health.

Despite the need for re-orientation of health services, most of the previous reforms had been oriented in higher efficiency of services (the supply side of the health care) and only few considered the demand side (improving health of the population by investments for health)

(5). Nowadays, the situation remains similar. The process of re-orientation of health services to be more supportive of health promotion evidently should be strengthened (16).

SWOT analysis of re-orientation of health services

Strengths and opportunities

One of the main opportunities of health care services in their role to serve to the health of the population in the future, it will be to take over the key role in supporting inter-sectoral action for health. Achieving equity in health could not be possible without coordinated intersect oral activities.

Weaknesses and threats

The process of re-orientation of health services into the direction of health promotion has its weaknesses. It is definitely not easy since it requires an increase in the capacity of the health service staff themselves and of the organization (16). This fact presents certainly one of the major weaknesses and limitations to health care systems to go this direction. It is the well known fact that health care systems all over the world are getting more and more expensive. The growing cost of care is associated with higher levels of chronic diseases and disability, the increased availability of new medical treatments and technologies, and rising public expectations. Going the direction of re-orientation to health promotion definitely would increase the costs. Although this would only be of temporary nature, we should be aware of it.

Also, an expanded role of primary health care services could not be achieved only through an increase in direct health system activity. Action by sectors other than the health sector may be more effective in achieving improved health outcomes. This could be seen as another weakness. Health services have only a limited impact on the health status of a population without other activities directed in health of the population since key determinants of health lie outside the health sector (21). Policies in areas such as education, employment, and agriculture often have even greater impact on population health than medicine. Therefore, cooperation of primary health care with other sectors is strongly needed.

An important threat to this process is the fact that in 1990s WHO lost its leading position in the field of international public health and World Bank became the major player. »Investing in health« becomes the well known slogan of this organization at that time. The basic problem in this context is that achieving good population's health seems not to be the main goal of World Bank (11). Organizational arrangements that had originally been meant to improve equity in access to health have increasingly been constrained by the concern for effective cost containment. A lot of countries responded with a series of measures to control cost pressures. The economic aspect prevailed over the moral imperative of maintaining solidarity and the social good character of health care.

Recent findings

Historically, the struggle between comprehensive and selective health care approach seemed to be more in favour of the later yet recent findings probably show opposite. Comprehensive health care approach was considered to be too idealistic and expensive and in many respect defeated by selective approach. Consequently, the later prevailed whilst recent studies indicate that it has not been effective (22). On the contrary, comprehensive

health care including health promotion and disease prevention can save money. How much, it depends on the programme, demographic and other characteristics of the population, the diseases structure, and whether short-term or long-term community outcomes are considered. In these times, when costs of medical care are escalating, especially high technology medical care, this fact should not be overlooked. The only time when prevention could be more expensive than treatment is when disease or injury is infrequent and moves quickly to death before major expenses are incurred. But we need to be aware that the argument for prevention in the frame of comprehensive health care cannot - and should not - be made primarily on economic grounds.

It is encouraging, that the re-orientation of health services to more comprehensive approach including health promotion is coming again on the agenda of global health policy rethinking (17, 18, 22).

Case study - primary health care in Slovenia and its orientation

Slovenia and health care reforms

In Slovenia the need for reforming health care system was realized immediately after it became independent. The process started in 1992 by adopting new legislation (23-25). The reasons were political (to open the health care system to private initiative and a more diverse organizational approach) and economic (cost-containment, multiple contributions - national insurance and voluntary insurance fees- and a mixed public and private health care system) (24). It is still going on.

Since the emphasis in comprehensive health care systems is on primary health care services the SWOT analysis on this segment of health care system is presented.

Primary health care services in Slovenia

Strengths

Traditionally, in Slovenia primary health care has a long and firm tradition. Community health centres were providers of primary health care before independency of Slovenia. Today, more than 15 years later, they are still the main providers of this kind of health care, though they were subjected to the radical changes soon after Slovenia attained its independence (26). The process is still ongoing.

Community health centres are the institutions which bear traditions from the ideas of Andrija Štampar, a distinguished scholar in the field of social medicine, born in Croatia. The first community health centre in Slovenia was established in 1926 (23, 25, 27, 28). The original idea was to deliver primary health care to the population at the level of the local communities and to provide various types of care in an integrated approach, especially to endangered population groups e.g. children, women, etc. For this purpose community health centres had special units, called dispensaries (27, 28).

Today, by law and in practice, community health centres are institutions that provide both, preventive and curative primary health care for different target population groups (many of them are from a public health standpoint at higher risk). The types of care include (23): emergency medical aid, general practice/family medicine, health care for women, children and youth, home nursing, laboratory and other diagnostic facilities, preventive and curative dental care for children and adults, health aids and appliances, pharmacy services, physical therapy, and ambulance services.

In 1999, Slovenia had 64 community health centres and 69 health stations. A primary health care facility (health care centre or health care station) is available within 20 kilometres from almost all locations. In rural areas, a physician's practice is more that of a family physician and a physician may have as many as 3000 patients, whereas in Ljubljana, the capital, a physician may have as few as 750 patients. The average number of patients per general practitioner is about 1800 (which normally includes only up to 10% of all children since their care is usually organized through primary care paediatricians) (23).

In the past, different types of care were facilitated, as previously mentioned, by the organization of dispensaries. The important characteristic of dispensaries was orientation not only in curing individuals with the disease but, at least at the very beginning, mainly in preserving good health of endangered groups of individuals as well as that of communities. The natural and social environment was considered as important determinant of health.

After the independency of Slovenia, in community health centres the era of transition started, which is still in a process. Today, some of dispensaries are still existing, e.g. for children and youth, but their role is slowly changing from more preventive orientation to more curative one.

We could conclude that in Slovenia the comprehensive primary health care approach was launched even before it was encouraged by the WHO. Unfortunately, the transition went in opposite track than it was proposed by WHO.

Weaknesses

As mentioned above, as the years passed by, the dispensaries were starting to disappear as an important part of health care at the primary level, and the selective approach prevailed over the comprehensive approach. Some of dispensary services are still organized, mostly as purely supplementary outpatient specialist services.

Another weakness is that actually many community health centres collapsed in the recent years and functionally ceased to exist in several parts of Slovenia while still developing and being well integrated into the new concepts in other parts of the country. This resulted in disparities in physical access for people in different parts of Slovenia. Part of this problem was also the long unsolved issue of publicly owned premises and their availability for (potential) private providers of health care. As no national guidelines were prepared for this problem until late in the process, many providers left the publicly owned premises and started developing their own as private providers.

Threats

Community health centres are still the main (public) providers of primary health care in Slovenia. Apart from public health care providers, the number of private providers is increasing. Private care is provided by either individual health professionals acting as providers or by group practices with various combinations of services and specialties. The self-governing community grants concessions for private primary health care providers (based on the consent of the Ministry of Health). Such a concession is a public contract, which ensures inclusion into the network of publicly financed health care providers. In the private sector material gain is one of the most important driving forces and this fact should be considered as an important threat to the further development of the comprehensive health care at the primary level (29).

Opportunities

It is undeniably that private sector could have many positive impacts on quality of health care (29). They are market orientated and therefore they need to take into consideration all key business operation with special emphasis on quality and economy of the working process.

Private provision also introduced competition, until then mainly unknown phenomenon in Slovene health care. Although private practitioners with contracts with the Health Insurance Institute of Slovenia work alongside the publicly employed physicians, competition arises by virtue of the competitive process associated with winning a contract.

Possible future alternative in Slovenia

Regional institute of public health as a central regional primary health organization

Features of health systems that encourage collaborative partnerships are those where there is:

- an environment that encourages trust;
- a common purpose among the key players;
- a supportive external environment;
- practical projects to work on;
- organizational stability;
- commitment from staff throughout organizations;
- willingness to commit resources;
- evidence that change is likely to improve outcomes for users, and
- an organizational environment in which learning from past experience is encouraged.

A number of constraints and tensions that work against introducing a greater emphasis on re-orientation of health services and collaboration within the system should be addressed and discussed, including tensions between central funding and health care management, experts and the reform fatigue which is underlined by increasing cynicism among staff resulting from continuous change. Against the chaotic background of contemporary health service reform it is very difficult to bring about genuine reform to achieve a shift to more emphasis on comprehensive approach in health care.

During last few decades the most important mission of Slovenian Regional Institutes of Public Health has been to identify the hazards that are threatening the health of population and proposing and introducing measures to avoid the threats and to preserve health, especially on population level.

In the last years, since it is very clear that privatization in primary health care in Slovenia is an ongoing process possible alternatives have been discussed to find ways how order to preserve and further develop programmes on primary prevention on individual level which have been started many years ago and are proven to be successful. Among the options, there is a serious consideration that Regional Institutes of Public Health get a new mission - development and coordination of preventive programs on the primary level. This model enables private sector to take over an important sphere of activity, which till now was in the competence of health centres. On the other hand, as developers and coordinators, public health institutions will be able to preserve public health interests.

The advantages of the Regional Institutes of Public Health when applying for the »coordinator« role in the development process of re-orientation of health services are:

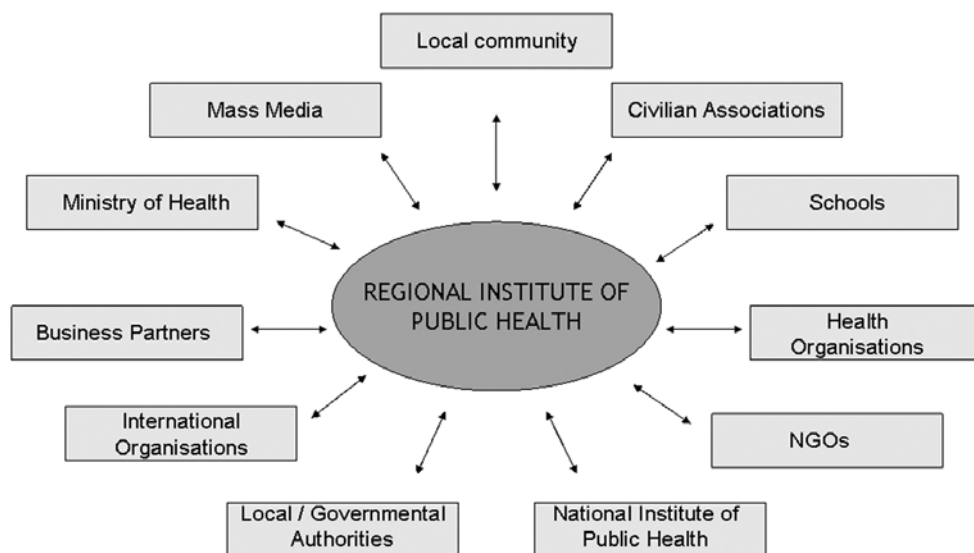
- wide scope of connections made with various social subsystems and their organizations;
- variety of communications skills;
- variety of professions, tasks and working methods used and thus more open for successful introduction of new forms of work;
- awareness and understanding of the importance and possibilities of re-orientation of health services.

Numerous connections, both from the institutional as well as territorial aspect, fostered for the purpose of performing various professional tasks, have enabled the formation of an extremely rich network of adapted means of communication. These organizations have the distinction of great flexibility and are, more than others, able to seek paths not yet trodden and to create new social network, required in the implementation process of health promotion strategy.

Figure 1 shows the complexity of connections made by e.g. Regional Institute of Public Health. The interconnections among individual organizations are not shown, although rich in number as well.

Besides all previously mentioned characteristics, the Regional Institutes of Public Health are state owned and are therefore programme and not profit oriented.

Figure 1. An example of different communications and connections held by the regional re-orientation



The tool

Re-orientation of health services is not possible without radical changes in approach to and method of work. As this is the case of intervention in several social subsystems, the project method which is becoming the most important tool for performance of new, complex tasks is considered the most adequate tool for in the process of re-orientation of health services.

This kind of approach to work was initially characteristic only for profit oriented enterprises, whereas it can currently also be observed in non-profit organizations. My best proof that this approach is the right one is the fact that the international health promotion movement uses project method as a fundamental approach to task performance and is anticipating the use of this tool for implementation of health promotion in various settings e.g. business enterprises, schools, hospitals. Project management has proven to be successful also in performance of programmes, focused on changing lifestyles and improving ecological conditions. It is only through the project approach that interdisciplinary co-operation can be implemented, which is regarded as essential to the performance of new tasks in re-orientation of health services.

Key features of a project dealing with re-orientation of health services are:

- it is a type of organization to perform complex, new tasks of various sectors within a single organization or among various organizations;
- it is an instrument to introduce changes planned in an organization;
- it mobilizes and redirects resources from one or more systems to new tasks;
- it evaluates and verifies the efficiency of new forms of co-operation and integration among individual departments and organizations;
- it gives the participants the opportunity to acquire fresh experience and skills to be later incorporated in their everyday activity;
- it exerts positive influence on the entire organization or other organizations, taking part in the project.

Development and interaction of knowledge among professionals is an integral part of project management. New tasks usually require new expert knowledge as well as different application of knowledge with experience (30).

Institutes of Public Health have, due to their role in the society of today, developed various kinds of knowledge and skills to facilitate the implementation of project work. They are closely connected with several social subsystems so they stand a real chance of undertaking the role of co-coordinators in the process of health services re-orientation.

Exercise

The main aim of the exercise is to get the students acquainted with the importance of re-orientation of health service in order to foster health promotion and to achieve better health situation.

Task 1:

Carefully read the papers:

Magnussen L, Ehiri J, Jolly P. Comprehensive versus selective primary health care: lessons for global health policy. *Health Affairs* 2004;23:167-176. Available at URL: <http://content.healthaffairs.org/cgi/reprint/23/3/167.pdf> (Accessed: August 10, 2007).

and

Baum F. Health for All Now! Reviving the spirit of Alma Ata in the twenty-first century: An Introduction to the Alma Ata Declaration. *Social Medicine* 2007;2:34-41. Available at URL: <http://journals.sfu.ca/socialmedicine/index.php/socialmedicine/article/view/76/187> (Accessed: August 10, 2007).

Task 2:

Identify the pressures contemporary health systems are facing and the challenge of re-orientating health services towards comprehensive health care and health promotion in specific environment.

Task 3:

Discuss the process of re-orientation of health services in your environment and try to evaluate the achievements in this field as well as factors that stimulate or hinder this process.

At the end of the module students should understand that the process of re-orientation of health services, implementation itself as well as development and evaluation is an extremely complex task where all partners need to be fully involved and where new working methods need to be introduced.

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1.6 CHILD HOSPITALIZATION AND INITIATIVES FOR IMPROVEMENT

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Today we consider each child as the value, not only as transitional phase to adult. We can't deny that modern medicine has helped many children to survive and to avoid morbidity. However, advances in health care have not always been accompanied by attention to the child's overall well being including sufficient concerns about their anxieties, fears and suffering. Although the first book about child diseases by Paolo Bagellardi de Flumine originated in 1472 in Padova, Italy, it was a long time before the establishment of hospital treatment became a normal procedure for children. In the beginning the children were hospitalized together with adults in the same wards. Only children older than 2 years of age of low socio-economic status were put in the hospitals. In these hospitals the conditions and hygienic levels were very bad. The first child hospital was established in 1802 in Paris, France. After that it was a period of 26 years till the opening of the second child hospital in 1828 in Vienna, Austria. London, United Kingdom got its first child hospital in 1852. The hospital is a medical institution but also a social one. In Dubrovnik, Croatia as early as 1432 the first world orphanage was established as the institution of advanced organized community of the Dubrovnik Republic. Over time, child hospitals spread all over the world. The conditions in the hospitals were dependent on the overall standards and economic conditions of their specific locations. But globally we can say that many unfavorable conditions and practices were common even in the wealthy countries. The advances in medical and surgical knowledge have not always been accompanied by equivalent attention to the child's broader physical and psychosocial needs - the needs of the child as a complete person. Some of the examples of everyday hospital practices toward children include: separation of the child from the parents after admission to the hospital - particularly during invasive procedures, failure to control pain because of misplaced fears of addiction, the use of devices such as straitjackets, straps, or ties to secure a conscious child for invasive procedures. Hospitals also created an environment that is frightening to the child, practiced inadequate sharing of information and other concerns with child and parents, and avoided any consultation with the child and parents regarding diagnostic and technical procedures. But in the 20th century "century of the child" the situation slowly changed. Several documents of global importance forced this change. In 1957 the Declaration of child rights was adopted. At approximately the same time, we can find the first critical analysis of child treatment in hospitals such as the Platt Report from the United Kingdom from 1959 (1). Although the Declaration doesn't have obligatory meaning, it was a great step. In 1989 the Convention on the Rights of the Child (2) was adopted. The European Parliament, in 1986, launched the Chart about child rights in the hospital.

The Baby-Friendly Hospital Initiative

The best known initiative to improve conditions for children in hospitals is the Baby-Friendly Hospital Initiative (BFHI) (1). The Baby-Friendly Hospital Initiative was launched in 1991. It is an effort by UNICEF and the World Health Organization. The aim of BFHI is to ensure that all maternity wards become centers that support breastfeeding. The process is controlled by the national breastfeeding authorities using the Global Criteria. Since the

beginning of the BFHI initiative more than 15,000 facilities in 134 countries have been awarded this prestigious status. A maternity facility which has implemented the 10 specific steps can be designated “baby-friendly”. This term may be used only by maternity services that have passed external assessment according to Global Criteria for the BFHI. Other medical services, community activities, workplaces or commercial products may use terms such as “breastfeeding-friendly”, “mother-child friendly” or “pro-breastfeeding”.

These are “Ten steps to successful breastfeeding” (1).

1. Have a written breastfeeding policy that is routinely communicated to all health staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within one half-hour of birth.
5. Show mothers how to breastfeed and maintain lactation, even if they should be separated from their infants.
6. Do not give newborn infants food or drink other than breast milk, unless medically indicated.
7. Practice “rooming in”-that is, allow mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them upon discharge from the hospital or clinic.

Data shows an increase in the number of mothers who breastfed their children as a result of receiving care in a baby-friendly maternity hospital unit. Another result of BFHI is the improvement of child health, especially in low income countries.

Child Friendly Healthcare Initiative

The other initiative is the Child Friendly Healthcare Initiative (CFHI) which entails healthcare provision in accordance with the Convention on the Rights of the Child (1).

Child Friendly Health Care Initiative Standards include:

1. Children will be admitted to and kept in hospital or other residential institution only when this is in their best interests (care in the community, collaborative child health care) -Articles 2,3,24.
2. The hospital/ healthcare facility will provide the highest attainable standard of care and treatment to new born and to children who attend or are referred (management and treatment) -Articles 2,6,24.
3. The environment will be secure, safe and scrupulously clean (safety) - Article 3.
4. Child and family centered care will be delivered in partnership with parents, in areas dedicated to children and young people that are child and family friendly, by staff with “children’s” qualifications, or who are experienced. A parent/ caregiver will be enabled to stay with their child and support them, especially during procedures (care delivery)- Articles 7,9.
5. Parents and children will be kept fully informed and involved in all decisions affecting their care (communication) - Articles 12,17.

6. Children will be approached without discrimination as individuals with their own age-appropriate and development needs and rights to privacy and dignity (rights/equity)- Articles 2,16,19,23,37.
7. The hospital or healthcare facility will have a multidisciplinary team to establish and maintain guidelines for the assessment and control of the physical and psychological pain and discomfort of children (pain) - Article 19.
8. When children are severely ill, undergoing surgery or have been given systemic analgesia and /or sedation there will always be healthcare staff trained and experienced in the resuscitation of children immediately available, and the facilities to do this (resuscitation) - Article 6.
9. Children will be able to play and learn while in a hospital or other healthcare institution (play/learning) - Articles 28,29,31.
10. Healthcare staff will be familiar with the signs and symptoms of child abuse and be capable of instigating appropriate and clearly defined procedures to protect the child (child protection)- Articles 19,20,32,33,34,39. Health will be promoted by example, education, immunization, growth and developmental monitoring/assessment and multidisciplinary collaboration when a pregnant woman or child is admitted to, or attends a hospital or healthcare facility (health promotion)- Articles 17,24,33.
11. The hospital or healthcare facility will comply with appropriate “best practice” standards on the support of breastfeeding and nutrition and will ensure that the nutritional needs of each child are met (breastfeeding and nutrition) - Article 3.

The medical service today as well as the whole range of healthcare professionals and volunteers should take special precaution in the protection of children from unnecessary suffering and the informed participation of treatment. Children deserve care for their souls and not only for their bodies. Additional staff training, a change in attitude and a redistribution of resources could all be useful steps to achieve child-focused treatment in medical facilities.

APPENDIX

The Budapest Declaration on Health Promoting Hospitals

Part 1

Content and Aims for Hospitals participating in Health Promoting Hospitals - an International Network

Beyond the assurance of good quality medical services and health care, a Health Promoting Hospital should:

1. Provide opportunities throughout the hospital to develop health-orientated perspectives, objectives and structures.
2. Develop a common corporate identity within the hospital which embraces the aims of the Health Promoting Hospital.
3. Raise awareness of the impact of the environment of the hospital on the health of patients, staff and community. The physical environment of hospital buildings should support, maintain and improve the healing process.
4. Encourage an active and participatory role for patients according to their specific health potentials.

5. Encourage participatory, health-gain orientated procedures throughout the hospital.
6. Create healthy working conditions for all hospital staff.
7. Strive to make the Health Promoting Hospital a model for healthy services and workplaces.
8. Maintain and promote collaboration between community based health promotion initiatives and local governments.
9. Improve communication and collaboration with existing social and health services in the community.
10. Improve the range of support given to patients and their relatives by the hospital through community based social and health services and/or volunteer-groups and organisations.
11. Identify and acknowledge specific target groups (e.g. age, duration of illness etc.) within the hospital and their specific health needs.
12. Acknowledge differences in value sets, needs and cultural conditions for individuals and different population groups.
13. Create supportive, humane and stimulating living environments within the hospital especially for long-term and chronic patients.
14. Improve the health promoting quality and the variety of food services in hospitals for patients and personnel.
15. Enhance the provision and quality of information, communication and educational programmes and skill training for patients and relatives.
16. Enhance the provision and quality of educational programmes and skill training for staff.
17. Develop an epidemiological data base in the hospital specially related to the prevention of illness and injury and communicate this information to public policy makers and to other institutions in the community.

Part 2

Criteria for Hospitals participating as Pilot Hospitals in Health Promoting Hospitals - an International Network

Basic Recommendations

1. Acceptance of the principles declared in the «Ottawa Charter on Health Promotion».
2. Acceptance of the document «Content and Aims for Health Promoting Hospitals»

Specific Recommendations

Acceptance of the criteria of the European «Healthy Cities» project as they relate to the hospital:

1. Approval to become a Health Promoting Hospital to be sought from the owner, management and personnel of the hospital (including representatives of unions, working council). A written submission will be required.
2. Willingness to cooperate and ensure the funding of programmes with an independent institution in relation to planning, consultation, documentation, monitoring and evaluation.
3. Evaluation to be undertaken annually in order to guide future action.
4. Willingness to develop an appropriate organizational structure and process, supported by project management to realise the aims of the Health Promoting Hospital.

5. Establishment of a Joint Project Committee (with representatives from the Pilot Hospital and institutions of research and/or consultation).
6. Nomination of a project manager by the hospital, who is accountable to the Joint Project Committee.
7. Provision of necessary personnel and financial resources as agreed by the Joint Project Committee.
8. Readiness to develop at least five innovative health promoting projects related to the hospital, the people who work within it, and the population served, with goals, objectives and targets for each project. Projects should be complementary to health promotion initiatives in primary health care.
9. Public discussion of health promotion issues and possible health promoting activities within the hospital by
 - Internal Newsletter
 - Public presentations within the hospital.
10. Provision of evaluation information at least annually to
 - the Joint Project Committee
 - the management
 - the staff
 - the public and to those who provide funding
 - other organisations, both local, national and international including WHO and the Coordinating Centre for the Network.
11. Exchange experience by networking with:
 - other hospitals
 - Health Promoting Hospitals - an International Network (participation in Business Meetings etc.)
 - National Network (group of nominated observers from different institutions with an interest in health).
12. Link the Health Promoting Hospital projects with congruent local health promotion programmes, especially those within the Healthy Cities Network.
13. Prospective running period of the model: 5 years.

This declaration has been issued at the 1st Business Meeting of the International Network of Health Promoting Hospitals.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Social Networks and Social Support in Health Promotion Programmes
Module: 1.7	ECTS: 0.5
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Key words	Social networks, social support, life stress, interaction, health promotion, health determinants
Learning objectives	<ul style="list-style-type: none"> • After the completed module students and professionals in public health will broaden their knowledge and understanding in respect to: • Importance of the social networks and social support in creating and implementation of health promotion programs; • empirical evidence concerning social networks and social support and their relationship to health status and health behaviour; • utilization of social networks in health education programs, e.g. family network interventions, self-help groups, natural helpers and community organizing.

Abstract	<p>Social networks and social support are general terms to describe different aspects of social relationships, including those mechanisms, which may protect the individual from the negative effects of stress. The social support is offered by the part of the social network, the people around us, that are ready to help us, and on whose help we can always count. Those enjoying strong social ties appear to be at low risk of psychosocial and physical impairment, whereas a lack of social support has been found to be associated with depression, neurosis and even mortality.</p> <p>The availability of the emotional and practical social support varies with the social and economic status. Poverty can lead to social exclusion and isolation. The social cohesion - presence of mutual trust and respect in the local community and wider in society - helps protect the people and their health against the cardiovascular diseases and mental disorders.</p> <p>An expert in public health should recognize the role of social networks and social support in health promotion process and programs and support-enhancing interventions, and should also master the knowledge and skills for implementing the integral health promotion programmes.</p>
Teaching methods	Lectures, focus group discussion, nominal groups, case studies
Specific recommendations for teachers	Case Studies – the students are to collect data on “life histories” for various types of social networks and social support in relation to the health status and health consequences.
Assessment of students	The final mark should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work and final discussion, and quality of the seminar paper

SOCIAL NETWORKS AND SOCIAL SUPPORT IN CREATING AND IMPLEMENTATION OF HEALTH PROMOTION PROGRAMMES

Doncho Doney, Gordana Pavlekovic, Lijana Zaletel Kragelj

Introduction

The term *social environment* is encompassing economic, political and cultural spheres and influences. It represents a complex determinant of health, human development and survival. It is supposed and expected that the social environment provides social and economic safety, social stability, acceptance of differences, human rights, cohesion in a community, and so on. Social environment includes moral sentiments defining good and bad thoughts, feelings and conduct, ideologies including religious and secular beliefs, and knowledge as well as the entire repertoire of cultural symbols and their meaning, including language. As Peter Berger (1964) nicely expressed it, »the human being resides in the social environment and the social environment resides within the human being« (1).

On the other side, social-economic turmoil, economic transition, unemployment and poverty, national, religious and other conflicts bring about dramatic changes in one's social environment ensuing in a host of consequences upon one's health. Conditions of war, implying not only physical threats but also a throng of stressful and crisis situations endanger physically, psychologically, and emotionally individuals and populations and especially the most vulnerable categories (women, children, the aged etc.). Resulting health disorders are numerous with acute and long-term consequences. The period of most rapid change in human health status is equivalent to what historians call the Modern Era.

Social relations and *supportive networks* of communication and mutual obligation makes people feel cared for, loved, esteemed and valued. Supportive relationships have powerful protective effect on health and may also encourage healthier behaviour patterns. Social relations that can be analysed at a primarily individual level as a social support, and at the community level as a social capital, are particularly important part of a social environment. *Social networks* are enveloping sets of relationships through which individuals develop their identities, which in turn shape the motivation to act in accordance with a sense of self and lifestyle. Networks may thus act to reinforce both positive and negative patterns of health behaviour (1, 2).

Social support is the general term to describe different aspects of social relationships, including those mechanisms which may protect the individual from the negative effects of stress (e.g. family, friends, number and frequency of social contacts). Those enjoying strong social ties and support appear to be at low risk of psychosocial and physical impairment, whereas a lack of social support has been found to be associated with depression, neurosis and even mortality. The lack of support increases the susceptibility for certain diseases, and the presence of suitable support can reduce the consequences from the exposure to stress situations and factors that have adverse affects. In general, social support seems to be an important moderating factor in the stress process (2-4).

Social network, social support and social capital

Definition of social network

Social network is »a person-centred web of social relationships«. Relationships are linkages of various kinds. It does not mean that the network necessarily provides social support. Social networks can be generally defined as »the web of social relationships that

surround individuals«, while social support is a function of those social relationships (5).

Social networks include family and kinship members (father, brother etc.), friends, »fictive kin«, co-workers and social role-persons (teacher, boss), business transactions partners, information exchange persons, and others connected to the individual on a personal level. Social networks and social support refer to the term »personal ties«. Human beings form personal ties with other people throughout the life course, beginning in infancy when the newborn's survival depends upon his/her »attachment to and nurturance by others over an extended period of time«. As the individual matures, personal ties become sources of support and act as buffers against the deleterious effects of stress and disease (5-7).

A tie connects a pair of actors by one or more relations. Pairs may maintain a tie based on one relation only, e.g., as members of the same organization, or they may maintain a multiplex tie, based on many relations, such as sharing information, giving financial support and attending conferences together. Thus ties also vary in content, direction and strength. Ties are often referred to as weak or strong, although the definition of what is weak or strong may vary in particular contexts. Ties that are weak are generally infrequently maintained, non-intimate connections, for example, between co-workers who share no joint tasks or friendship relations. Strong ties include combinations of intimacy, self-disclosure, provision of reciprocal services, frequent contact, and kinship, as between close friends or colleagues (6,7).

Women's social networks consist more of family and friendship ties, whereas men's social networks are more closely connected to relationships formed at work or in the neighbourhood (8).

Structural characteristics and relations of social networks

Social network analysis is the study of the connections between people. These connections are valuable, because they are how people gather the different types of support that they need – emotional, economical, functional, etc. The types of connections – or *ties* – that an individual maintains varies, but they often include family, friends, colleagues, and lovers. In addition to a difference in type, ties vary in value or *strength*. Most commonly, social network theorists refer to two levels of ties – *strong ties* and *weak ties*, where a strong tie is able to offer a much greater magnitude of support than a weak tie. Although it may seem as though weak ties are not particularly valuable, there are distinct advantages to having weak ties, including increased information flow and social mobility. Since weak ties require less effort to maintain, it is in an individual's best interest to maximize their weak ties, if they should want increased access to information (6,9).

Both strong and weak ties, play roles in resource exchange networks. Pairs who maintain strong ties are more likely to share what resources they have. However, what they have to share can be limited by the resources entering the networks to which they belong. Weakly-tied persons, while less likely to share resources, provide access to more diverse types of resources because each person operates in different social networks and has access to different resources:

- *reciprocity* means the extent to which resources and support are both given and received, while
- *intensity* means the extent to which the relationship provides emotional comfort. The cross-cutting »strength of weak ties« also integrates local clusters into larger social systems. The more relations (or strands) in a tie, the more multiplex (or multistranded) is the tie;

- *complexity* means the extent to which the relationship serves multiple functions.

Social network analysts have found that multiplex ties are more intimate, voluntary, supportive and durable. The composition of a relation or a tie is derived from the social attributes of both participants: for example, is the tie between different or same sex dyads, between a supervisor and an underling or between two peers (6,7,9).

Social networks can vary in their *range*: i.e., in their *size*, *density* and *heterogeneity*:

- *size* is very important characteristic of the network. In general, the larger a person's ego network, the more support they receive. This is basically because there are more people available to provide any service someone may need. In addition, it appears that alters in larger networks tend to provide more support. It is unclear why this should be so, but it may be that the alter perceives the ego as important (because they are so well connected) and therefore deserving of more help;
- *density* means the closeness and availability to interact with each other. The density of an ego network is defined as the number of ties in the network divided by the number of pairs of people. If T is the number of ties (not counting ties to ego), and N is the number of people in the ego network (not counting ego), then the equation is:

$$Density = \frac{2T}{N(N-1)}$$

The relationship of density to social support is not yet clear. It is thought on theoretical grounds that density promotes mental health, but that has not been shown enough empirically yet. What is clear is that dense ego networks tend to be better at providing emergency and chronic health care.

Density is one of the most widely used measures of social network structure: i.e., the number of actually-occurring relations or ties as a proportion of the number of theoretically-possible relations or ties. Densely-knit networks (i.e., groups) have considerable direct communication among all members: this is the classic case of a small village or workgroup. Much traditional groupware has been designed for such workgroups. By contrast, few members of sparsely-knit networks communicate directly and frequently with each other. As in the Internet, sparsely-knit networks provide people with considerable room to act autonomously and to switch between relationships. However, the resulting lack of mutual communication means that a person must work harder to maintain each relation separately; the group that would keep things going is not present (6,7).

- *heterogeneity* - larger social networks have more heterogeneity in the social characteristics of network members and more complexity in the structure of these networks. Small, homogeneous networks are characteristic of traditional work groups and village communities; they are good for conserving existing resources (6,7);

Definition of Social Support

Cobb defined social support in 1976 as »a sense that one is loved and cared for, is esteemed and valued and belongs to a network of communication and mutual obligation«. Cobb identifies three separate elements of social support, which are important in providing assistance or aid to those under stress (4,9), namely:

- *emotional support* (expressions of understanding, trust, sympathy and nurturance);
- *esteem support* (expressions of liking, love and respect), and
- *network support* (social integration and material, tangible aids).

Social support is an extra quality in the social network, for it surmises, beside one's surroundings – network of people and frequency of communication – that people have obligations one to another, decreed and chosen by themselves, and it includes care, attention, readiness to help. (2,10).

Researches show that people with strong social support risk less to die of certain diseases than those without it, and they also recuperate more quickly once a disease has been diagnosed. This is of particular importance in childhood. Thus, the presence of parents in hospital conditions, especially the mother, has a favourable effect upon the course and outcome of an illness. Researches also indicate that lack of social support is an additional factor in premature death cases of smokers, those with high blood pressure, and in other conventional risks. Men with less social support have twice as much chance to die at certain age than their peers with greater social support (10,11).

Definition of Social Capital

Social capital, as opposed to former social relations which are individual, is a characteristic of a community. In 1993, Puttman defined it as »those features of social organization, such as network, norms and trust that facilitate co-ordination and co-operation for multiple benefit« (12).

It is also defined as »the resource imbedded in social relations among people and organizations that facilitate cooperation and collaboration in communities«. This concept is closely connected to the development of civil society, the one which values solidarity, participation, integrity, and in which social, political, educational, and health institutions are connected horizontally, not vertically (10,13).

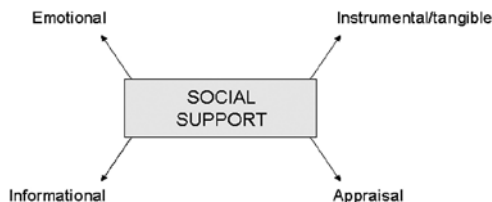
Researchers suggest to a close correlation between the social capital and infant and child mortality – the higher the indicators of social capital the lower the mortality. There is also a connectedness with general mortality (14). This connectedness is explained by the fact that communities/societies with higher level of social capital can act so as to formulate and realize common goals.

Basic Types/Categories of Social Support

Whereas social networks constitute the structure of social relationships, social support is a function of those relationships. Numerous measures of social support exist, some of which emphasize the multidimensional nature of the construct, while others propose that emotional support is the essential component. In spite of difficulties with definitions and the use of different measures most studies have found that social support is negatively related to loneliness and general wellbeing (4).

According to Heaney and Israel, there are four basic types of social support: emotional, instrumental, informational, and appraisal (5), (Figure 1).

Figure 1. Four basic types of social support.



1. *Emotional social support.*

Emotional support includes the provision of intangible support, such as love, empathy, caring and trust.

2. *Instrumental/tangible social support.*

Instrumental/tangible support includes the provision of services that directly benefit the recipient (e.g. food, money, computer assistance, mechanical help as a ride to the supermarket, etc.). Emotional support was more frequently received from networks of extended family, whereas families of origin provided the largest amount of material support. Instrumental support was provided most often by informal community relations.

3. *Informational social support.*

Informational support is provided by means of offering information and advice or instructions/suggestions to help the recipient address his/her own problems. An example might be telling a neighbour where to find the nearest bank or grocery store, or giving her the name of a good paediatrician for her children.

4. *Appraisal social support.*

Appraisal support refers to the provision of constructive feedback, perception of a positive comparison, encouragement, or other information that will help the recipient to evaluate his/her own sense of self-efficacy or competency. Appraisal support helps one to make sense of things and self-appraisal (4,5,10).

In industrialized societies, social support tends to flow through equals - peers and friends. In contrast, in agricultural societies, aid tends to flow through hierarchical relations like parent-child and boss-worker. According to Social Resource Theory (15) strength of tie is related to the kinds of resources provided. Instrumental actions (buying goods, mechanical help) require diverse social resources and therefore tend to be accomplished via weak ties (one reason is that we tend to have strong ties with people who are similar to ourselves, so diversity is achieved through weak ties). Expressive actions (sharing life experiences, emotional support) are more likely to be done by strong ties (15).

Kinship ties tend to be used for really big things, like life-threatening emergencies. One reason for this is the cultural understanding of the obligations of kin - they are supposed to help. Another reason is that the dense ties among kin make it easy for them to mobilize and coordinate their efforts. A person's friends may not even know each other, but kin typically do.

A large chunk (25%) of active ties in a support network is local. This means that even in today's world of high mobility and excellent transportation and communication media, we still get a lot of our support from people who are physically close by.

Social support is not clearly related to similarity of ego to alter. That is, one gets social support from both people who are similar to one's self, and different from oneself. However, with respect to age, there tends to be a lot of social support provided by people of dissimilar ages. Young people tend to provide older people with physical labour, while old people tend to provide knowledge and impart skill to younger people. Also, with respect to employment similarity, people with similar employment status tend to give aid to each other.

Research on social networks and social support linked to personal health

Consistent relationships had been proven between social support and better health. Mechanism – thought to be a function of stress management and how social support reduces

the impact of stress. The support acts on the individual and on the societal level. The social isolation, loneliness and exclusion are related to increased rates of premature deaths and smaller chances to survive more severe illnesses, such as heart attacks. The people that receive less emotional and practical social support than others, more frequently suffer from depression, the level of incapacity due to chronic diseases is greater, and in women during pregnancy, the risk is higher for complication of the pregnancy (2-4).

Differentiating social networks from social support helps us to understand the different ways in which each one contributes to the individual's health and well being (or lack thereof). There are two main points of differentiation in the context of studying health and health-related behaviours. The first point is that social network research considers characteristics of social relationships beyond social support, such as negative interactions, risky health behaviours, stress, and susceptibility to infectious disease. Second, discussions of social support usually frame the provision and effects of social support in positive terms and as benefits intended by the provider. Social support is always intended by the sender, meaning it is consciously provided. Furthermore, social support is always meant to be helpful, even if the recipient does not perceive it as such (5). The assumption that social support is always intended to be positive leads researchers to highlight the existence of social support as a positive influence on health and health behaviours, and its absence as a negative influence.

Recently there has been research into the study of the implications of social integration for personal health. This research has shown that participation in a diverse social network may have an influence on health. The researchers chose to study social network diversity (number of social roles) and susceptibility to the common cold in people experimentally exposed to a cold virus. What they have found is that the greater the social diversity of the person, the lesser his or her susceptibility to infectious illness will be. Despite these results, the researchers were not able to isolate the pathways through which social diversity was associated with susceptibility. The leading hypothesis is that as social diversity increases, the level of exposure to a certain illness also increases. Thus the immune system is better prepared to defend itself against any future exposure to the sickness. However, the researchers have so far not been able to thoroughly support this hypothesis experimentally. What this research does show is another strong benefit of having high social diversity or social capital (16).

The results found by these researchers are quite surprising, »The magnitude of the health risk of being relatively isolated (socially) is comparable to the risks associated with cigarette smoking, high blood pressure and obesity and is robust even after controlling for these and other traditional risk factors« (16). It appears that cultural isolation can have a profound effect on physical well being. Their research has also shown that the development of mental illness is associated with the level of social contacts a person has. Some researchers believe that this is due to the fact that people's identities are tied to their social roles. By meeting role expectations, individuals are given the opportunity to enhance their self-esteem. They believe that these social roles provide a purpose to life. They imply that a sense of purpose is an integral component of psychological well being (4,16).

Limitations of Social Network Research in the Field of Health

The social network measures used in studies of health outcomes are not as advanced as those involved in formal social network analysis. A major reason for this is that studies of health outcomes typically involve large samples and include multiple questionnaires or interviews. For these studies, intensive quantitative measurement is reserved for the rare

cases in which the researcher determines that there exists sufficient need for it. Thus the social network results in this type of research do not always hold up to the same academic rigor as other research in the field of social networks does. This does not discredit the research described above. However, it does propose that further research is required before these conclusions can be adequately supported (17,18).

The implications of social network theory extend beyond the applications of business to explain the hierarchy of social and political power that exists in the society. A person's social network can affect them in a variety of ways, from their reputation to their health. Social networks are dynamic and evolve to fit new technologies that are introduced to society. The Internet has allowed social network interaction to expand in ways that were previously not possible (6,7,17).

Social networks and social support in the health education and health promotion programmes

The convincing evidence of the relationship between social networks, social support, and health status has influenced the development of program strategies which are relevant to health education. Linkage between social support and social networks and health education programs involve interventions at the network and community level. Two broad strategies are predominant:

- programmes enhancing entire networks through natural helpers, and
- programmes strengthening overlapping networks/communities through key opinion and informal leaders who are engaged in the process of community wide problem-solving.

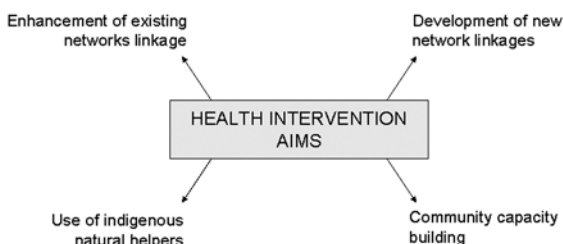
Some network characteristics relate to physical and mental health status. Network characteristics can be applied to the two program strategies. This approach not only recognizes, but also acts to strengthen indigenous skills and resources (2,19).

Considering the number and variety of references to social networks and social support in health literature, it seems apparent that social support is an important contributor to health and positive health behaviours. Unfortunately, as referenced above, not everyone enjoys the beneficial influence of social support on health. On the other side without social support, messages may not have relevance. Programs must use and anticipate the role that social support can play in disseminating an innovation or in »submarining an innovation«. Supporting the innovation requires a training component in the planning and delivery of a program/innovation. It means it is necessary to plan for costs and time to train the support personnel, as well as identifying and training the gatekeepers. As implied by diffusion theory, time and resources will need to be used to get the gatekeepers on board. It is particularly important in the needs assessment to identify the key people and whether they can be brought on board. It is also necessary to identify or develop a core group of potential mentors as an important component of many health promotion programs. It is very important to explore the possibilities how to make use of buddy systems and self-help groups. This approach should be careful in order to assist and not to hinder health promotion program. It means it is necessary to identify the barriers and resources, as well as what training and support is needed (19).

Here are presented a few ways in which support-enhancing health interventions can be accomplished. According to Heaney and Israel, there are four basic ways in which health

interventions can be geared toward enhancing social networks and social support. Health interventions can seek to enhance existing social network linkages, to develop new social network linkages, to enhance networks through the use of indigenous natural helpers, or to enhance networks through community capacity building and problem solving (5), (Figure 2).

Figure 2. Health intervention aims.



1. *Enhancement of existing network linkages.*

Enhancing existing network linkages or ties involves helping individuals to identify supportive network members and to mobilize and maintain those relationships. Interventions aimed at enhancing existing social networks should also focus on enhancing the quality of the relationships within the network by providing network members with specific skills for providing support.

2. *Development of new social network linkages.*

Interventions that seek to *develop new social network linkages* are particularly beneficial when existing social networks are small or overburdened. Examples include providing individuals with a mentor or »buddy«, or providing opportunities to participate in a self-help or support group. »Buddy« systems and support groups are based on the idea that all parties involved serve both as support provider and receiver, which increases the sense of support reciprocity in the relationships.

3. *Use of indigenous natural helpers.*

The *use of indigenous natural helpers in enhancing social networks/ support* necessitates identifying natural helpers in the community and training them in relevant health topics. All communities have natural helpers - community volunteers and it is very important these people to play a role in the health intervention program. Using indigenous natural helpers to enhance social support is especially important in cases where community members already turn to them for advice and material or instrumental support.

4. *Community capacity building.*

The fourth type of support-enhancing intervention is *community capacity building*. Involving community members to identify and resolve community problems may indirectly strengthen the social networks that exist in the community.

Limitations of the Social Support Interventions

All of these intervention possibilities have their *limitations*. Challenges to the first type of intervention, enhancing existing network ties, include difficulty identifying and engaging

existing network members who have the commitment and the resources to provide the necessary support, as well as difficulty measuring attitudinal and behavioural changes that directly result from increased perceived support (5). To ensure that the intervention does not conflict with the established interaction styles within the network might also be difficult. Developing new social network linkages with mentors, buddies, or support groups requires that those people exist and that they have the time, commitment, and other resources necessary to become involved.

While the use of indigenous natural helpers to bolster social support has been beneficial in a variety of cases, this intervention strategy may necessitate larger investments in time and resources in order to train those individuals in specific health topics and community problem-solving strategies. The same difficulty might be a potential limitation to the fourth type of intervention, enhancing networks through community capacity building and problem solving. However, in both cases the positive results of equipping individuals and their communities to work together to identify and resolve specific problems might outweigh these challenges. Given these limitations to each intervention type, it is important to be aware of the alternatives and choose the one that best fits the targeted individuals/communities and health behaviours/outcomes. In some cases, a combination of two or more intervention strategies might be appropriate (5).

Policy implications

Intervention studies have shown that good social relations and providing social support can reduce the psychological response to stress and can improve patient recovery rates from several different conditions. The World Health Organization (2) pointed out the following main directions for action and policy intervention:

- reducing social and economic inequalities and reducing social exclusion can lead to greater social cohesiveness and better standards of health;
- improving the social environment in schools, in the workplace and in the community more widely, will help people feel valued and supported in more areas of their lives and will contribute to their health, especially their mental health;
- designing facilities to encourage meetings and social interaction in communities could improve mental health; and
- in all areas of both personal and institutional life, practices that cast some as socially inferior or less valuable should be avoided because they are socially divisive.

Exercise

Task 1:

Develop a role play by looking at everyday situations in the context of social networks and social support related to health and wellbeing and to the health interventions and health promotion programs.

Task 2:

Analyse, are there different networks established in your target population? How do they get along? What will it take to involve them? Do you need to involve them? How will you allow for them? What will happen if you don't get them on board?

Task 3:

How will you use the social groups in your intervention to keep track of what's going on at the community level? Keep in mind that these groups are paramount in the evaluation of the implementation of the programme.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Evaluation in Health Promotion
Module: 1.8	ECTS: 0.25
Author(s), degrees, institution(s)	Alexandra Cucu, MD, PhD, Chair of Public Health and Health management, Bucharest, Romania
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Key words	Health promotion, evaluation, health promotion interventions
Learning objectives	After completing this module students and public health professionals will be able to: <ul style="list-style-type: none"> • understand the conceptual framework of health promotion and its evaluation; • increase knowledge on basic principles of evaluation; • improve knowledge on health promotion evaluation; • becoming aware of the necessity of health promotion intervention evaluation; • be able to evaluate a health promotion intervention.
Abstract	Evaluation of health promotion intervention is a systematic examination and assessment of process and outcomes of a health promotion intervention in order to produce information for further improvement. Due to complexity of health promotion interventions, several methodological and practical issues have to be clarified from the beginning of the processes. In this context, based on the literature review, and Springett and all model, an eight step evaluation framework and its principles is described. Some important methodological issues and challenges specific for each step are further detailed. Also critical points and difficulties are briefly presented. The whole approach contributes to enhance understanding of methodology and importance of evaluation as part of health promotion interventions cycle.

Teaching methods	Teaching methods include: <ul style="list-style-type: none">• introductory lectures related to health promotion concept and its understanding;• distribution and discussion of relevant literature on health promotion and its evaluation and best cases examples;• guided discussion on general health promotion interventions and their evaluation;• small group evaluation for a health intervention from the best cases examples;• distribution of topics for seminar papers.
Specific recommendations for teachers	Specific recommendations: <ul style="list-style-type: none">• $\frac{3}{4}$ lectures; $\frac{1}{4}$ discussions;• facilities equipment available;• training materials elaborated and distributed;• best cases health promotion interventions presentations.
Assessment of students	Assessment of students: <ul style="list-style-type: none">• multiple choice questionnaire for theoretical aspect• presentation of evaluation papers

EVALUATION IN HEALTH PROMOTION

Alexandra Cucu

Introduction

Generally, there are more than 100 specific types of evaluation, each of them appropriate for specific purposes, from the very broad perspective of Green (1) as “comparison with an object of interest against a standard of acceptability” to the programme/project more specific evaluation.

Health promotion evaluation shares many issues common to evaluation in general, but due to specificity of community health interventions, raise many methodological difficulties.

In order to be able to find out the most appropriate approach for health promotion intervention a clear definition of concepts and understanding of *health promotion* and *evaluation* should be done from the beginning.

Health promotion concept

Even the health promotion concept is a not a new one, according to the recent social, economic, demographic, technological developments its understanding has continuously evolved continuous broadening its senses.

Any overview of health promotion definitions should start from Marc Lalonde (2) approach, who, since 1974, on his document “A new perspective on health of Canadians” identifies health promotion as a *key strategy* “aiming at informing, influencing and assisting both individuals and organizations so that they will accept more responsibly and be more active in matters affecting mental and physical health” emphasizing both on information and assistance rolls at individual and organizational level.

Few years later, the U.S. Department of Health Education and Welfare definition (3), contributes to widening the modern understanding of the HP as “a combination of health education and related organizational, political and economic programs designed to support changes in behaviour and in the environment that will improve health” (4). It stresses more clearly the integrated, multilevel approach of the health promotion intervention and the goals of that process: improving health.

The recent conceptualization of the HP, corresponding to the WHO updated definition “the process of enabling people to increase control over the determinants of their health and thus to improve their health” contained in the *Ottawa Charter for Health Promotion (1986)*, (5) is stressing one of the cardinal principle of health promotion, empowering, as a tool for individual action for health improvement.

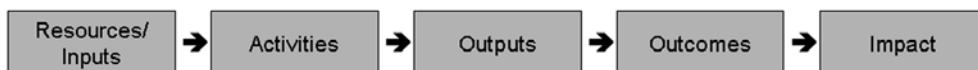
Even different, stressing more on finalities, partnership or process features, beyond all those definitions there are the same values as equity, participation and empowering, oriented to the same, consistent goal over decades, improving health and wellbeing at individual and social level.

A framework for evaluation of health promotion intervention

Theoretician’s definition on evaluation as “systematic examination and assessment of features of programme or other intervention in order to produce knowledge that different stakeholders can use for a variety of purposes” (6) gives us only an introduction on the complexity of this process.

According to the specialist opinion “many methodological issues are associated with evaluation in health promotion, above and beyond the difficulties of programme evaluation”. Even so, the logic model framework for programme evaluation from figure 1 could be considered as a simplified necessary background for understanding the specificities and difficulties of health promotion evaluation (7). Its general diagram includes the following components:

Figure 1. Logic model evaluation diagram



The term understanding is the following:

- *Resources/Inputs* - resources/inputs include the human, financial, organizational, and community resources available for doing the work;
- *Activities* - activities are what the intervention does with the resources in order to reach the intended results;
- *Results* - the term results includes all of the intervention desired results (outputs, outcomes, and impact);
- *Outputs* - the outputs are the direct products of program activities and may include types, levels and targets of services to be delivered by the program;
- *Outcomes* - outcomes are the specific changes in program participants' behaviour, knowledge, skills, status and level of functioning. Short-term outcomes should be attainable within 1-3 years, while longer-term outcomes should be achievable within a 4-6 year timeframe. The logical progression from short-term to long-term outcomes should be reflected in impact occurring within about 7-10 years;
- *Impact* - Impact is the fundamental intended or unintended change occurring in organizations, communities or systems as a result of program activities within 7-10 years. It often occurs after the programme/intervention ends.

In applying this simplifying approach, always health promotion specific attributes as: complexity, dependence of political and social values and context, different intervention levels, diversity of results, long term effects and difficulty to measure outcomes as participation and empowering, should be addressed. That's why, in order to draw up a framework for health promotion evaluation, several methodological and practical issues have to be clarified.

The main methodological aspects are related to difficulties to determine the relationship between the intervention and their associated, sometimes synergic, results, in the context of long term effects and multilevel character of health promotion interventions. In addition reaching best evidences of impact of the interventions, often requiring use of both objective and subjective measurements and ensuring the appropriate level of precision is another issue to be solved.

Practical aspects are related to difficulties to involve according their roles in the participatory process the stakeholders, evaluator and beneficiary of the intervention. Another key issue is what to evaluate, one single intervention or a package and their associated outcomes. How to deal with results in terms of cost-effectiveness, for this reason usually evaluation should be done for interventions where the costs are known or could be estimated.

Briefly, after the long series of specificities that should be considered, generally a health promotion evaluation framework, according to Springett et al. (8) should be based and respond to following principles:

- be applicable in all evaluation process, but ensure that the most appropriate method is use for the programme or policy being assessed;
- be consistent with health promotion principles, in particular empowering individuals and communities, by emphasizing participation, focus on collective as well as individual accountability;
- be flexible in its application, able to respond to changing circumstances;
- cover all stages of the evaluation process, from setting the agenda to using the results;
- apply to at all levels of evaluation.

According to these principles, evaluation should include eight steps, as follows:

1. Step 1 - describing the evaluated programme.
The first step consists in *describing the evaluated programme*, policy in terms of mandate, aims, objectives, procedure, structure and links with other initiatives.
It also includes the set up of the evaluation team and collecting baseline information. A logic model, as presented previously, for each health promotion intervention should be used in this stage for clarifying, together with all involved partners on the structure of the health promotion intervention that will be evaluated. It is a crucial step, requiring participation, involvement and commitment influencing not only the evaluation process but the implementation of it's the results. This stage includes the team selection for conducting evaluation and sometimes requires a task force team for support of process progression to be established.
2. Step 2 - identification of issues of concern.
The second important step is *identification of issues of concern*. This is a major one for clarification on the substance of the evaluated intervention and also on the purpose of evaluation and the end use of results. It consists in formulation of the evaluation question. Those should address both the operation of the initiative and its effects, in achieving the proposed objective and goals. For instance the questions on implementation of activities are important for assessing the effectiveness of the initiative, sometimes failure in reaching the expected results, for instance lack of reduction in prevalence of risk factors for a modifiable risk factor in a community, being associated with improper implementation or delivery to the beneficiary. This stage will be followed by clarification of information needs and indicators and not concomitant in order not to influence the relevance of the evaluation question due to data availability constraints.
3. Step 3 - designing the data collection process.
Step tree is *designing the data collection process*. It is a decisive, mostly methodological, step in progression of the evaluation process. It includes decisions on type of evaluation, methods and indicators to be produced in order to respond to the previously formulated questions. It requires involvement and participation of the stakeholders for selecting the most relevant information providing answers for the questions previously selected, ensuring effective evaluation. It has to establish the paradigm and criteria for goals achievement specific to the evaluated intervention. Also, decisions should be taken on what data should be collected. This is closely linked to the agreed methodological

approach, quantitative data being usually preferable to qualitative one. But often, due to complexity of health promotion outcomes qualitative data, meaningful soft tools have to be produced. Another important issue is to establish the appropriate level of aggregation of the information, being known that data aggregated for individuals are not always appropriate for assessing the community impact of an intervention at community level (9, 13). Selected measures should reflect both process and outcome, and for the last one effect should be explored both at individual and community/systemic level.

4. Step 4 - data collecting.

The fourth stage is *data collecting according to the format and requirements agreed before*. This is a process also complicated due to issues as confidentiality, ethical approach and selection of the target group beneficiary of the intervention. Participation and involvement of stakeholders is necessary for obtain reliable and accurate data for the studied intervention.

5. Step 5 - data analysis and interpretation.

Step five, *data analysis and interpretation* are another critical step. As often qualitative data are used and their quality is often beyond influence, analysis of data should be carefully made in order to keep and transmit the correct message in an understandable and significant format for the beneficiary of the evaluation. It gives added value to the evaluation process trough translating the technical results in an easy accessible format, adequate for the purpose of evaluation itself.

6. Step 6 - formulation of recommendation.

The sixth step, succeeding to data analysis, is *formulation of recommendation*. This includes also clarification of implication of the findings and their implementation. It is the primary mode for valorising the results of the evaluation made. Stakeholder's involvement during this stage will guarantee the adequacy and feasibility of the recommendation and also their future implementation.

7. Step 7 – dissemination of the results.

On the seventh stage the results of evaluation should be *effectively and not “ad hoc” disseminated* (10). It is a step that must be systematically designed and planed, according to a dissemination plan, in order to maximize the use of results of the evaluation process. It should be done, consistent with the previous steps, with participation and involvement of all actors, stakeholders and beneficiary together. Dissemination should clearly transmit information on the scope, team, methods, questions, results and recommendation of the evaluation process. Proper carried out, with the target audience mobilized it represents one of the moments where information can be a powerful tool in empowering communities and individuals (11, 12), ensuring in this way the success of the evaluation made. There are opinions that, for this stage, efforts and resources should be devoted as much as for the whole process. In fact dissemination itself is not only the trigger of improvement and implementation of findings and the recommendation for the policy/intervention evaluated but also represents a model for similar initiatives evaluation or even improvement without an explicit evaluation.

8. Step 8 - intervention.

The last step, the eighth is *the intervention* one. It consists in implementation of results and recommendation of the evaluation. It requires identification of resources and tools for proposed changes of the evaluated health promotion interventions and should be done in an articulated systematic manner according to a specific action plan. It is the starting point

for the next evaluation process of the health promotion intervention and it contribute to integration of evaluation in health promotion practice.

These steps, adapted to the features of the intervention to be evaluated, represent the backbone of a generic health promotion evaluation process. If the key challenges, represented by the correct identification of evaluation questions, decision on the design, outcome measures, and adequate data analysis are met, evaluation can be conducted in a systematic, reproductive way.

Instead of conclusion

The question on what is the most appropriate methodology to be used for health promotion intervention find out the logical answer that a unique model, adequate for all purposes and intervention is impossible to be draw up. Even so, the principles and the logical steps of the evaluation framework presented above are largely applicable. The rest is the role of the evaluation team and their art to involve and motivate stakeholders and beneficiary participation in the process.

To conclude this overview several features of health promotion evaluation should be always keep in mind when planning such an approach. The most important aspects are:

- health promotion evaluation is a process that requires systematic planning due to complexity of the evaluated theme;
- it requires good evaluators (14), able of logical thinking, ethical approach, excellent communication and interpersonal skills as well as research and conceptualization skills;
- it is strongly participatory process, stakeholders involvement during all stages being crucial for progression of evaluation and its added value for the intervention future;
- as a systematic information feedback mechanism, it is necessary for all health promotion intervention, allowing adjustments for reaching the proposed goals.

Deriving from the above, it is clear that no matter how systematic, rigorous is the evaluation process planed and conducted; its results are strongly depending on skills and quality of the evaluators and their capabilities to lead the process in order to reflect the complexity of the intervention and to ensure stakeholder participation.

In conclusion, well designed and carried out evaluation could contribute not only in improving of the evaluated health promotion intervention but also in developing networks and contacts, creating bridges between practitioners, beneficiary and decision makers, increasing the impact, support and participation for other health promotion activities.

Exercise

The students will work in small groups (4-6 students). They will analyze the health promotion national framework features. They will design evaluation, based on the recommended steps, for one specific intervention from the national public health programme. They will identify and discuss the main methodological and practical issues raised by each specific intervention and elaborate presentation on the studied topic.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Public Health Intervention Programmes and Their Evaluation
Module: 1.8.1	ECTS: 0.5
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Key words	Evaluation, public health intervention programmes, CINDI, blood pressure, arterial hypertension
Learning objectives	<p>After completing this module students should:</p> <ul style="list-style-type: none"> • increase knowledge about evaluation process; • understand and differentiate between different types of evaluation; • understand the public health programme process; • understand the meaning and importance of the last step in this process – the evaluation of public health programmes; • be able to critically assess the limits of evaluation process of public health programmes.

<p>Abstract</p>	<p>A public health intervention is an intervention, which is applied to many, most, or all members of a community, with the aim of delivering a net benefit to the community or population as well as benefits to individuals.</p> <p>Every intervention programme has its cycle. One of most important phases in this cycle is the evaluation phase.</p> <p>One of the most important physiological risk factors for non-communicable diseases is arterial hypertension. In Slovenia high prevalence of severe arterial hypertension was registered at the beginning of the 1990s what classified Slovenia among countries with the highest prevalence of severe arterial hypertension. Consecutively it was realized that an interventional and systematic programme to deal with the problem was strongly needed.</p> <p>Slovenia as a state officially joined international CINDI programme at the beginning of the 1990s, when its activities were limited to Ljubljana demonstrational area. First few years were used as an introductory period of the programme, while more systematically organized activities begun in the late 1990s.</p> <p>The paper presents the different types of evaluation and as an illustration of evaluation in practice the case of evaluation of CINDI programme activities in Slovenia to reduce arterial hypertension prevalence effectiveness.</p>
<p>Teaching methods</p>	<p>Teaching methods include introductory lecture, case study, small group discussions, and the whole group discussion (snowball method).</p> <p>After the introductory lecture students need carefully to read the suggested paper on the subject. Afterwards they need to answer the questions and discuss the issue - first in small groups and afterwards in a whole group of students. They are especially addressed to critically discuss on limits and strenghts of evaluation of public health programmes.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are mainly available in the internet; • target audience: master degree students according to Bologna scheme.
<p>Assessment of students</p>	<p>Assessment is based on case problem presentation and oral exam.</p>

PUBLIC HEALTH INTERVENTION PROGRAMMES AND THEIR EVALUATION

Lijana Zaletel Kragelj, Jozica Maucec Zakotnik, Zlatko Fras

Theoretical background

General definitions

Programme

Several definitions exist on what the term programme means, among which we can find the following:

- a formal set of procedures to conduct an activity (1);
- a set of projects designed to achieve common, long-term goals (2);
- a set of organized but often varied activities (a programme may encompass several different projects, measures and processes) directed towards the achievement of specific objectives (3).

Every programme has several steps, which could be schematically presented as a cycle (Figure 1), to the certain extent similar to the evidence based public health cycle (4):



Figure 1. The programme cycle.

- needs assessment - this is a step at which information about community health problems are gathered. On the basis of these information assumptions on how the needs/problems could be addressed, and the objectives/goals that should be reached are set up;
- programme planning – planning step - uses the assumptions set up at the previous step to plan a programme of activities;
- programme implementation - implementation step - refers to the follow-up of the activities in accordance with the plan. Implementation could be expressed in terms of operational or action plans which commonly outline concrete activities, time frames, responsibilities, budgets etc., for the achievement of different objectives of the programme;
- programme evaluation – by running a programme, we want to know how far the programme went and how effective it is in achieving its goals/objectives. We are

able to answer these questions by performing the so-called programme evaluation process. According to WHO (2), a programme evaluation is a periodic review and assessment of a programme to determine, in light of current circumstances, the adequacy of its objectives and its design, as well as its intended and unintended results. This process bases on continuous careful monitoring of the course/implementation of the programme.

Programme evaluation is of key importance since, on one hand, it generates information that can help to improve programme, and, on the other hand, it can demonstrate to stakeholders (e.g. funders) and others the impact and the efficiency of the programme.

Intervention and public health intervention

Several definitions exist of what the intervention is, among which we can find the following:

- an intervention is a generic term used to denote all public actions e.g. policies, programmes, projects (3);
- an intervention is an action or programme that aims to bring about identifiable outcomes (5).

Planned/desired effects of an intervention expressed in terms of outcomes are general objectives of an intervention.

A public health intervention is an intervention, which is applied to many, most, or all members of a community, with the aim to deliver a specific benefit to the community or population as well as benefits to individuals (5, 6). Public health interventions include:

- policies of governments and non-governmental organisations;
- laws and regulations;
- organisational development;
- community development;
- education of individuals and communities;
- engineering and technical developments;
- service development and delivery; and
- communication (including social marketing).

Evaluation

To evaluate something means literally to look at, and judge, its quality or value. Several formal definitions of evaluation exist, two of them being:

- a process that attempts to determine as systematically and objectively as possible the effectiveness and impact of activities according to their objectives (1);
- an in-depth study which takes place at a discrete point in time, and in which recognised research procedures are used in a systematic and analytically defensible fashion to form a judgement on the value of an intervention (3).

Whatever we evaluate, could be assessed from several different points of view. The three main types of evaluation are formative evaluation, process evaluation, and summative evaluation (Figure 2) (2, 3, 5, 7, 8).

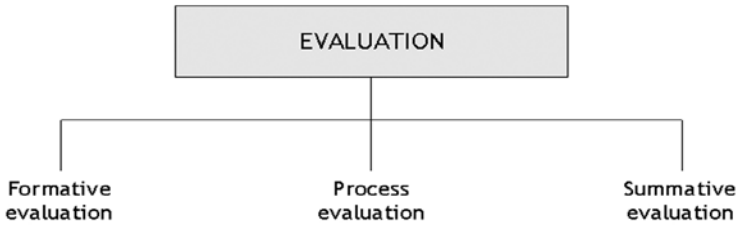


Figure 2. The three main types of evaluation.

1. Formative evaluation.

Formative evaluation is the process of testing programme plans, messages, materials, strategies, and activities for feasibility, appropriateness, acceptability, and applicability to the programme and the target population.

This type of evaluation is generally used when a new programme is being developed or an existing programme is being modified. It is a process, which is often going on during the phase of planning and the course of the programme. In this case, it is an evaluation concerned with examining ways of improving and enhancing the implementation and management of an intervention.

Formative evaluation is aimed at being conducted to help those managing the intervention with the intention of improving their work.

2. Process evaluation.

Process evaluation is an assessment of the process of programme delivery. It is dealing with documenting the intensity of interventions, their outreach costs, their short- and medium-term impacts.

The primary aim of this type of evaluation is to provide practical feedback to those who are responsible for an intervention, so that they can improve its design and performance during the course of the programme.

3. Summative evaluation.

Summative evaluation is sometimes referred to as programme impact or outcome evaluation. Some authors even treat outcome and impact evaluation as two different types of evaluation.

This type of evaluation is concerned with determining the essential effectiveness of a programme. It is used to determine how well the programme achieved the goal (for example the reduction of morbidity or mortality).

For this type of evaluation, the baseline data must be collected prior to the programme implementation and following the implementation of the programme to determine programme effects. Documenting changes in morbidity and mortality requires a large study population, as well as the analysis of the same type of data for a similar population that did not receive the programme intervention (control group).

Summative evaluation is aimed at being conducted to help external actors (groups who are not directly involved in the management of a programme), for reasons of accountability or to assist in the allocation of budgetary resources.

Community based intervention projects/programmes

Many different community based intervention projects/programmes were designed and/or implemented since the early 1970s to combat chronic non-communicable diseases. A great number of them have aimed at promoting risk-reduction lifestyle changes in different populations. Most of these projects started in the field of cardiovascular disease prevention and emphasized the fact that merely providing risk-reduction measures for people at high risk in health service settings would have only a limited impact to the broader society, e.g. the whole nation/country. On the other hand, if the population as a whole is to be targeted, even a modest change in risk factor and healthy-heart lifestyle would potentially have a huge public health impact. One of the first among such community-based health intervention projects was the North Karelia Project (in Finland) which started in 1972 (9).

Many of intervention programmes become international. Countrywide Integrated Non-communicable Diseases Intervention programme (CINDI) of the World Health Organization (WHO), Regional Office for Europe (10), which started to spread its ideas in the 1980s, is one of them (11). In details, it is described in one of modules of this book.

Case study – evaluation of the effectiveness of the WHO CINDI programme in Slovenia in combating arterial hypertension

Combating arterial hypertension according to WHO CINDI programme

The CINDI programme recognized the arterial hypertension control as an important element of controlling the overall risk of cardiovascular diseases since arterial hypertension is one of the most important modifiable risk factors for cardiovascular diseases, and among major contributors to the mortality and/or disability of adult population in many countries (12). Changing the lifestyle of the population, screening for arterial hypertension, and early lifestyle and antihypertensive drug treatment are among the cornerstones of the successful prevention of cardiovascular diseases (12-14).

CINDI-WHO Working Group on Hypertension worked out international recommendations, where the most frequently used non-pharmacological interventions for arterial hypertension control are: stress management, smoking cessation, salt, calories and saturated fats intake reduction, increase in vegetable/fruit consumption and regular physical activity, and alcohol intake reduction (15). Positive experiences from Finland (North Karelia) and Lithuania showed that the CINDI programme interventions could be extremely successful in tackling the problem of hypertension (16).

Needs assessment in Slovenia

Combating non-communicable diseases has become one of the most important contemporary public health issues in Slovenia since mortality is still mainly attributable to non-communicable diseases, with cardiovascular diseases as the leading group among the causes of death, both in women and men (17).

Among biological/physiological risk factors for non-communicable diseases in Slovenia, more precisely its central part, i.e. Ljubljana area, the high prevalence of severe arterial hypertension (systolic/diastolic blood pressure $\geq 160/95$ mmHg) was registered at the beginning of the 1990s, being 19% (18). This result classified Slovenia among countries with the highest prevalence of severe arterial hypertension (Hungary: 5%, Israel: 7%, Romania 5-10%, Italy: 24-27%) (18).

Establishment and spread of an intervention programme in Slovenia

Once the problem was realized, it was also acknowledged that a programme like CINDI was strongly needed in Slovenia. The process started in the early nineties. First years were introductory and the programme was limited to demonstrational Ljubljana region.

In 1997, after the second CINDI survey, health promotion and cardiovascular disease prevention philosophy started to spread countrywide. This process outgrew into the Nationwide Programme on Primary Prevention of Cardiovascular Diseases, launched under the auspices of the Ministry of Health of the Republic of Slovenia in autumn 2001 and legally introduced and for the first time carried out at the beginning of 2002 (19, 20). Tackling the problem of high prevalence of arterial hypertension was one of the priorities.

Evaluation of an intervention programme

What exactly was done in the observed period to increase the control over the problem of arterial hypertension in Slovenia and could be assigned to CINDI programme? To get this answer the quantitative and qualitative analyses were performed.

Quantitative evaluation

In 2006 an important study was carried out to evaluate the CINDI Programme contribution in controlling arterial hypertension in Slovenia. It was the study of changes in blood pressure over time (21). By this study the hypothesis was confirmed that the average values of blood pressure in Ljubljana area after being adjusted for effects of gender, age and education level globally increased or remained stable in the first half of 12-year period, while they decreased in the second half. In general, the most important finding was the prominent decrease in average value of systolic blood pressure in the period 1996/97-2002/03. At the same time, the increase of the diastolic blood pressure between 1990/91 and 1996/97, and its decrease between 1996/97 and 2002/03 were registered (both changes were nearly statistically significant).

The changes in arterial hypertension prevalence were characterized by its prominent increase between 1990/91 and 1996/97, while during the period of 1996/97-2002/03 a minor decrease was registered. However, this decrease was still important in an epidemiological sense since the trend reverted from an increasing to a decreasing one. These results suggested some unfavourable influence on the blood pressure of Ljubljana area adults between 1990/91 and 1996/97, while within the period 1996/97-2002/03 the influence was favourable. When commenting the observed blood pressure dynamics it was obvious that the favourable changes in blood pressure happened after implementation of the CINDI programme in Slovenia but on the other hand it was necessary to take into account also an obvious fact that the 1990/91-1996/97 period was characterized by a very intensive political and socio-economic transition after Slovenia had become an independent state in 1991. This perturbation resulted in important changes in the lifestyle of the population (22). It is very likely that those changes were reflected also in blood pressure levels as well as on many other cardiovascular risk factors (23, 24). Because of this fact the qualitative analysis was necessary to be performed to supplement the quantitative analysis.

Along with this study, another studies were performed with similar findings (25, 26), as well as other studies which tried to evaluate the programme from different standpoint (27). From this standpoint, the results of evaluation of the multi-sectorial and multi-disciplinary project Mura, which started in 2001 in Pomurje region, are also very important (25, 26).

The studies showed that public health interventions in only a couple of years offered several extremely positive results (25). The Mura project is ongoing intervention project based on the pattern of a process similar to the project carried out in Finland, which proved highly successful and effective (9). Numerous multi-sectorial activities, including primary health care prevention activities, were focused on changing the nutritional and physical activity behaviour of the population and have been in process since the end 2001 at the regional (first in the Pomurje region) as well as at the national level (25, 28). Regarding to health prevention activities, specific socio-economic and cultural circumstances were taken into consideration. At the level of population groups at high risk, the concrete health promotion and health education approach was already applied in Beltinci Community in the Pomurje region (25) where the prevalence of many unhealthy behaviours were found as being the highest in Slovenia (29), as well as combination of multiple risky behaviours (30). For example, according to the first analysis of the CINDI Health Monitor survey (31) for the year 2004 only the prevalence of every-day consumption of sweet soft drinks decreased from 42.9% in 2001 to 29.1% in 2004 (26). The same study showed a strong shift to more healthy behaviours also in use of fat for food preparation. The percentage of people using lard decreased from 30.3% in 2001 to 20.8% in 2004 while the percent of people using olive oil increased from 7.1% to 15.2%. Results of another study, also based on CINDI Health Monitor and CINDI Risk Factor methodology (32), showed considerable improvement not only in healthy behaviours but also in some of the physiological risk factors. For example, only one year after the start of the programme in the Beltinci community, the average total cholesterol value decreased by 4.9% (25). This programme was already spread from this community to other parts of Slovenia as part of the implementation of the already mentioned nation-wide strategy for prevention of cardiovascular diseases (28). The results are very promising and stimulating for people personally interested and motivated, but sustainability is still under question.

Qualitative evaluation

We have just emphasized that the 1990/91-1996/97 period in Slovenia was characterized by a very intensive political and socio-economic transition with all accompanying problems, potentially also worsening the health status of the population as a whole. Unfortunately, in the period 1990/91-1996/97 the population approach to control cardiovascular risk factors was not among the priorities in the field of Slovene public health.

On the contrary, Slovenia approached to the very intensive implementation of the CINDI programme principles during the second half of the 1990s. Moreover, the 1996/97-2002/03 period was characterized by some prominent achievements in the context of spreading CINDI philosophy out of CINDI Slovenia Preventive Unit. Such a situation represented also an obvious need for the broader (national/countrywide) support and implementation. Consequently, the national alliance, Slovene National Forum on cardiovascular diseases Prevention, was established in 1999 (founded by the Slovene Society of Cardiology) (19, 33). The Forum brought together all important stakeholders in the field of cardiovascular diseases prevention in Slovenia (health care performers, public health institutions, governmental representatives, as well as many relevant scientific, medico-professional, and nongovernmental societies) (19, 33). At that time, joint collaboration group, initiated by the CINDI Slovenia Preventive Unit, elaborated the project on national cardiovascular diseases and other non-communicable diseases prevention programme (19, 20). The most

important interventional arm of the project was the provision of the health counselling and education for individuals at high risk for cardiovascular diseases, which is being performed within the network of 60 Health Education Centres, established all over Slovenia, and coordinated by the CINDI Slovenia Preventive Unit. Based on this project, the Ministry of Health decided to support the implementation of the Nationwide Slovene Programme on Primary Cardiovascular Diseases Prevention, the main characteristics of which were already described. The necessary financial resources were provided by the National Health Insurance Institute of Slovenia (19, 20). Within this project, all practicing general practitioners participate in screening the adult population in certain age groups. Its intermediate aims were to decrease the cardiovascular diseases risk factors prevalence (where arterial hypertension is among the most important) in the population, mainly by lifestyle changes, and to improve early detection and treatment of major cardiovascular risk factors (19, 20).

CINDI programme represented the most important base of health promotion and cardiovascular diseases prevention activities described above, inducing the majority of activities towards reducing the arterial hypertension prevalence in Slovene population. These activities took place in various institutions, while CINDI Slovenia Preventive Unit group by itself was especially intensively directed to activities for salt reduction in food industry, and enhancement of healthy behaviours (e.g. nutrition patterns and physical activity). It was also involved in the CINDI-EuroPharm-Forum project, which aimed at enhancing the role of the pharmacist in blood pressure management (10). We could justifiably claim that without the activities of the CINDI Slovenia programme, the gap in blood pressure control between various population groups could be even larger as it is today.

Exercise

Task 1:

Carefully read the paper:

Bulc M, Fras Z, Zaletel-Kragelj L. Twelve-year Blood Pressure Dynamics in Adults in Ljubljana Area, Slovenia: Contribution of WHO Countrywide Integrated Non-communicable Diseases Intervention Program. *Croat Med J* 2006;47:469-77. Available from: URL: <http://www.cmj.hr/2006/47/3/16758526.pdf>.

Task 2:

Try to classify the evaluation presented in this study in appropriate type of programme evaluation.

Task 3:

Discuss the process presented in the paper with other students.

Task 4:

In bibliographic database (e.g. PUBMED or MEDLINE) try to find another paper on this subject.

Task 5:

Repeat the exercises No.2 and No.3.

Task 6:

Critically discuss strengths and limitations of evaluation of public health intervention programmes with the whole group of students.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Social-economic Inequalities and Risk Groups Vulnerability in SEE Countries
Module: 1.8.2	ECTS: 0.5
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Key words	Social-economic factors; social conditions; social exclusion; unemployment; poverty; health status; health inequalities; social protection; social support; social justice
Learning objectives	After the completed module students and professionals in public health will broaden their knowledge and understanding in respect to: <ul style="list-style-type: none">• social and economic factors and conditions as determinants of vulnerability of some risk groups;• possible main changes in the health status and health consequences of social status and marginalization of certain population groups in SEE countries;• appropriate strategies and programmes directed toward mitigating and overcoming the adverse conditions and problems related to the health status and health protection of the vulnerable groups.

Abstract	<p>The aim of this module is to explore the connection between certain social and economic factors and conditions as determinants of vulnerability and social exclusion of some risk groups and possible main changes in the health status of the population in South Eastern European countries within the last almost twenty years of post-communist transition. The available data regarding the demographics, economic and health statistics of the morbidity and causes of death, as well as the expected influence of various social-economic factors to certain risk and vulnerable groups and their possible health consequences, were analyzed. Based on the observations and conclusions, directions and suggestions are given for appropriate strategies and programmes directed toward mitigating and overcoming the adverse conditions and problems related to the health status and health protection of the vulnerable groups and the total population in the SEE countries.</p>
Teaching methods	<p>Lectures, focus group discussion, nominal groups, case studies.</p>
Specific recommendations for teachers	<p>The following teaching methods are recommended:</p> <ul style="list-style-type: none">• lectures;• focus group discussion,• case studies on social and economic factors influencing health and prevalence of diseases,• individual work, consult literature, written reports, preparation of project, preparation of poster.
Assessment of Students	<p>The final mark should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work and final discussion, and quality of the seminar paper</p>

SOCIAL-ECONOMIC INEQUALITIES AND RISK GROUPS VULNERABILITY IN SEE COUNTRIES

Doncho Donev, Ulrich Laaser

Introduction

In the countries in postcommunist transition there were many events, changes, insecurities and ambivalences in the area of politics, economy, culture and social security. The end of the twentieth century stimulated many summaries of experiences, attitudes and successes or failures. In the South Eastern European (SEE) countries, the almost twenty-year period of transition was followed with a growing phenomenon of alienation and marginalizing of a significant portion of the population, social and economic exclusion, and human insecurity. So far insufficient studies have been made of the negative influence and consequences on the health of the population due to the worsening of the social and economic factors and living conditions and increasing of the psychosocial stress. On the other hand, the reduction of the economic and physical availability of health protection and health services, including medicines, for certain critical and vulnerable population categories might cause further worsening of the damaged health condition of the individuals and groups in need of health services and medicines. This especially pertains to the following categories with increased risk for health deterioration (1-3):

- unemployed workers, especially those with long and chronic unemployment;
- poor population, especially in the underdeveloped and rural areas;
- elderly people in general, particularly those with lower pensions and income or social aid users, and especially those (mainly females) that live alone in poverty;
- children growing up in single parent families or in families on social compensation, children and young people who terminated their education early and the children on the street;
- women in the reproductive period in general, and particularly women in some risk groups;
- migrants from other countries and refugees and internally displaced persons; and
- members of ethnic minorities, especially Gypsies (Roma population), etc..

The disadvantaged groups are especially susceptible to social exclusion, with reduced opportunities for employment and education, and their children are usually under a special risk. The latent or open discrimination and hostilities, which they often face, can damage their health. In addition, the communities usually marginalize and reject the people that are sick, handicapped or emotionally vulnerable, such as users of child dormitories, persons that come from prisons or psychiatric hospitals. Persons with problems related to the physical and mental health often have difficulties to obtain appropriate education or to earn a living. Handicapped children are at greater risk for a life in poverty, especially if stigmatic conditions are present, such as mental illnesses, physical incapacity, or diseases like tuberculosis, epilepsy, alcohol dependency and AIDS. The people living on the streets and suffering from several of these problems have the highest rates of early mortality (4-6).

The results from epidemiological studies clearly indicate the connection between the deteriorated social and economic conditions, especially unemployment, social and economic exclusion and increased human insecurity and the psychosocial stress, on one hand, and certain indicators for deterioration of health of the disadvantaged groups and of the population

in general, on the other hand. One of the most important indicators is morbidity due to cardiovascular diseases, malignant neoplasms, mental breakdowns and suicides, growth of alcohol dependency, smoking, and drug addiction (2, 4).

Influence of Social and Economic Factors on the Health of the Population

Modern times give ample evidence that health of the people in general is determined by socio-political conditions, such as poverty, inequity, marginalization, and isolation, as well as violence, humiliation and psychological traumas. Inequity in health is considered to be unfair and unjust, unnecessary and avoidable. It causes social tension and thereby interferes with the economy (7, 8).

The chronic non-communicable diseases are dominant in the pathology of the population not only in developed countries but also in many developing countries and in the countries of SEE Region. There is a social background of many illnesses and their connection with the lifestyle and conditions of life and work of the people. That implies that the factors of the social environment should be included in the concept of diseases and that more attention should be paid to study and control these factors. The characteristics of certain population groups (structured by age, sex, occupation, unemployment, place of residence and living conditions, social and ethnic beliefs) could also be connected to the incidence, frequency and distribution of certain diseases. Many chronic diseases couldn't be explained exclusively with a single causality factor, which resulted in the appearance of a multi-causality theory of illnesses, which places special emphasis on the social relations and conditions and the social stress. In recent times, in spite of successful implementation of control over the contagious diseases, the presence of modern chronic and non-communicable diseases is greater, with a tendency of growing. The reasons for this are sought primarily in the society and the social living conditions, in the habits and customs, behaviour and communication patterns, everyday stress etc. The lifestyle and the conditions in which people live and work have a strong impact on their health and life span. The social and economic factors at all levels of the society have an impact on individual decisions and health itself (4, 5, 9, 10).

Although each individual is responsible for his/her own lifestyle with respect to nourishment, physical activity, smoking and excessive alcohol consumption, certain social and economic factors and circumstances are outside of the control of the individual. That is why an organized social activity of the state is needed, including all sectors of society (in addition to the health sector). The activities at the community level should be directed toward preservation and improvement of the health, removing social barriers to health care and social selectivity in access to health care and delivery of services, as well as reduction of morbidity and mortality rates of some categories of diseases in disadvantaged groups and in the population as a whole.

Economic standard and health

There is ample evidence of the connection between the low economic standard and a series of indicators of negative health. Many diseases and causes of death are more frequent the lower one goes on the social hierarchy ladder. The social level of health is a reflection of the economic unfairness and the effects of uncertainty, fear and lack of social integration. The unfairness has many forms and can be absolute and relative. It can include: deficient household, living in unsuitable housing conditions, insufficient and irregular nourishment, insufficient education in the adolescent period, incapacity due to industrial injury or uncertain

employment etc. These adversities tend to concentrate in the same group of people and their effects are cumulative. The longer the period of living in stress creating economic and social circumstances, the greater the psychological burden and consequences for these people, as well as the lower the chances that they will have a long life (5, 10, 11).

Most researchers seem to believe that impaired living conditions constitute the major force determining health and health inequalities even some part of health inequalities arise from a prevalence of unhealthy behaviour in lower socio-economic groups and from differences in psychosocial work environments (1, 8).

The gross domestic product (GDP) per capita in 2004 in some SEE countries and other countries in Europe and the world is presented in Table 1.

Table 1. Gross domestic product (GDP) per capita and unemployment rate in SEE, European and some other countries in 2004 (12).

Country	GDP US\$	Unemployment rate
Albania	2439	14.4
Bosnia and Herzegovina	2183	-
Bulgaria	3109	12.2
Croatia	7724	18.0
Germany	33212	9.2
Greece	18560	10.2
Israel	17194	10.4
Norway	54465	4.5
Poland	6346	19.0
Romania	3374	8.0
Serbia	-	26.8
Slovenia	16115	10.6
Switzerland	48385	3.9
Macedonia	2637	37.2
Turkey	4221	10.3
United Kingdom	35485	4.6
European Region	24028	9.4
EU	28150	9.2
Japan	36526	4.7
USA	39860	5.5

Source: WHO HFA Database 2007

It must be noted that there are big differences in the development and economic power between countries and different regions within countries, in addition to the differences in economic status among different categories and social strata in the populations. The population groups identified as being most at risk of poverty are the unemployed, socially imperilled households, pensioners and farmers. Larger households in the rural areas, particularly those

with members who are unemployed or have low educational levels, are identified as specific risk groups together with the unemployed in urban areas (1,4,13-15).

Unemployment and health

The unemployment, poverty and ill health form a vicious circle. The unemployment has a substantial negative influence on the health of the population:

- increases the death rates,
- causes changes in the lifestyle,
- physical and mental health deterioration, and
- an increased utilization of the health services which is corroborated by the results of numerous investigations.

The severity of unemployment depends not only on the risk of becoming unemployed but also on the probability of remaining so for a long time. Unemployment as a cause of poverty and ill health is a major SEE countries and pan-European issue. An analysis of the unemployment situation in the European Union (EU) shows a sharp increase from 3% in the early 1970s to approximately 11% by mid-1990, with an overall EU average of 8.6% in 2004 (13, 14). The comparative indicators of unemployment for SEE and other countries in Europe and the world are presented in Table 1.

The loss of work or short-term unemployment has a character of a stressful event and represents a risk factor for health deterioration. The unemployment is usually experienced as deprivation or a deviant situation. It causes not only economic and financial difficulties and indebtedness, but also physical consequences, loneliness, reduction or loss of social contacts, sense of rejection. The unemployment had influence to the functioning of the family, as well as to the distribution of resources in it, to the health of its members etc. Research has shown higher death rates with wives of unemployed husbands, higher risk for separation and divorce, domestic violence, unwanted pregnancy, complications during pregnancy, higher mortality at birth, slower growth and development of the babies and higher mortality as well as increased exploitation of health services. At the global level a connection has been sought between the economic and health indicators, and the unemployment being the foremost economic factor. Unemployment has an almost instantaneous effect on the health (especially mental) which is documented by the increase in the number of patients received by the psychiatric institutions and the increased number of suicides; the unemployment also initiates other processes of change in the organism, that lead to an increase of the number of chronic diseases. The cardiovascular diseases reach their peak two years after the jump of the unemployment. The economic recession and transition, which are the most frequent reasons for unemployment, lead to a series of consequences, which increase the sensitivity to illnesses. The death rates in all classes of society are higher with the unemployed than with the employed people. That relates especially to the increased mortality due to cardiovascular diseases, lung cancer, accidents and suicides (4, 16-19).

The psychological threats, fear and the depressive symptoms appear as a universal companion of the unemployment. The changes that occur in the neuro-endocrine and the immune system, as a reaction to stress increase the sensitivity to new and activate the existing diseases. The attitude of the unemployed toward the health service, usually change toward extensive utilization of health services and seeking help for the health problems, rather than utter negligence of the objective needs. The studies connected with the “closure of factories”

have shown that the rate of hospitalization of unemployed people increases which is usually interpreted as an indicator of deteriorated health (16, 19).

Lot of studies has shown increased rates of smoking, alcohol consumption and irregular nourishment, as well as increased medicament consumption by the unemployed in comparison to the employed. The alcoholism and drug addiction have usually increased as well (17, 20).

Nourishment and health

The main nutrition-related health problems in SEE and EU countries are: insufficient breastfeeding, overweight and obesity, non-insulin-dependent diabetes (with about 4% of the population affected in most countries), too high a fat intake and insufficient consumption of fruits and vegetables, and iodine and iron deficiency (10,16,21).

Adequate nutrition and the proper supply with food are essential conditions for the promotion of the health and the welfare of the population. The lack of food and its insufficient diversity can cause malnutrition and diseases related to insufficient nourishment. The poor compensate the fresh and biologically valuable food with products of maize, potato, animal fats and cheap processed foods. The people with low incomes have lesser opportunities to eat well and correctly. Examples of such population groups are:

- young families,
- elderly people, and
- the unemployed.

The high input of fats, combined with other risk factors (smoking) is substantially linked with the leading causes of death in Europe (coronary heart disease, cerebrovascular diseases, carcinoma etc.) On the other hand, reducing the body weight reduces the risk of hypertension, higher glycemcy and hypo-cholesterinemy. Also, by reducing the fats in the nourishment, the risk of coronary heart disease is reduced (15,16,22).

One important social indicator is the percentage from the incomes of the households that is spends for nourishment. According to the reports of the richest countries such as USA, Canada, Australia, an average household spends about 15% of their income for food, EU countries 22%, while in the underdeveloped countries that percent is bigger than 50% and somewhere even 80%. In the Republic of Macedonia in the structure of the individual consumption in 1999, the food accounts 41.1%, drinks 4.6% and tobacco 3.2% of overall household expenditures (12, 18). Results from survey in Roma communities in Skopje showed that more than half of the families (54.6%) live on monthly earnings from 100-200 DM and the most of the incomes in the families are usually spent on food supplies (88.5%), as families in most cases live and spend money day by day (3).

Another indicator of the nourishment of the population is the energetic value of the food stuffs per capita, which is calculated on the basis of the estimated production of food, export, import, losses and consumption of other foods. The average per capita consumption of certain food products is also calculated, as well as the movement of the consumption of fats, especially animal fats, as one of the more significant risk factors for health deterioration. In the Republic of Macedonia, the price of “the monthly basket” of food products, necessary for the correct nourishment of one family of 4, during one month, is approximately equal to an average salary in the economy of the country (1,2). This allows the assumption that a large part of the population, which has low personal and total family incomes, including here a few

of the risk groups of the population, have limited opportunity for correct nourishment, and it can increase the risk for deterioration of their health.

Psychosocial stress, social support and health

The adverse social and economic conditions and psychological circumstances can cause long-term stress. The continuous fear, insecurity, the low self-confidence, the social isolation and the lack of control over the working environment and relations and the home life, have a strong negative effect on health. The psychosocial risks and stress are accumulated during the course of the life and contribute to the deterioration of the mental health and lead to premature death. The stress activates one whole complex of hormones that damage the cardiovascular and the immune system, and that increase the susceptibility to contagious diseases, diabetes, depression, high blood pressure and other harmful effects of cholesterol and fats in the blood, as well as increasing the risk of a heart attack and a stroke (19,20).

Social support is the general term to describe different aspects of social relationships, including those mechanisms, which may protect the individual from the negative effects of stress. The social support is offered by the part of the social network, the people around us, that are ready to help us, and on whose help we can always count. Those enjoying strong social ties appear to be at low risk of psychosocial and physical impairment, whereas a lack of social support has been found to be associated with depression, neurosis and even mortality. The lack of support increases the susceptibility for certain diseases, and the presence of suitable support can reduce the consequences from the exposure to stress situations and factors that have adverse affects. In general, social support seems to be an important moderating factor in the stress process (20,21).

The support acts on the individual and on the societal level. The social isolation, loneliness and exclusion are related to increased rates of premature deaths and smaller chances to survive more severe illnesses, such as heart attacks. The people that receive less emotional social support than others, more frequently suffer from depression, the level of incapacity due to chronic diseases is greater, and in women during pregnancy, the risk is higher for complication of the pregnancy. The availability of the emotional and practical social support varies with the social and economic status and the quality of the social networks. The poverty can lead to social exclusion and isolation. The social cohesion - presence of mutual trust - and respect in the local community and wider in society - helps protect the people and their health against the cardiovascular diseases, mental disorders and other diseases (16,22, 23).

Poverty, social exclusion and health

The processes of poverty and social exclusion, and the level of the relative deprivation in society, have a strong influence on health and the premature death. The deterioration of health occurs not only due to the material deprivation, but also due to social and psychological problems of being poor. Poverty is the number-one cause of ill health. The people that have lived most of their lives in poverty suffer much more from deteriorated health (10,22).

More than 165 million people in Europe live below the poverty line. Out of 18 CEE countries and the newly independent states, 8 have 50% or higher of their population living below the poverty line. In some countries $\frac{1}{4}$ of the population - and even higher portion of the children - live in relative poverty (defined by the EU as less than $\frac{1}{2}$ of the average national income). The relative poverty, as well as the absolute poverty, leads to health deterioration, and an increase of the risks of premature death (9, 14, 22). The rate of poverty in Republic of

Macedonia is lower than in some other countries with similar level of economic development (Romania, Bulgaria, Moldova and some other former Soviet Union republics), but the situation related to the poverty in Macedonia is much worse than in the countries with higher standard and more successful transition (Poland, Czech Republic, Hungary, Slovenia etc). The poverty, unemployment and the homelessness is increased in R. Macedonia as well as in other countries, including the richest (18, 23).

Directions and recommendations for future strategies, programmes and measures

The changes in the societal and the political system and economic transition toward market economy in SEE countries in the last almost 20 years have contributed to a significant change and deterioration of the societal and economic conditions and factors significant for the health of a relatively large portion of the population in these countries especially in certain risk categories. That can have further multiple negative effects on the health of the threatened groups and the health condition of the population in general, which induces the need to develop suitable strategies and programmes and to undertake activities to prevent and mitigate the consequences of transition on the health of the population in the SEE countries (2).

In order to reduce the social exclusion, insecurity and deprivation and to mitigate the consequences of the transition on the health of the people in SEE Region, it is necessary to have a diversity of activities at international and regional, at national and local levels, conducted by the government and the relevant ministries, the non-governmental national and international organizations, as well as active participation of all sectors. Measures and activities of the national economic, social and health policies should be directed in the following directions (1, 2, 5, 9-11, 25-30):

- determination, by the Government, of a satisfactory minimum of national income, material aid and increasing of the employment opportunities, on the basis of genuine principles and not by nepotism and corruption;
- prevention and reduction of unemployment by job-creation initiatives outside the mainstream labour market, especially in small and medium-sized businesses in disadvantaged regions;
- prevention of the uncertainty at work, as well as reduction of the social and economic consequences that occur after loss of work or unemployment;
- legislative protection of the rights of the migrants, minority groups, families with small children, unemployed workers and other risk groups, prevention of discrimination and removal of the sources of fear and insecurity;
- appropriate distribution of available resources toward fostering development of underdeveloped regions, mainly for building educational and health care facilities, water supply systems, improving the housing conditions and job possibilities;
- increase of the inclusion of the children and youths in the elements of elementary and high school education, improvement of the quality of education and undergoing crucial reforms in the social system in order to provide healthier and more secure state and to reduce and minimize the brain drain phenomenon, such that the intellectual cadre would remain to be utilized and be useful in it's own country;
- reduction of the insecurity at work and the range of differences of the income in society in order to reduce the number of people that become poor, and those that have become poor not to become very poor;

- to allow the citizens to play an active and useful role in the social, economic and cultural life in society and especially in the local community, to improve the quality of the social environment and economic security, which are often more important to health than the physical environment and the application of medicaments as a medicine response to the individual stress;
- support of the development of agriculture and the methods of production of food that do not threaten the natural resources and the environment, protection of the domestic food produce against the import and the global food trade, appropriate politics of prices and subsidies to improve the accessibility of quality, biologically valuable and fresh food to the population, as well as strengthening of the knowledge and the culture of healthy nourishment, the skills of preparing and the social value of preparation and joint consumption of the meals in the family;
- strengthening of the social cohesion, with social and economic policy measures, as a condition for the maintaining and promotion of the health of the people.

Health policy has to be closely related to the social and economic determinants of health, by accepting and developing of the basic elements and principles of the health systems in Europe and other developed countries in the world, such as: solidarity; following and promotion of the quality of health services and evaluation of health technologies; establishment of a system of monitoring with a unified methodology for collecting and evaluation of data, as well as strengthening and integration of the health information system on the national level; provision of economic sustainability by effective utilization of the available resources; strengthening of the human resources by promoting of medical and managerial education; active participation of the population in the activities of the community and making of decisions related to health, as well as strengthening of the individual responsibility of the people for their health; cooperation between sectors with active engagement and participation of the other sectors of society in addressing socioeconomic and other key determinants of health, in maintaining and promoting of health and in creating safe conditions for work and life; equality (removal of the barriers to equal physical and economic access to health protection services) and strengthening of the right of the patients toward a free choice of a doctor, provision of a basic health protection ("packet of benefits") etc..

National action plan should be developed for reducing the consequences in the community related to alcohol, tobacco and drug addiction, especially in the direction of construction of an efficient policy with respect to the alcohol, tobacco and drugs within the framework of wider social and economic policies. New ways need to be discovered to subject the young, to the health and educational measures, in order to prevent the challenge of taking drugs, alcohol and other stress-reducing substances, and to reduce the recruitment of these people into new addicts. On the other side, provision of appropriate services for efficient protection, treatment, rehabilitation and support of those that have developed addictions is necessary. Measures for protection directed toward the reduction of social differences and deprivation with loss of perspective among young people, which harbours the roots of the problems, in the context of the prevailing social, cultural and economic conditions are also necessary.

Exercise

Task 1:

Analyze everyday situations in the context of social economic inequalities related to health and wellbeing and to the health interventions and health promotion programs.

Task 2:

Analyze different social economic factors in your target population, various health indicators of certain groups, inter-sectoral approach in reducing inequalities and health promotion programs and interventions at community level.

Task 3:

Discuss with other students about inequalities in health, especially about its socio-economic component. Think about what kind of inequalities in health are present in your country, and which population groups are the most vulnerable.

Task 4:

Write in short your vision how to tackle this problem.

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Recommended readings

1. Eckenfels E, DeGolia P. Health and Well-being of Vulnerable Peoples in South Eastern Europe. In: Georgieva L, Burazeri G, editors. Health determinants in the scope of new public health: Handbook for teachers, researchers and health professionals. Laga: Hans Jacobs Publishing Company; 2005. p.604-14. Available from: URL: http://www.snz.hr/ph-see/Documents/Publications/PH-SEE_Book3_Full_HealthDeterminants.pdf (Accessed: September 17, 2007).

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Ethics in Public Health and Health Promotion
Module: 1.8.3	ECTS: 0,25
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Key words	Public health, health promotion, ethics
Learning objectives	After completing this module students and public health professionals will be able to: <ul style="list-style-type: none"> • understand the conceptual framework of ethics and public health; • become familiar with the major theories in ethics that define viewpoints and perspectives on how society is organized and how it ought to operate; • be able to discuss an ethical issue; • be able to analyze an ethical dilemma; • contribute in providing ethical solutions to various issues.
Abstract	Ethics in public health is an ever raising issue that can no longer be postponed from more seriously taking it into consideration. This module provides overview of major ethical theories (utilitarianism, liberalism and communitarianism) and basic concepts and principles of moral philosophy as applied to public health and health promotion. Ethical theories provide a way of thinking and highlight various ways of approaches to alternative priorities and problem definitions in public health and health sector reform issues. It also provides an insight in the most common ethical dilemmas that arise in public health and health promotion.
Teaching methods	<ul style="list-style-type: none"> • introductory lectures related to ethics concept and its understanding; • distribution and discussion of relevant literature on ethics; • guided discussion on general ethical issues small group; • seminar papers preparation on related topics.
Specific recommendations for teachers	<ul style="list-style-type: none"> • ¾ lectures; ¼ discussions; • facilities equipment available; • training materials elaborated and distributed; • cases presentations and discussion.
Assessment of students	<ul style="list-style-type: none"> • multiple choice questionnaire for theoretical aspect; • seminar paper presentation and evaluation.

ETHICS IN PUBLIC HEALTH AND HEALTH PROMOTION

Carmen Ungurean

Ethics or moral philosophy is the branch of philosophy which takes a systematic approach to define the social, as well as individual morality. It sets the norms and standards to be then applied to the judgement of behavior and practice.

The discipline of ethics is usually sub-divided in two categories: metaethics and normative ethics.

Metaethics, the conceptual view of ethics, is the least precisely defined area of moral philosophy. It can be defined as the study of the origin and meaning of the ethical concepts and it is concerned with the underlying reasons to making judgement (1).

Normative ethics involves arriving at moral standards that regulate right and wrong conduct. The classical example of normative ethics is the Golden Rule: do to others, what you expect them to do to you (2). Normative ethics seek to determine what ought to be done rather than what is done and hence, it is prescriptive. Having its roots in ethical theory, normative ethics formulates and, equally, defends systems of principles and rules that identify whether an action is right or wrong (3, 4).

Two more other concepts need to be distinguished within this context: morals and values. Although ethics and morals are confounding terms, and very often moral equal ethic, **morals** reflect beliefs and tradition of beliefs of what is right and what is wrong, and are associated with social prevailing culture or religion (3). Other authors refer to morals as actions taken involving values but, with no involvement of judgements or comparison (5).

Values reflect a wide range of personal beliefs, experience, culture and religion and represent the worth that an individual, group, or society places on things or action, regardless of principles or norms.

Both, morals and values being non-normative and non-prescriptive, contribute to individual and personal evolution and growth and allow actions in conformity with personal beliefs and clarifications, nonetheless, collective decisions should be based on ethical principles.

Ethical theories and principles

There are three types of ethic theories that gained attention:

Utilitarianism considers an action as morally right if its outcomes or consequences are more favorable than unfavorable to everyone well being. Measuring the value of actions by outcomes and consequences, these theories are often called consequentialist or teleologic theories. Utilitarianism (utilitarism) comes from the work of the 19th century British jurist, philosopher, and legal and social reformer. Jeremy Bentham who argued that what really mattered in any kind of public policy decision was the results of the decision, the outcomes and the impact on human well-being. It is rooted in the thesis that an action or practice is right (when compared to any alternative) if it leads to the greatest possible balance of good consequences or to the least possible balance of bad consequences or “the greatest good of the greatest number” (3). These theories surrender the individual rights, goods or benefices to the common collective welfare. Main problems and open questions with utilitarianism are: 1) Does “utility” exist?; 2) Is there one correct way to measure well-being?; and 3) Can we really sacrifice some for others?

Moral good: Moral good, deontological, or formalist theories place the duty above the consequences and holds at its core the respect for fundamental rights, such as the right to

truth, privacy, to fulfilled promises. The main promoter of the deontological theories of ethics was Emmanuel Kant. Kant states that persons should be treated as end themselves and that actions should be based on duty and all persons should act “for the sake of duty” (3).

Kants work in this area, together with the work of other thinkers associated with the Scottish Enlightenment, will became part of the broader 19th century theory of *liberalism* which emphasizes on indivdual rights and equality in opportunity.

Main motto of the liberalism is: “Respect an individual’s right to choose their own life plan”. Liberalism is concerned about where people start, what sort of entitlements do they have, what rights do they have, and in health care what rights do they have to health care or to health status. The main problems and open questions with liberalism are: 1) How do we know who has what rights?; 2) How far can we redistribute?; and 3) What do we do when rights conflict?

There is a clear distinction between these two theories and often appear to be competing with each other should the consequences used by utilitarianism be regarded as costs and the moral good employed by the deontology be a reasonable level of human existence (6). From this point of view, these theories appear to be mutual exclusive, but nowadays, most formalists agree to a certain extent with the utilitarian theories, but they maintain that principles are not to be compromised by exclusive focus on consequences. Thus, a number of hybrid theories have emerged, such as act-utilitarianism, rule-utilitarianism, libertarianism, egalitarian liberalism, etc.

Communitarianism or virtue theory is the third significant theory of ethics focuses on the character on people themselves and on the society in which they function. It bases its reasoning on ideas of virtue, of good character both for individuals and for the community, and deals with the nature of the community within which individuals live and function. The main motto of the communitarianism is: “Societies should raise their members to exhibit good character in order to create the good society. In opposition with utilitarianism and liberalism and other formalist theories, which base their judgements on particular acts committed by individuals, the virtue theories (communitarianism) stress their reasoning on moral character of individuals, such as honesty, compassion, tolerance, etc (3). The main problems and open questions with communitarianism are: 1) How do we know the boundaries of the community?; 2) How far can communities go to suppress dissent?; and 3) What happens when those with conflicting visions meet?

The moral reasoning involves various degrees of abstractions and systematization, and therefore some authors provide a simplified diagram for ethical reasoning (Table 1).

Table 1. Hierarchy of Ethical Reasoning (4)

Theories	Systematically related bodies of principles and rules; used for resolving conflicts of principles
Principles	Serve as a foundation or source for justifying rules, which guide decision making.
Rules	State that actions of certain kind ought (or not) to be made because they are right or wrong
Judgements (or action)	Constitute specific decisions, verdicts or conclusions

According to Beauchamp and Childress the ethical reasoning includes, from bottom: specific judgements, rules, principles and theories. An action taken as the result of a decision, based on a rule (stating that the action should or shouldn't be taken because it is right or wrong). The rule regulates the action, undoubtedly, because they are base on the set of principles, already solved and categorized by the theories. In sum, judgements of what ought to be done in specific situations are justified by moral rules, which in turn are justified by principles, which ultimately are justified by ethical theories (4).

The judgement and sound reasoning is based on a set of principles which ensure an ethic decision:

Beneficence –means the promotion of doing good and charity. The first formulation of this principle appears in the Hippocratic Oath: “I will apply dietetic measures to the benefit of the sick according to my ability and judgement; I will keep them form harm and injustice” (7).

Nonmaleficence – ensures that no harm is done. It usually states which ought not to be done.

Respect for persons (autonomy) - roots in Kant's theories, and ensures that no respect and dignity of persons are valued and taken into consideration when judgments and actions are taken. This principle is often used when defending personal liberties and individual rights.

Justice – is the most complex ethical principle and entails fairness, equality, impartiality.

Utility – dictates the balance that should be maintained between good and bad aspects of alternatives.

Medical ethics and the ethics in health care are as old as medicine itself, bioethics is a newer field which arose in late 1960, in response to the dilemmas of that era. Since then, the thorny ethics debates have broadened, deepened and multiplied, as the health services and the demand for health services have evolved and increased. The last 15-20 years have produced a much-needed resurgence of public health and with it the issue of ethics in public health is gaining prominence. The care and responsibility for collective health has broadened the public health domain from the narrow focus of risk reduction to socio-cultural and economic roots of health and entails a whole range of issues, such as equal access to health services, fair distribution of resources, and equality in health. In this respect the ethic aspect of public health is taking much attention in the recent years.

Public health policy and interventions often arise from controversy, generate controversy and pose a number of dilemmas as they are implemented. Therefore the issue of a moral foundation and an ethical approach in decision making process becomes crucial as it can solve and resolve much of the controversy. Ethical analysis in public health can be looked from a number of perspectives, which are not separated, nor mutual exclusive.

Professional ethics are concerned with the ethical dimension of public health professional, the way they conduct their professional activity as individuals. It entails the identification of the mission of the profession and developing the standards within which all professionals should act (8,9).

Applied ethics or practical ethics are concerned with the public health enterprise and devise general principles to be applied to decision making or specific interventions (8,9).

Advocacy ethics is informed by the sole value of a healthy community. The ethical persuasion is a sample of advocacy for those social changes and reforms that will enhance the general wellbeing (8,9).

Critical ethics attempts to combine the strengths of all the above perspectives. It is historically informed, practically oriented towards real time, real world problems of public

health, but also brings larger social values. This perspective has much in common with egalitarianism and human-rights oriented discourse of advocacy ethics (8).

The current debate over the forms of public health ethics, some believe that a code of ethics will help clarify the many ethical dilemmas; other argue that a single set of values for the many areas of public health competence would hardly be relevant to each group. Some think that the health and safety of the population are implicit and should be central to all activities and criticize the cost-benefit approach when deciding between alternatives, or even when deciding alone.

Another debate is over the advocacy role of public health for social justice and community health, which is by some central and by others not (9).

Law and ethics

Public health is one area where health protection and assurance entails legal measures. Often, public health practitioners are both, members of administration and governments and representatives of the public towards they are responsible. The law is an efficient tool to protect the health of population and to implement the health strategies. These legal measures employ coercion (compulsory vaccination), restrictions (banned smoking in public places), limiting some rights (quarantine). They also regulate the incentives for health assurance, such as taxing and spending, the production of goods in order of safety and security and they regulate the city planning and development.

The current debate argues the governments should rarely exercise coercion and often invokes the civil rights and liberties, autonomy and privacy. The relationship between law and ethics is a very interacted one, but it is pertinent to say that most public health laws have a moral purpose behind them (8).

Ethics of public health, health promotion and diseases prevention

The current debate of the ethical issues in this area of public health is focused on the extent of state intervention in limiting or prohibiting harmful behaviors. Marc Lalonde, former Canadian minister of health, the American secretary Joseph Califano, or John Knowles former president of the Rockefeller foundation, were the first to bring into attention the individual responsibility for a change in behavior to reduce the burden of morbidity and mortality in a post infectious society (9). These statements were interpreted as a sign of absolving the state from its obligation to provide health services and serve the patients needs. The foundations were laid by John Stuart Mill, by his essay "On Liberty", where he antagonize paternalism and states that has justification for imposing limitations upon individual in only two circumstances: when children are involved and those with cognitive limitations, as both categories are not able to care for themselves.

The alternative to individualism whose exponents were briefly cited above would be to set paternalism as the core value and norm of public health. The exponent for this approach was philosopher Robert Goodin (9).

These would be the two alternative of state involvement in promoting health and preventing diseases. In between the floor is open for discussion.

The ethical discussion is opened in the area of *health communication campaigns* which have to face the challenge of keeping the balance between correct information of the public and the avoidance of exaggerations and placing messages that can lead to stigmatization. The classical example is the case of HIV/AIDS campaigns that in order to avoid stigmatization

have created the message that virtually everyone is at risk. In its efforts to meet the ethical issue of non-stigmatization, these campaigns were faced with the ethical problem of passing out modified statements, which in fact are misinformation.

The censure of public advertising for products that are proven to be harmful to health raise the challenge of freedom of expression. Here the best-known debate on tobacco advertising is still not closed.

Compulsory behavior and interdictions are probably the most ethically debated issues in public health. Autonomy, freedom of choice, privacy are the issues brought into discussion when mandatory wear of helmets for cyclists or motorcyclists, or restriction of alcohol consumption are imposed by governments as a way to prevent accidents and injuries, as well as consequences and to protect health of the citizens.

These issues are laying the foundation to a code of ethics in public health and health promotion. The code of ethics is necessary for at least three reasons (9): responding to the controversy, establishing the moral credibility of an area of practice and provide it with tools to solve common dilemmas, and to provide the profession the framework to take forward its mission and ideals.

Some recent developments have taken place in this respect (11):

- the Public Health Code of Ethics adopted by the American Public Health Association
- publication of a report of a research collaborative project on ethical and social dilemmas of health promotion and diseases prevention, conducted by Hastings Centre and Stanford University centre for Medical Bioethics
- the policy debate on health equity and distributive justice opened by the World Health report released by the World Health Organization in 2000.

In advancing to the defining the morals of the health promotion profession Callahan and Jennings provide a set of recommendations (8):

1. Leaders in public health should support the development of conferences and symposia on the theme of ethics and public health;
2. The editors of leading public health and bioethics journals should give high priority to accepting and soliciting rigorous work in public health ethics for publication;
3. Efforts should be undertaken to compile a set of case materials for ethics discussion and teaching;
4. The specific topic of ethical issues in public health research should be a focus;
5. The accreditation process for schools of public health should involve an increase in ethics instruction requirement;
6. As a profession, public health should develop continuing education requirements and make ethics prominent among them;
7. Public health agency managers and supervisors at the federal, state, and local levels should be encouraged to provide the time and resources necessary for periodic in-service ethics sessions;
8. Scholars in the field of ethics should educate themselves about public health and develop a more sophisticated understanding of how ethical issues in public health might best be approached.

Exercise

The students will work in small groups (4-6 students). They will analyze various theories and ethical issues that arise in the course of implementing an public health and health promotion intervention.

Recommended readings:

1. Beauchamp D. Community: the Neglected Tradition of Public Health. Hastings Center Report; December 1985:28-36.
2. Moreno J, Bayer R. The Limits of the Ledger in Public Health Promotion. Hastings Center Report; December 1985:37-41.
3. Crawford R. You are Dangerous to Your Health: The Ideology and Politics of Victim Blaming. International Journal of Health Services 1977(7):633-80.
4. Leichter H. Saving Lives and Protecting Liberty: A Comparative Study of Seat Belt Debates. Journal of Health Politics, Policy and Law; Summer 1986:323-44.
5. Goodin R. No Smoking. Chicago: University of Chicago Press, 1989; Chapters 1 and 2.
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2. The Internet Encyclopedia of Philosophy. Ethics. Available from: <http://www.iep.utm.edu/e/ethics.htm#H2> (Accessed: July, 2007).
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6. Purtilo RB, Cassel CK. Ethical dimensions in the health professions. Philadelphia, Pa.: W.B. Saunders Company; 1981.
7. Edelstein L. The Hippocratic Oath: text, translation and interpretation. Bulletin of the History of medicine, Supplement 1. Baltimore, MD: John Hopkins University Press; 1943:3.
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10. Mill JS. On Liberty. London: Longman, Roberts & Green, 1869; New York: Bartleby.com, 1999.
11. Sindall C. Does Health Promotion Need a Code of Ethics?. Health Promot Int. 2002 Sep;17(3):201-3.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Promotion Activities in the Republic of Macedonia
Module: 1.9.1	ECTS: 0.25
Author(s), degrees, institution(s)	<p>Elena Kosevska, MD, PhD, Assistant Professor¹ Jovanka Karadzinska-Bislimovska, MD, PhD, Professor¹ Mome Spasovski, MD, PhD, Associate Professor¹ Fimka Tozija, MD, PhD, Assistant Professor¹ Dragan Gjorgjev, MD, PhD, Professor¹ Mihail Kocubovski, MD, PhD, Assistant Professor¹ Vladimir Kendrovski, MD, PhD, Assistant Professor¹ Snezana Cicevalieva, Lawyer, MSc² Vera Dimitrievska, MD³</p> <p>¹School of Public Health, Medical Faculty, University of Ss Cyril and Methodius, Skopje, Macedonia ²Sector for International Collaboration and European Integration, Ministry of Health, Skopje, Macedonia ³Institute Open Society Macedonia-Skopje, Skopje, Macedonia</p>
Address for correspondence	<p>Elena Kosevska, MD, PhD, Assistant Professor Republic Institute for Health Protection 50 Divizija no.6, 1000 Skopje, Macedonia Tel: +389 2 31 25 044/230 Fax: +389 2 32 23 354 E-mail: kosevska@yahoo.com</p>
Key words	Health promotion, health care system, indicators, public health, priorities, activities
Learning objectives	After completing this module, students and public health professionals would become familiar with health promotion activities in the Republic of Macedonia during the period of transition
Abstract	This course covers the following topics: definitions and basic concepts of health promotion, Macedonian health system and health indicators, the new Macedonian public health policy and priorities, health promotion activities regarding 12 key priorities, advantages and weaknesses of the process of health promotion and future developments.
Teaching methods	Lecture, group work and Power Point presentation of national health promotion experience
Specific recommendations for the teacher	It is recommended that this module should be organized within 0.25 ECTS credit, out of which one third will be under the supervision of a teacher. After an introductory lecture the students should work in small groups (3-4 students) searching the Internet to find, compare and present different national examples of health promotion activities. Students need a PC with Internet connection.
Assesment of students	Essay on health promotion activities for certain country/region

HEALTH PROMOTION ACTIVITIES IN THE REPUBLIC OF MACEDONIA

**Elena Kosevska, Jovanka Karadzinska-Bislimovska, Mome Spasovski,
Fimka Tozija, Dragan Gjorgjev, Mihail Kocubovski,
Vladimir Kendrovski, Snezana Cicevalieva, Vera Dimitrievska**

Introduction

The disintegration of the former Yugoslavia happened in 1991 and the Republic of Macedonia emerged as an independent country at 8th of September 1991. Over the last years, Macedonia has undergone considerable socio-political and economic changes, similar to those in the other Central and Eastern European countries. At present, the Republic of Macedonia is confronted with serious task. In order to provide more efficient and cost effective health services, the Ministry of Health has undertaken Reform of the Health Care System, in accordance with the possibilities of the state and respecting the rights of the patients. The basic components of the Reform are to:

- maintain the advantages of the existing system;
- improve health management;
- strengthen health promotion activities in order to improve lifestyle, mental health care and prevention of diseases of addiction;
- improve quality of health services, provide patients rights and high norms of health ethics.

These reforms will provide a complete transformation in the sphere of the health care. Our health care should be adjusted to the European standards, so as to enable comparison of the results obtained.

Macedonia follows the basic concept of the strategies and areas for action for “Health for all” defined by the WHO at the 1st International Conference on Health Promotion, (held in Ottawa, 1986) which are known as the Ottawa Charter for Health Promotion. This charter defined 5 key strategies:

- building healthy public policy;
- creating supportive environments;
- strengthening community action;
- developing personal skills;
- reorienting health services (1).

Health promotion is defined as “the process of enabling people to exert control over the determinants of health and thereby improve their health”. It is also stated that “to reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment” (2).

A WHO meeting in November 1995 on “new challenges for health”, reported that the New Public Health (3) was an extension, rather than a substitution of the traditional public health. It described organized efforts of society to develop healthy public policy as a comprehensive approach to protect and promote health status of the individual and the society, based on the balance of sanitary, environmental, health promotion, personal, and community oriented preventive services, coordinated with a wide range of curative, rehabilitation, and long-term care services. The New Public Health is a concept of ethical issues related to health expenditures, priorities and social philosophy.

Health promotion is defined as a key investment-essential element of social and economic development. But, effective health promotion is possible only with comprehensive approaches through:

- Settings: schools, workplaces, health care sector, cities and local communities;
- People need to be at the heart of health promotion action programmes and decision making processes;
- Real access to education and information, in appropriate language and styles (4).

Highlights on the health situation in the Republic of Macedonia

The Republic of Macedonia is a relatively small country situated in the middle of the Balkan Peninsula on the south of Europe, covering an area of 25.713 km² with 2.036.855 inhabitants (2005). The sex distribution of the population shows that males are slightly predominant (50,2%) over females (49,8%). Females in fertile period (age group 15-49) comprise 51,9% of all women. During the last decades the number of the young population is in permanent decrease, i.e. the age group from 0-14 is 19,7%, while the number of elderly people over 65 years of age is in permanent increase – 11,1% of the total population in 2005. During the last decades, the natural increase per 1000 inhabitants in the Republic of Macedonia decreased from 13,6 in 1981 to 4,4 in 2003 and 2,0 in 2005. The vital indicators of the population in certain regions, natality, mortality and natural growth are significantly increased. The official language is the Macedonian language; writing on Cyrillic alphabet. In addition to the Macedonian language, the languages of the other nationalities are also in official use in the units of local self-government, where they have a considerable number of the inhabitants in a manner stipulated by Law (5,6).

There has been a constant increase in the educational level of the Macedonian population in the last years. The illiteracy rate decreased from 80% in 1940-ties to 6% in 2003. The percentage of enrolled students at the University is 41.5%. About 8% of people in the age group 30-64 hold a university degree. The admission rate of women into secondary schools and universities has improved over the last decades. The minority groups have primary or secondary education on their native language (7).

The role of the family is well recognized. Some activities have been performed by health and social services, with support of women's organizations (booklets and pamphlets on nutrition, family planning, infant's health, infective disease prevention, etc.).

In the early 1990s, Macedonia recentralized its health services. Regarding the Ljubljana Charter, adopted in 1996 by the member states in the European region, Macedonia has reversed its policy, moving toward decentralized health system with crucial objectives of equity, efficiency and quality of care and addressing citizens' needs. Government started to introduce market mechanisms into service delivery by purchaser/provider split, introduction of competitive elements into health services and various payment mechanisms. Critics point out that governments often implement decentralization "with surprisingly little thought for how it would work in practice" (8). Macedonia addresses a far-reaching decentralization consequence: an urgent need for local management and policy capacity. The Reform includes changes in legislation, foundation and management of health facilities, raise and distribution of financial resources. It is based on strengthening of primary health care (PHC) and rationalization of hospital care (HC). In average, PHC teams appropriately cover the population, but some measures and activities are still in the phase of implementation. The process of privatization has started in the early 1990s although many problems have to be solved. The Law on health care and the Law on health insurance support the reform.

The institutions family doctor and dentist are implemented. Also, the health care standards and norms, the package of health services for obligatory health insurance are in a phase of preparation and implementation.

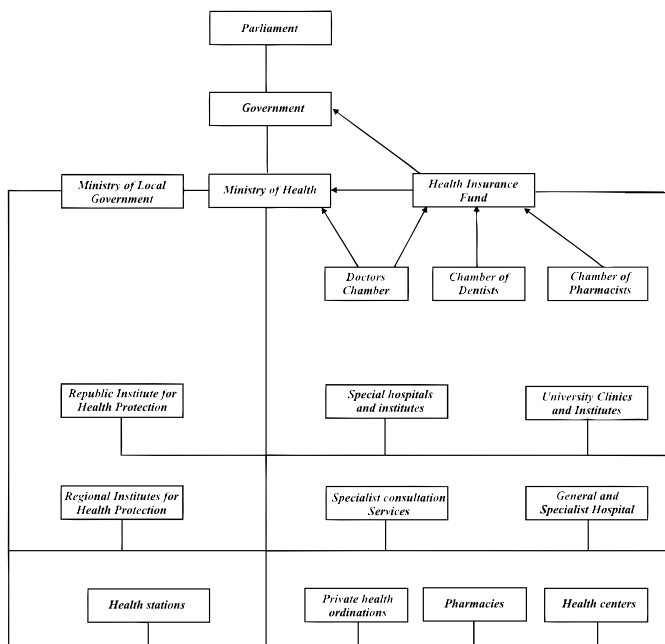
Table 1. Demographic and vital indicators in the Republic of Macedonia

Area	25 713 sq.km
Population (2005)	2.036.855 (Urban 59.7/Rural 40.3)
Administrative division	84 municipalities
Ethnicity/languages	Macedonian 64,2%, Albanian 25,2%, Turkish 3,9%, Roma 2,7%, Serbian 1,8%, Vlactus 1,0%, Other 1,2%
Religions	Orthodox Christian 67% , Muslim 30%
Literacy rate (2003)	94%
Unemployment rate (2003)	39%
Life expectancy at birth (2002)	73.4
Mortality rate (2005)	9.0
Infant mortality rate (2005)	12.8
Neonatal deaths(2005)	9.6

Sources: WHO Regional Office for Europe, Health for All database, 2002, 2003
 Republic Institute for Health Protection-Skopje: Report for Health Status and Health Care in the Republic of Macedonia 2005,2006

Health care system in the Republic of Macedonia, as in many other countries in the world, is organized on three levels: primary, secondary and tertiary level of care. Its typical functions are: health services, production of health resources, management of the system, education and training, research and development, financing health care.

Scheme 1. Health System Organization in the Republic of Macedonia



Source: Ministry of Health, the Republic of Macedonia, 2005

Macedonia has fairly extensive network of 145 health care facilities consisting of primary health care centers, public health institutes, general and specialised hospitals, specialized institutes and clinics within University Clinical Center and other types of health organizations. Health care services are distributed in more than 1307 separate location units enabling good accessibility of the entire population to the services. Bearing in mind, the private sector, the small size of the country and its good quality transport network, about 90% of the population can reach or be reached by a doctor in less than 30 minutes. The national system has approximately 24 000 employees with the overall doctor-population ratio 1:442. 35,4% from all doctors are employed on primary level and 36.1% or 1652 (2002) doctors are employed in hospitals.

Table 2. Health care resources and utilization

Number of hospitals (2005)	54
Number of physicians, PP (2005)	4999
Number of dentists, PP (2005)	1375
Number of pharmacists, PP (2005)	878
Number of nurses, PP (2005)	7012
Average length of stay in days, all hospitals (2005)	11.1
Outpatient contacts per person per year	4.3

Table 3. Economic indicators

GDP (2002)	\$ 1690
Health expenditure of GDP (2005)	6%
Health expenditure of GDP per capita (2002)	\$ 106
Public health expenditure as % of total health expenditure (2005)	90.1

Sources: WHO Regional Office for Europe Health for All database, 2005; EUROSTAT database 2005

Health promotion activities in Macedonia are being carried out over a long period of time (more than 60 years). In the beginning they've been limited to the activities of the health sector and concerned mostly public hygiene, but later those activities spread over the sector of education and non-governmental organizations. The health sector carry out specific preventive programmes on national level, such as those concerning decline of the infant mortality rate, improvement of the environmental and epidemiological situation, vaccination, mother and child health, occupational health, dental care and adolescent health. Over the last decade, the focus has been placed on cancer prevention, AIDS, alcoholism (drink), smoking, drug abuse, reduction of traffic accidents, etc. as problems of all development countries and countries in process of transition.

Recently, priority health problems in the Republic of Macedonia have been: poverty and unemployment, high rates of mortality and morbidity from CVD and cancer, explosion of addictive drug abuse, increased violence and injuries, hyperproduction and surplus of staff (doctors), lack of properly qualified experts in public health, lack of qualified managers of health programs and underutilization and deterioration of the health facilities.

The new Macedonian public policy and priorities are:

1. Improving social security and combating poverty
2. Political power, influence and participation - democratic rights for all groups in the society, participation in the political decision-making process
3. Creating secure and good conditions for children and young people
4. Healthy workplaces and an improved level of occupational health
5. Healthy environment and provision of safe products
6. Health-promoting health services
7. Healthy lifestyle: increasing physical activity, good eating habits and safe food, reducing tobacco smoking, harmful alcohol consumption
8. Struggle against narcotics
9. Reducing the spread of infectious disease and promoting safe sexual behavior
10. Reducing injuries and violence
11. Improving oral health
12. Improving mental health

Activities and achievements on health promotion during the last period in the Republic of Macedonia are as follow:

1. Improving social security and combating poverty

Activities: National Poverty Reduction Strategy, Social Development Project-Cooperation across disciplines, among teachers, doctors, journalists, government workers and religious leaders (National Center for Training in Social Development at the University of Ss. Cyril and Methodius), National Human Development Report 2001-Civil Society in Transition: “Social Exclusion and Human Security in Macedonia” aims to investigate the growing phenomenon of alienation and the marginalization of substantial groups of population, notably in rural areas and unemployed youth.

2. Political power, influence and participation – democratic rights for all groups in the society, participation in the political decision-making process

Organization: Institutions for providing social and health care and education of pre-school children, homes and boarding schools for pupils-students and institutions for social care for children lacking parental care, care of physically and mentally handicapped children and juveniles, for educationally neglected children and juveniles (reception centers), for professional rehabilitation of persons with limited working abilities and persons with disability, Unit for Promotion of Gender Equality, Ministry of Labor and Social Policy.

Legislation: Law on social care, etc.

Activities: National Strategy for Roma Population, National Action Plan for the Advancement of Women

3. Creating secure and good conditions for children and young people, women, elderly people

- Maternal and child health, reproductive health

Organization: Ministry of Health, National Committee for Breast Feeding, Institutes for health protection (RIHP /10 reg.), Institute for Mother and Child Health Care, Ministry of Education and Science, Ministry of Labor and Social Policy, UNICEF, WHO, NGOs.

Legislation: Law on health care, Law on family, Law on communicable diseases protection,

Program for immunization, Program for active maternal and child health care, Program for preventive health care, Program for early detection of cervical cancer, National Action Plan for Breast Cancer Control.

Activities: Projects: “Rehabilitation of Patronage System-Family nursing”, “EPI-Program”, “Baby friendly hospitals”, “Project for child and youth development”.

- Adolescents and youth

Organization: Ministry of Health, Institutes for health protection (RIHP /10), Institute for Maternal and Child Health Care, Ministry of Education and Science, Ministry of Labor and Social Policy, Agency for Youth and Sport, UNICEF, WHO, NGOs.

Legislation: Law on health care, Law on family, Law on communicable diseases protection, Programs for: immunization, active maternal and child health care, preventive health care, preventive health check, AIDS, National strategy for youth.

Activities: Projects: “Rehabilitation of Patronage System”, “EPI-Program”, “Youth friendly services”, “Project for child and youth development”, “Local Vavilon Centers”.

- Elderly people

Organization: Ministry of Health, Institutes for health protection (RIHP /10), Institute for Palliative Care, Ministry of Labor and Social Policy, institutions for housing and care of adults, homes for elderly and sick persons, Sue-Rider services (Skopje, Bitola), WHO, NGOs, Red Cross etc.

Legislation: Law on health care, Law on family, Law on social care.

Activities: Projects: “Rehabilitation of Patronage System”, social services which include housing, food and health care, survey on “Health status and nutrition of elderly in the Republic of Macedonia”.

4. Healthy workplaces and an improved level of occupational health

- National Strategy for Health, Healthy Environment and Safety at Work (HESME), 2005 (Institute of Occupational Health as a leader);
- Combined activities of the employees, employers, organizations and community aiming to improve health at work- a multidisciplinary approach;
- Focused on: health conditions, ergonomics of the workplace, lifestyle, education and training, special groups problems (young-old workers) etc.;
- Pilot study in two companies (steel production and leather manufacture).

5. Healthy environment and provision of safe products

Harmonization of the national legislative with EU Directives and WHO recommendations related to the environmental health

- Collaboration in the Pan-European Program for Transport, Health and the Environment with WHO and United Nations Economic Commission for Europe (UNECE)
- Work on Children Environmental Health Action Plan for Europe (CEHAPE) in Macedonia
- Improvement of Water and Sanitation Conditions (WSC) Goal 4:
 - From 93% with safe drinking water in 2003 to > 95% in 2010
 - From 90% with sanitation in urban areas in 2003 to > 95% in 2010
 - From 15% with sanitation in rural areas in 2003 to > 30% in 2010

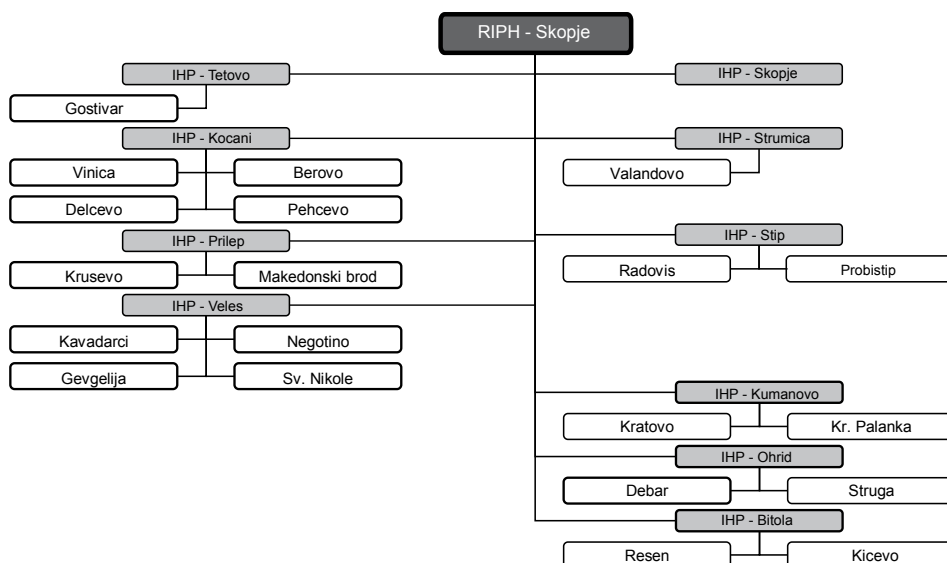
6. Health-promoting health services

Organization: National Committee for Health Promotion - Ministry of Health (2000), Institutes for Health Protection (RIHP /10), Institute for Occupational Health-Skopje, primary healthcare units, schools, social centers, media, UNDP, UNICEF, WHO, NGO, Red Cross

Legislation: Law on health care, Law on Local Self Government, preventive programs for global or specific health problems, annual programs for health education-national /regional level

Activities: Consulting, education: workshops, campaigns, conferences, project: “Healthy communities” - Ministry of Health, CDC, OSI

Network of Institutes for Health Protection



7. Healthy lifestyle: increasing physical activity, good eating habits and safe food, reducing tobacco smoking, harmful alcohol consumption

- Physical activity

Encouraging physical activity, as part of preventive services in primary care, focuses mainly on leisure-time activities rather than occupational ones. The major strategies behind the implementation of programmes to increase the physical activity level in individuals and in the population are creation of supportive physical, social and cultural environments for the population, education of the public through mass media and direct education and counseling in primary care. National survey (9) has shown that half of the examinees (15-64) in the Republic of Macedonia have no physical activity in their free time (49.6%), which is for 10% higher than the average in the countries from 14 sub-regions in the world (that is, 41% of the population).

Organization: Agency for Youth and Sport

Legislation: National Strategy for Youth

Activities: New sport center - Skopje, runways, bicycle paths, organizing cross country competitions.

- Nutrition

The Government of the Republic of Macedonia has adopted the Action Plan for Food and Nutrition of the Republic of Macedonia at its session in April 2004 as Governmental Document.

The planned activities in accordance with the Action Plan for Food and Nutrition of the Republic of Macedonia have already started:

- The Centre for Nutrition and diet within the RIHP was established in 2003
- Promoting material and posters
- Participation on World Heart Day in 2003 and 2004 with more than 200 examined women
- Opening of Nutritional Clubs in elementary schools with promotion;
- Ongoing surveys (The National Diabetes Study; Nutritive status among preschool children; Nutritive status among elderly); and
- Implementation of activities from Annual National Preventive Program for Nutrition for RIHP and 10 IHPs in Macedonia

- Tobacco

Consumption of tobacco in any form, including cigarettes, cigar and pipe tobacco, chewing tobacco and snuff and exposure to tobacco combustion products through passive or involuntary smoking contribute considerably to illness and premature death from more than 20 different diseases. Macedonia belongs to the countries of Central and Eastern Europe where smoking is increasing. Results from the survey in 2000 among population between 15-64 showed that almost each second examinee is a smoker (42,7%) and that 6,2% smoke more than 20 cigarettes a day (9). Global Youth Tobacco survey in 2002 among young people from 13 to 15 years old, showed that 8,2% of students smoke cigarettes (10). Intervention measures for this problem are policies on tobacco control:

Organization: National Committee for Tobacco Control

Legislation: Law against smoking

Activities: National Strategy, National Action Plan, media, press conferences on 31st of May

8. Struggle against narcotics

In Macedonia there is a strategic approach -National Program on protection against drug abuse and illegal drug trade since 1996. Indeed as Macedonia moves slowly towards being a member state of the European Union, important developments within the care sector are becoming increasingly apparent. These changes include the de-centralisation of drugs treatment resources, the shift towards a mixed economy of care (embracing partnership working between the statutory, NGO and private sectors) and the commissioning of services from the NGO sector. Practitioners involved in direct work with drug users need the relevant skills to be able to respond to these changes. The mixed economy of care in Macedonia is in its infancy. The NGO sector has grown at a rapid pace with the help of inward investment of international organizations whilst the state care sector has

struggled to maintain a service amidst a deepening economic crisis. The government has been unable to grasp the need to develop an infrastructure role in respect of the health and social care sectors. There are acute issues around the provision of relevant services, sustainability, quality of services and partnership working.

The pace of development in the care sector and the relatively recent emergence of problematic drug use have created a skills gap amongst practitioners working in the drugs field. This is particularly evident amongst frontline workers who are finding it difficult to respond to the basic needs of drug users (with the exception of a few niche drugs focused NGOs). As the number of drug users needing treatment in Macedonia increases, service users are funnelled into central mainstream services (such as the Detox unit at Kisela Voda Hospital) often overloading them. Frontline workers need to have the skills to be able to work with drug users in the community to ensure early therapeutic input, harm reduction and community re-enforcement (11).

9. Reducing the spread of infectious disease and promoting safe sexual behavior

- An Inter-Ministerial Group (Country Coordinative Mechanism);
- National Strategy for Prevention of HIV/AIDS;
- National Program for Prevention of HIV/AIDS (Prevention of HIV transmission among young people, prevention of transmission of HIV and blood-borne diseases among IDUs, among sex workers and their clients, MSM, Roma community, prisoners, improvement of the access to and quality of HIV consulting and testing, improvement of HIV/AIDS/STI surveillance and forecasting to strengthen planning of national response, provision of health care and psychological support for PLWHA and capacity building and coordination).

10. Reducing injures and violence

- Violence prevention
 - National Campaign against Violence
 - Institutionalization: Department for Injury and Violence Control and Prevention established at the Republic Institute for Health Protection
 - Violence priority in the Biannual Collaborative Agreement (BCA) MOH/WHO
 - National task force: Inter-ministerial and multidisciplinary Group
 - National report on Violence and Health preparation
- Road safety
 - World Health Day 2004 promotion activities
 - WHO Certificate to the Department for Injury and Violence Control and Prevention
 - National study on road traffic injures among children and students
 - Draft Strategy for road safety prepared
 - Law for road safety amended and empowered
 - Stability pact – Pre-hospital trauma life support project
 - Information for emergency services in Macedonia – in preparation
 - Elective course for Injury research and safety promotion in the Master for Public Health curriculum
 - CEHAPE

11. Improving oral health

- Draft-Curricula on Oral Public Health for the School of Public Health
- Oral Health Survey in RM (Project) based on WHO oral health survey methods
- Red Cross activities

12. Improving mental health

- Mental Health Reforms (Government level)
 - Decentralization
 - Deinstitutionalization (mental health centres-6)
 - Policy and legislative support (Draft National Mental Health Policy and Draft-Mental Health Law)
 - NGO Sector's involvement
- Non-Governmental level
 - Project: "Promotion of human rights for persons with mental handicap in the civil society" (NGO Message)

Education and information are very important parts in the process of health promotion activities. "Health promoting schools" was a project in the elementary and secondary schools supported by the WHO. The involved 40 schools and students were very satisfied. Within Medical Faculty-Skopje a School of Public Health was established in 2003, then a Faculty for High Education of Medical and Stomatology Nurses. Media play an important role in the process of better and timely information.

Conclusion

Economic and social development determines health. Macedonia is strengthening its capacity to effectively manage complex health promotion aspects - the capacity to monitor relevant trends, identify options for change, set priorities, draw up action plans and ensure their implementation, measure outcomes and take corrective actions when needed.

Future developments

- National strategy for health development;
- Advocate relevant health, social, environmental policies;
- Encourage active and continuing participation in health education and health advocacy;
- Capacity building-health promoters from all sectors of the society;
- Promote factors that contribute to a better status of health of the population;
- Initiate projects and actions for local community development - legislation, fiscal measures, organizational change, communication and education.

Exercise: Health Promotion Activities in the Republic of Macedonia

Task 1:

After an introductory lecture students are asked to search the Internet to find different national examples of health promotion activities.

Task 2:

Students are asked to make comparisons between countries and to prepare Power Point presentation.

Task 3.

As output, students should write an essay, stressing their personal opinion about advantages and weaknesses of certain country/regional health promotion activities and offering their proposal how to make health promotion more effective process in the future.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Promotion in Croatia and Experiences with the First National Health Promotion Project
Module: 1.9.2	ECTS: 0,5
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Key words	Andrija Stampar, Andrija Stampar School of Public Health, National Health Promotion project, Croatia
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none">• Be critically aware of the past positive experiences and lessons learnt in development of national health promotion and disease prevention programs;• Understand the strengths and weaknesses of the “imported” projects in local circumstances;• Be able to conceptualize what is needed in planning, implementation and evaluation of an effective program, using example of the First Croatian Health Promotion (vertical) program
Abstract	<p>The paper describes a very specific historical development of health promotion and health education in Croatia, based on Andrija Stampar ten principles written at the beginning of the last century. Since 1927, Andrija Stampar School of Public Health has been the initiator, facilitator, leader and evaluator of different health promotion and community-based programs in Croatia and abroad. The activities and approaches passed different periods: the early bird of modern public health and enlightenment approach to health education and community health, period from sixties to eighties emphasizing community interventions, self-help movement and Family Practice, war and postwar time as well as current situation.</p> <p>The paper is critically discussing similar situation in South-Eastern countries: some very positive experiences from the past, the new possibilities in development of health promotion and disease prevention activities, but, on the other hand, the strong influence of supporters from abroad. Therefore, the experiences of the First National Health Promotion project, supported by World Bank, is described in details.</p>

Teaching methods	Individual reading. Intensive small group discussion: Similarities and differences between Croatian experiences and regional/national settings.
Specific recommendations for teachers	If possible, use similar national examples (Case study). Prepare national readings for participants.
Assessment of students	Structured essay: What I learnt from our national program(s) supported from broad?

HEALTH PROMOTION IN CROATIA AND EXPERIENCES WITH THE FIRST NATIONAL HEALTH PROMOTION PROJECT

Gordana Pavlekovic

Andrija Stampar: Back to the Future

The real father of public health and health promotion in Croatia is Andrija Stampar, “a charismatic leader of social medicine and international health” (1). At the beginning of the 20th century it was evident that the public health situation in Croatia, as well as in neighborhood countries, was poor (2). Stampar was aware of the situation and became interested in solving it. He became very active in public health efforts in the Health Section of the League of Nations and later on, he became one of the founders of the World Health Organization and the author of the well-known WHO definition of health (3,4).

Andrija Stampar, a young physician born in small village in Croatia, wrote ten principles of health care. There is no doubt that professor Stampar, the founding father of the School of Public Health in Croatia, initiator of establishment of many other important institutions all over the World, was the visionary of health in the World. Ten principles defined the Croatian approach to health but also influenced social and community-based approach development.

Written in the year 1926, these principles are actual today more than ever.

1. It is more important to enlighten the people than to impose laws.
2. It is most important to prepare the ground in a certain sphere and to develop the right understanding for questions of hygiene.
3. The questions of public health and its improvement must not be monopolized by medical authorities, but has to be cared out by everybody, for only by joint work can the progress of health can be obtained.
4. First of all the physician must be a social worker; by individual therapy he cannot attain much, social therapy is the means of success.
5. Economically the physician must not be dependent on his patient, because it hinders him in the accomplishment of his principle tasks.
6. In matters of people’s health no difference is to be made between the rich and the poor.
7. It is necessary to form a health organization, in which the physician will seek the patient, not the patient to seek the physician; for this is only way to gather an ever increasing number of those health we have to care for.
8. The physician has to be the teacher of the people.
9. The question of national health is of greater economic than humanitarian importance.
10. The principle fields of action of a physician are human settlements and not laboratories and consulting room (5)

Health promotion and health education in Croatia: Historical perspectives

The history of development of Health Promotion in Croatia is based on the Andrija Stampar School of Public Health («School of People’s Health») activities since 1927 when the School was established. This institution has been always the initiator, facilitator, leader and evaluator of different health education, health promotion and community-based programmers in Croatia. During the history, the activities and approaches passed different periods, especially in the field of health education and health promotion.

Period from 1927 to the middle of the last century was the early bird of modern public health and enlightenment approach to health education and community health in Croatia (6).

The School of Public Health, together with the National Institute for Public Health, was established in 1927, with the task to study conditions which might have favorable or unfavorable impacts on people's health. From its foundation till the beginning of World War II, the activities of the School focused on the development, organization and implementation of programmes with the aim to solve environmental problems (safe drinking water, disposal of infected materials and improvising of living conditions) (7). The main strategy used was education of lay-people. For this reason, three departments were established within the School of Public Health:

- Department for Health Education
- Department for Health Propaganda
- Peasant's University

Department for Health Education and Department for Health Propaganda were responsible for production of books and leaflets, journals and posters and exhibitions. The first Film industry was established in this part of the Europe, mainly producing films with health educational messages. Some of them are very actual today (for example: Alcohol and Health, Healthy Eating etc.). Grand Prix was awarded to the School for «Living in the Country» at the World Exhibition held in Paris in 1937. In 1933, a film by Hloupek and Gerasimov «One day in the Turopolje Cooperative» was made, which was awarded at the Florence Film Festival for the best ethnographic film, and with special award at the Venice Film Festival, 25 years later (8).

Peasant's University (for Males and for Females) was established at the School of Public Health in 1928 to educate those who would act as a bridge between the health system and the peasants, e.g. 5-months courses for men and 3-months courses for women were organized to educate them in hygiene, nutrition, child care, housing, economy, etc.

Period from sixties to eighties emphasized community interventions, self-help movement and Family Practice. In 1963, the School started organizing as the first in the world 3-years vocational training courses for general practitioners. Preventive measures have been a regular part of their training and everyday work in families.

War and postwar problems gave the new role of public health institutions and building civil society in modern Croatia

Throughout the war, the School was active in the places with highest life risks, cities under siege, prisoners of war camps, and hospitals in war areas. On the basis of these experiences, the «Challenge of Goodness» was formulated as humanitarian health proposals to improve civil protection in prevention, controlling and stopping war (9). At the same time, the Educational Multimedia Center (EMC) was very active in production of different health educational materials for refugees and displaced persons as well as in development of training programmes and materials for health professionals facing with war-related problems.

During the war, the existing «old» public health institutions at the counties levels became key-points for different preventive activities related to injuries in children, and emphasizing the treat of explosive devices and weapons.

At the same time, political changes and democratization offered the new possibilities in development of civil society (including NGO's sector) and growing-up the different health promotion programmes based on «settings» approach.

At present, majority of Health Promotion activities in Croatia are running by Andrija Stampar School of Public Health, some of them in collaboration with governmental institutions (for example, National Institute of Public Health) and with many different non-governmental groups (civil society).

From the 1990's, «setting-approach» started to be a very popular in Croatia. Experiences from the Health Promoting Schools, Healthy Cities, Healthy Counties, Baby-friendly Hospitals as the example of Health Promoting Hospitals, are Croatian successful stories in Health Promotion.

There are also different vertical national programmers. One of the most popular is «Say YES to non-smoking», initiated by Andrija Stampar School of Public Health.

Additionally, Educational Multimedia Center (EMC), located at Andréa Stampar School of Public Health, is the organizer of the EMC festival – competition festival of health messages using different media channels (TV, print, journals, posters, etc.). This festival started to be very supportive in development of ethically and professionally correct and visually appropriate messages to ordinary people.

The First National Health Promotion Project

The World Bank approved a financial loan for health related matters to the Republic of Croatia. The whole population aims a part of the loan at health promotion and education, as well as the accepting of the healthier life-style.

On the basis of morbidity and mortality data analysis, cardiovascular diseases and sexually transmitted diseases including the HIV infection have been identified as public health priorities.

Health Promotion was a sub-project of the Health Project in Croatia, running by the World Bank, Ministry of Health of the Republic of Croatia and Croatian Institute of Health Insurance. Croatian Institute of Public Health was appointed as a responsible institution for the sub-project Health Promotion (9).

Goal and objectives

The main goal of the sub-project Health Promotion was promoting and accepting healthier life-styles on the population level with the consecutive reduction of prevalence regarding some risk factors relevant for developing cardiovascular diseases and spreading of sexually transmitted diseases, resulting with the morbidity, mortality and invalidity rate decrease.

The specific goals were:

- To reduce the smoking prevalence in the population, and especially the number of smokers among persons bellow 20 years of age by 20%;
- To achieve changes in eating habits by reduction of intake of salt and refined carbohydrates;
- To correct daily energy intake, including consumption of macro-nutrients, with special attention to reduce intake of fats, particularly animal fats;
- To promote the regular physical activity, especially walking for exercise in sedentary 14 Km weekly;
- To increase the general population knowledge concerning sexually transmitted diseases prevention as well as encourage responsible sexual behavior (9).

To achieve the goals the Health promotion sub-project included four important life-style factors: diet, smoking, physical activity and sexual behavior.

The implementation plan had four phases:

1. Establishment of baseline parameters to define the magnitude and context of the problems, to facilitate planning of interventions and to serve as an objective basis for monitoring and evaluation;
2. Design of Health Promotion interventions, based on the quantitative and qualitative baseline parameters;
3. Application of the Health Promotion interventions to the target population/population sub-groups;
4. Evaluation, to determine progress made towards achievement of objectives, to determine the effectiveness of interventions and to serve as a basis for improvement on the Health Promotion strategies.

Design of Health Promotion Activities was based on the baseline parameters. They showed that interventions in Croatia must be targeted to:

In relation to smoking:

- To the children and adolescents, both girls and boys, to protect them all from tobacco promotion and to receive all educational and other help to resist the temptation to start smoking;
- To the general population to accept that (a) everyone has the right to be informed of the health risks of tobacco use, (b) fresh air from tobacco smoke is essential component of right to a healthy environment, (c) all citizens have the right to smoke-free air in the work-place and enclosed public places and transport, and (d) every child has the right to smoke free environment.
- To the smokers – to receive encouragement and help to overcome the habit.

In relation to dietary habits:

- To the children and adolescents, in continental as well as coastal region, to accept proper dietary habits related to the intake of salt and refined carbohydrates, fats, particularly animal fats;
- To the adults, both in continental as well as coastal region, to achieve change in dietary habits by reduction of intake of salt and refined carbohydrates, fats, particularly animal fats;

In relation to regular physical activity:

- To the children and adolescents that the regular physical activity promotes their physical fitness as a composite of intellectual, emotional and social as well as physical well-being;
- To the adults, especially sedentary, to control their health status and start with regular everyday physical activity to promote their health, especially in scope of increasing their muscle tone and flexibility as well as efficiency of their heart.

In relation to STD's and HIV infection:

- For school children to develop human relationship, especially towards the infected and diseased, and encourage the interpersonal responsible sexual behavior
- For adolescents to receive all educational and all other help to encourage the responsible sexual behavior and learn about STD's as well as HIV infection prevention, increase tolerance and acceptability of HIV infected and AIDS patient

- For the general population to receive all information on STD's and HIV infection prevention, to encourage responsible sexual behavior and to increase the tolerance and acceptability of HIV infection and AIDS patient.

The health promotion programme implementation had two crucial parts: Training/education programme and Public campaign.

Training and education was carried out on three levels: (1) training and education of key-persons; (2) training and education of educators and (3) training and education of local health promoters

Training and education of key-persons

Key-persons were members of the Health Promotion Working Group: representatives from Public Health Institutes from major centers (Zagreb, Rijeka, Osijek, and Split), Medical School University of Zagreb, from Ministry of Education and Sports, religious organizations, and persons who could contribute to the success of the project. Total number was 25. Training programme of key-persons was carried out at international level, using a workshop form for three days. Goal of the training programme was to make key-persons familiar with the project objectives, content of work, plan and organization, monitoring and evaluation of the activities.

Specific objectives were:

- To acquire basic knowledge about problem (project content);
- To understand the principles of health promotion and health prevention;
- To remain the risk factors of cardiovascular diseases and STD;
- To develop positive attitudes towards the project (motivation);
- To develop skills in communication, planning, organization of work, monitoring and evaluation.

Training/education of educators

Educators were selected from public health institutions, primary health care units (school health, general practice, occupational health, nurses) and elementary schools (teachers, pedagogues, psychologists), all together 80 educators. Four workshops/seminars were organized in four regional centers (city of Zagreb, Split, Rijeka and Osijek).

In principle, the aims of the training programme for educators were the same as for the key-persons. Both were expected to acquire the same range of skills and positive attitudes to health promotion. However, the educators had to master the communication and planning skills as well as to transfer knowledge and be in full control of health education techniques.

Training/education of local health promoters

The plan was to have local health educators/health promoters at community level. Their tasks were based on organization of health educational programmers in schools, families, various social and risk groups in community, etc. Educators responsible for the programme at county level organized their education. The content of the training was similar to the training programme for educators with special emphasis on health educational skills development. In total, 150 professionals have been covered by educating the educator's seminars and 120 professionals have been covered by four direct/local health promoters' seminars.

Project Working Group prepared Manual and the Educational kit (9). They were prepared with (1) project information and proposals how to run the project, (2) facts about smoking, nutrition, physical activities and STD in Croatia and (3) at least two active workshops for children and adults with all materials and detailed instructions how to implement its in practice.

Public Campaign

The first step in Public campaign was to choose the adequate firm for the production of materials. Marketing company was responsible for Project delivery and materials for campaign addressed to the general public through media messages (TV, radio, newspaper) as well as those using other media channels (T-shirts, posters, video spots, etc).

Logo (heart) and slogan of the public campaign were chosen: «O zdravlju odlučujete sami» (Health is in your hand, or You are deciding about your health).

Specific messages were:

- For CVD: Think on your heart («Mislite na svoje srce»).
- For tobacco: I love non-smoker («Volim nepusaca»), and Rights for the fresh air («Pravo na cisti zrak»).
- For nutrition: Daily food guide pyramided («Piramida zdrave hrane»), and Control your weigh («Kontrolirajte tjelesnu tezinu»).
- For physical activity: Moving towards health («Kretanjem do zdravlja»).

Products of the Public campaign were (1) 10 different broadcasting spots (30 sec), (2) 20 TV broadcasting spots (10 sec), (3) 15 radio messages (30 sec), (4) 3.000 posters (50x70 cm), (5) 100 posters (70x100 cm), (6) 50 jumbo posters (520x250 cm), (7) 4x10.000 brochures and (8) 8x90.000 leaflets (A4). For the whole preparation of the material and media campaign, the World Bank approved 775.700 USD in the 1995.

What we did learn from the First National Health Promotion project?

- Very high costs, very low results
- Plan delivery is the essential part of the project
- Politicians and policy-makers must be included
- Multiprofessional and intersectoral approach is important
- Salutogenic approach is needed
- Innovative approach is needed (health as a part of everyday life)
- Action, not education!

Current situation in health promotion in Croatia: SWOT

During the history, Andrija Stampar School of Public Health played the most impotent role in community-based programmers, health education and that what we call today – Health Promotion (based on Ottawa Charter) (10). Being the WHO Collaboration centre for PHC for many years, the member of different networks in worldwide research and international training in Health Promotion, there is no doubt – the School is recognized in the country and abroad as the leading institution in this field. Unfortunately, being out of the regular health system and belongs to Ministry of Science, the present situation put the School in position with less influence to current situation.

National Institute of Public Health is responsible for data collection and announcement of Preventive measures. This Institute is running several surveys in healthy lifestyle (ESPAD, WHO Household Health Survey) but they are not a regular part of the Croatian health system. Additionally, there are many health surveys (including CINDI in demonstration areas, different research on school children health habits, etc.) running by Andrija Stampar School of Public Health, but, unfortunately, there is no strong connection between these activities.

Regarding training in health promotion and public health (undergraduate, postgraduate, vocational and in-service training), Andrija Stampar School of Public Health is a leading institution in Croatia. All medical students (future medical professionals) have the topics in health promotion principles and activities, as well as undergraduate students of social work, nurses, etc. Modules on Health promotion are present in postgraduate training in Public health, Occupational health, School health, Family health, Social Pediatrics, etc. There is no special postgraduate study in Health Promotion.

The most important issue in the current situation in Croatia is development of the National Health Promotion Law (under discussion). There are still a lot of discussion (as well research) trying to answer on the question: Do we really need a special professions («health promoters») or not? The problem of terminology is still present, with no clear understanding what does it mean «public health», «new public health» and «health promotion».

There are many activities in the field of Health Promotion - unfortunately not well coordinated, even not recognized as a part of the Croatian health system. Additionally, there are many resistances to have interdisciplinary approach in this field (monopoly of medical professionals working in Public Health Institutes, mainly epidemiologists and social medicine experts).

In summary, the SWOT analyze of current situation in Croatia concerning Health Promotion could be described as follows:

STRENGTHS	WEAKNESSES
Tradition Positive experiences Legal framework Decentralization Multiprofessional approach	Rational approach to health «Sectoral» isolationism Inadequate qualifications of professionals Low motivation Voluntarism Lack of clear visions Lack of financial support Lack of coordination and leadership
OPPORTUNITIES	THREATS
Decentralization Health care reform Intersect oral collaboration Motivation	Centralization Resistant to change Hidden interests New (vertical) structure (health promoters?)

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	National Health Survey- Precondition for a Preventive and Health Promotion Intervention: Methodology and Implementation of 2003 Croatian Adult Health Survey
Module: 1.9.3	ECTS: 0,5
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Key words	National health survey, methodology of adult health survey, strategy for health systems reforms,,Croatia
Learning objectives	After completing this module students and public health professionals should : <ul style="list-style-type: none">• improve knowledge and tools in methodology and implementation of National Adult Health Survey;• have an awareness of the importance of National Health Survey as a precondition for a preventive and health promotion intervention;• have an understanding of research in health policy development.

Abstract	<p>The paper describes the experiences of Croatian Adult Health Survey (CAHS) conducted in 2003 and targeted adult population (persons aged 18 years or older) who are living in private dwellings in Croatia. Survey covered approximately 98% of the Croatian population aged 18 or older. CAHS included topics around the health status, determinants of health (smoking, physical activity, nutrition, alcohol use) and use of health care services by Croatians. Three levels of objectives are presented. The first level objectives were to provide timely, reliable, cross-sectional estimates in order to support the work around developing a public health information system and enhancing the national efforts in health promotion. The second level specific goals included gathering data for six major regions of Croatia and creating a survey instrument that could be used as a benchmark for future studies. The third level components were oriented toward development of public policy - to provide data for analytical studies, data on the economic, social, demographic, occupational and environmental correlates of health for understanding of the relationship between health status and health care utilization.</p> <p>Methodology and implementation of 2003 Croatian Adult Health Survey (stratification, sample and household sampling strategy, data collection and response rate as well as data processing, weighting and estimation are described in details.</p> <p>In conclusion, National Health Survey is a precondition for a preventive and health promotion intervention. Using the data from National Health Survey, health care professionals and policy makers are able to produce in-depth analysis supporting development of national health strategy and to improve the health of population.</p>
Teaching methods	Short introductory lecture. Readings. Intensive small group discussion: Comparison between Croatian experiences and regional settings
Specific recommendations for teachers	If possible, use similar national examples (Case study), if any. Discuss similarities and differences.
Assessment of Students	Structured essay: Preconditions for preventive and health promotion intervention in (own) country)

NATIONAL HEALTH SURVEY- PRECONDITION FOR PREVENTIVE AND HEALTH PROMOTION INTERVENTION: Methodology and implementation of 2003 Croatian Adult Health Survey

Aleksandar Dzakula

Introduction

As part of an overall strategy for health system reforms in Croatia, Croatian Adult Health Survey (CAHS) was conducted in 2003. This survey included topics around the health status, determinants of health (smoking, physical activity, nutrition, alcohol use) and use of health care services by Croatians.

Specific target for this survey was the prevention of cardiovascular disease in Croatia. The survey questionnaire was designed through consultation with experts from the fields of epidemiology and public health, drawing on known survey instruments.

Under the management of the Canadian Society of International Health, medical doctors from the Andrija Stampar School of Public Health in Zagreb lead the Croatian Survey Project Team. Statistics Canada advised the Team on data quality and survey design. Survey collection took place during the summer of 2003, and results were officially released in December of 2003.

Background

Cardiovascular diseases are a leading cause of death in Croatia, in the year 2002 caused 52,8% deaths in Croatia. Between ten leading causes of death in Croatia five are from cardiovascular group, with ischemic heart disease and cerebrovascular insult as leading.

Despite that, exact data on the spread of the most important risk factors, such as hypertension, smoking, obesity, insufficient physical activity are not available.

Also, Croatia has not any National Register on any leading cardiovascular disease. Further, there have not been any systematic, periodic (e.g. 3-5years) and standardized (allowing for international comparisons) studies of risk factors in a representative sample of the population which would allow for the monitoring of trends over time.

The mortality due to cardiovascular and cerebrovascular diseases in certain populations can be significantly reduced by acquiring a healthier way of life (non-smoking, proper diet and regular physical exercise, control and treating of hyperlipidemia, hypertension, diabetes etc.) and specific medical programs.

For any of preventive or health promotion program specific data are necessary.

Objectives

The *first level* objectives of the 2003 Croatian Adult Health Survey (CAHS) were to provide timely, reliable, cross-sectional estimates in order to support the work around:

- developing a public health information system;
- enhancing the national efforts in health promotion with emphasis on cardiovascular disease prevention;
- cardiovascular disease risk reduction, clinical prevention, and emergency care and
- promoting healthier lifestyles among the general population with emphasis on smoking prevention and cessation.

The *second level* specific goals of the survey included:

- gathering data for six major regions of Croatia and
- creating a survey instrument that could be used as a benchmark for future studies.

The *third level* components of the survey were oriented toward development of public policy - to provide data:

- for analytical studies that will assist in understanding the determinants of health;
- data on the economic, social, demographic, occupational and environmental correlates of health for understanding of the relationship between health status and health care utilization.

Content

The main priority for the survey was to examine health status, risk factors and health care utilization with a focus on cardiovascular disease.

A Steering Committee with representatives from the Croatian Ministry of Health, the Public Health Institute and the Andrija Stampar School of Public Health defined the content.

The survey and questionnaire were based on existing studies such as the CINDI, Short Form 36 (SF-36) and World Health Organization. (Table 1).

Table 1. Content modules: Questionnaire Description

Categories	
Household:	size, income, rooms, etc.
Socio-economic:	characteristics, age, gender, marital status, education, occupation
Physical measurements:	blood pressure, pulse, height and weight
SF-36:	general health, activity, limitations, mental and physical problems
Health care services:	access, use, visits to doctors, specialists, dentists, etc.; difficulties in accessing services; health insurance, etc..
Chronic conditions:	asthma, cancer, back pain, rheumatic arthritis, etc.
Medication	
Preventative examinations	
Smoking:	daily smoking, attempts to stop, exposure to secondhand smoke
Eating habits:	breakfast, fat and caffeine intake, salt, fruit / vegetable consumption
Alcohol consumption	
Physical activity:	time spent for work and leisure

Target population

The 2003 CAHS targeted adult population (persons aged 18 years or older) who are living in private dwellings in Croatia. Survey covered approximately 98% of the Croatian population aged 18 or older. Persons living in non-conventional dwellings, clientele of institutions, full-time members of the Croatia Armed Forces and residents of certain remote regions are excluded from this survey.

Definition of regions

The 2003 CAHS used the official definition of the five sub-national regions as proposed by the Central Bureau of Statistics; those five regions are groupings of counties. In order to ensure sufficient sample for the City of Zagreb, this important city has been removed from the Central region and a sixth region has been considered for the 2003 CAHS.

Stratification, sample and household sampling strategy

To meet the survey objectives of providing reliable estimates the six main regions have been further stratified based on city type (town/municipality) or districts for the City of Zagreb. Overall for the 2003 CAHS the country was stratified into 20 design strata. Calculating all criteria and taking into account anticipated non-response a sample of 11,250 units was required.

Through the cooperation of the Croatia Central Bureau of Statistics, the 2003 CAHS sample of dwellings was selected from the 2001 Census of Households under a multistage stratified cluster design. At the final stage 11 250 dwellings were selected. The households living in the selected dwellings formed the sample of households.

Sampling of interviewees

One person aged 18 or over per household was randomly selected using a simple random sampling approach. Interviewers (nurses) were instructed to list the first and last names of everybody aged 18 or over living in the household. Using a vector of random numbers and based on the number of eligible persons, one individual was selected at random to participate in the survey.

Data collection and response

Data collection took place between April and June 2003 by 238 trained public health nurses from the County Institutes of Public Health as interviewers. Nurses conducted interview by formatted paper questionnaire and collected anthropometric measures such as height, weight, pulse and blood pressure at the end of the interview for all respondents.

Household addresses for every selected household under the jurisdiction of each interviewer were provided. Interviewers were instructed to first collect an inventory of the household members aged 18 years or older, and then according to a vector table found on each sample selection control sheet, randomly select the survey respondent. The interviewers had an introductory letter signed by the Minister of Health that legitimized them as interviewer, explained the importance of the survey and provided examples of how the data would be used.

After removing the out-of-scope units, a total sample of 10,766 households were selected to participate in the 2003 CAHS. Out of these selected households a response was obtained for 9,070 individuals which results in an overall response rate of 84.3%.

Data processing, weighting and estimation

Data capture was performed by two office staff members who captured the completed questionnaires. The quality of the data capture process was monitored through systematic quality control procedures where a random sample of 10% of the questionnaires were recaptured and reconciled.

Questionnaire design with pre-determined response categories facilitated capture and as well minimized error. Predefined response categories made it impossible for interviewers to enter out-of-range values.

Each survey respondent was assigned a survey weight to represent his or her contribution to the total population. Taking into account the sample design, estimates are produced from the survey data by using estimation techniques from survey sampling theory.

Conclusion

The development, design and implementation of the National Health Survey requires the participation of several organizations. CAHS 2003 was led by the Canadian Society of International Health, the Croatian Ministry of Health, the Croatian Central Bureau of Statistics, the Andrija Stampar School of Public Health, the National Institute of Public Health and Statistics Canada. Experience showed that joined forces and shared expertise are necessary for successfully accomplishing a high quality population health survey.

Using the data from National Health Survey health care professionals and policy makers across will be able to produce in-depth analysis in support of the development of a national promotion strategy to improve the health of population. Furthermore obtained data will be useful for regional and periodical comparisons which are necessary for longterm plans and strategic decisions.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	The WHO Countrywide Integrated Non-communicable Diseases (CINDI) programme in Slovenia
Module: 1.9.4	ECTS: 0.5
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Key words	public health intervention programmes, CINDI programme, non-communicable diseases, Slovenia
Learning objectives	After completing this module students should: <ul style="list-style-type: none"> • be familiar with WHO Countrywide Non-communicable Diseases Intervention (CINDI) programme; • increase knowledge about CINDI programme vision for the future; • be able to critically assess the importance of intervention public health programmes in controlling non-communicable diseases.
Abstract	Many different community based intervention projects/programmes were designed and/or implemented since the early 1970s to combat chronic non-communicable diseases, many of them being international. Countrywide Integrated Non-communicable Diseases Intervention programme (CINDI) of the World Health Organization (WHO), Regional Office for Europe, which started to spread its ideas in the 1980s, is one of them. Slovenia as a state officially joined international CINDI programme at the beginning of the 1990s, when its activities were limited to Ljubljana demonstrational area. First few years were used as an introductory period of the programme, while more systematically organized activities begun in the late 1990s. The paper presents the historical development of the CINDI programme in Slovenia, and the role of CINDI Slovenia Preventive Unit in it.

Teaching methods	Teaching methods include introductory lecture, case study, small group discussions, and the whole group discussion (snowball method). After the introductory lecture students need carefully to read the suggested readings on the subject. Afterwards they need to answer the questions and discuss the issue - first in small groups and afterwards in a whole group of students. They are especially addressed to critically discuss on limits and strengths of evaluation of public health programmes.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• training materials: recommended readings are available in the internet;• target audience: master degree students according to Bologna scheme.
Assessment of students	Assessment is based on multiple-choice questionnaire.

THE WHO COUNTRYWIDE INTEGRATED NON-COMMUNICABLE DISEASES INTERVENTION (CINDI) PROGRAMME IN SLOVENIA

Jozica Maucec Zakotnik, Zlatko Fras, Lijana Zaletel Kragelj

Theoretical background

The WHO Countrywide Integrated Non-communicable Diseases Intervention Programme

The World Health Organization (WHO) Countrywide Integrated Non-communicable Diseases Intervention (CINDI) programme is an intervention programme with integration as a key concept in prevention of chronic non-communicable diseases (NCD) (1-3). It arose out of experiences of one of the first community-based health intervention projects in Europe - the North Karelia Project in Finland, which started in 1972 and reached remarkable achievements as well as global recognition (4).

The CINDI concept reflects the recognition that a relatively limited number of risk factors are common to some major NCD. Integration roughly refers to (1, 5):

- an intervention that is aimed at several risk factors simultaneously;
- a comprehensive approach that combines various implementation strategies (e.g. policy development, capacity building, partnership etc.) at all levels;
- an intersectorial action that implements health policies, including coordinated action by several sectors to address some major determinants of bad health that are not covered by the health sector as such, and
- a combination of population and high-risk strategies which link the preventive action of various components of the health system (health promotion, public health services, primary care and hospital care).

CINDI interventions are implemented according to the common protocol (6), preferably on a countrywide level.

The CINDI strategy aims at reducing the burden of NCD primarily by reducing unhealthy lifestyle. This should lead to the improvement of individual's risk by affecting biological/physiological risk factors (obesity, high blood pressure, abnormalities in lipid and carbohydrate metabolism, etc.) (5).

The CINDI network in 2007 comprises 29 participating countries (28 Member States of the WHO European Region and Canada) and three candidate countries, The Network is coordinated by the WHO Regional Office for Europe in Copenhagen, Denmark (1).

Case study – the CINDI programme in Slovenia and the role of CINDI Slovenia Preventive Unit

Short history of CINDI programme in Slovenia

The introductory period

A group of general practitioners from the city of Ljubljana introduced this programme for the first time at the end of the 1980s, but Slovenia as a state officially joined CINDI programme at the beginning of the 1990s, when its activities were limited to Ljubljana demonstrational area (7).

The period 1990-1994 represented the introductory period of CINDI programme implementation in Slovenia. From late autumn to early spring 1990/91 the initial cross-

sectional CINDI survey (CINDI Risk Factor/Process Evaluation Survey) (8) according to the international CINDI programme protocol (6) was carried out.

The period of institutionalization

In 1994, the CINDI Slovenia Preventive Unit was established as an autonomous unit within the Ljubljana Community Health Centre (9). Besides that it carried out the survey on cardiovascular risk factors, and consequently started to spread the significance of the worrying prevalence rates, with the main aim to increase the level of consciousness among physicians and general population, as well as in politicians, no specific major interventions were performed during this period. The need for immediate action in the field of reducing the overall cardiovascular risk, especially through lowering the imminent burden of arterial hypertension and increased blood lipids levels, became more obvious, when the second CINDI survey, which was carried out in the period of late autumn/early spring 1996/97, registered an increase in the prevalence of major cardiovascular risk factors from the earlier figures (10).

This period was characterized by development of the concept of prevention of NCD and their risk factors at primary health care level.

Today, the CINDI Slovenia Preventive Unit is still the part of Ljubljana Community Health Centre but since many years ago it outgrew the local dimension, the new administrative/institutional organisation is considered.

The period of implementation and spreading of the programme

In 1997, the decision for development some more systematic interventional health promotional and prevention activities through health promotion and health education in group workshops as well as by individual counselling were adopted and put into action. With the initiative of CINDI Slovenia Preventive Unit, many activities had started aiming at influencing political level and decision makers.

The 1996/97-2002/03 period was characterized by some great achievements in the field of healthy lifestyle promotion led by the CINDI programme activities in Slovenia:

- after the second CINDI survey, health promotion and cardiovascular disease prevention philosophy started to spread countrywide;
- in the period 2001-2004 the Ministry of Health of the Republic of Slovenia (MoH) put considerable efforts to overcome the rising burden of chronic NCD among the Slovene population with the following strategic aims:
 - to establish comprehensive intersectorial political cooperation,
 - to develop effective national strategies and action plans, and
 - to carry out projects, tackling NCD.

This process resulted in establishment of the Nationwide Programme on Primary Prevention of Cardiovascular Diseases, launched under the auspices of the MoH in autumn 2001, while it was legally introduced and started with the activities at the beginning of 2002 (11, 12).

The CINDI Slovenia Preventive Unit and its role in the programme

Within the process described above, the CINDI Slovenia Preventive Unit played a proactive role and served as an indispensable partner to the MoH and other expert groups like scientific professional societies, as well as institutions, involved in these complex activities.

Through this cooperation, the concepts of integration, partnership and capacity building have been continuously applied at the national level in political and strategic terms. This approach has enabled development of relatively favourable systemic environment for the CINDI Slovenia Preventive Unit activities. Actions to create supportive environments, to build capacities within the national health care system, and other public systems and environments (educational system, work place, local community) have created conditions where CINDI Slovenia Preventive Unit as a public health institution made a meaningful progress.

Results of the CINDI Surveys have been taken in consideration when allocating national resources to those Slovene regions, in which health indicators (e.g. mortality, NCD prevalence, NCD risk factors prevalence) were the most unfavourable (epidemiologically defined needs of the populations). Interdisciplinary health promotion programme in rural areas (i.e. »Healthy Living« project), financed by the MoH is being implemented in many Slovene regions. Pilot project MURA, dealing with health determinants, has been started in Pomurje (north-eastern part of Slovenia), the most endangered region in terms of social, economic, environmental and health deprivation of the population. Financing of additional health promotion staff at the National and Regional Public Health Institutes has been assured. Funding of the National programme on primary prevention of cardiovascular and other chronic diseases, including assessment of defined adult population for cardiovascular risk (health risk assessment procedure), as well as health education intervention for individuals at higher risk for the development of NCD has been arranged through the National Health Insurance Institute. Again, in this process CINDI Slovenia Preventive Unit played a proactive role.

Implementation of the comprehensive National programme on primary prevention of cardiovascular diseases in Slovenia

As the core and the most comprehensive approach to the reduction of the NCD the systematic programme for the prevention of cardiovascular diseases (CVD) in Slovenia was introduced at the national level in 2001. Programme, as designed, offers probably the most appropriate method for detecting individuals at high risk for the occurrence of a CVD and other chronic diseases.

Preventive health care of the adult population was for the first time tackled and defined by the »Recommendations of the MoH of the Republic of Slovenia for the implementation of preventive health care at the primary level«. They issued in 1998. They were based on the already developed programme in CINDI demonstration region of Ljubljana. Because the recommendations were probably too complex, their feasibility was questioned from the very beginning. That is also the reason why the MoH in 2001 issued revised version of recommendations, which were much more simple, straightforward and defined the preventive programme as the comprehensive approach to adult population in a specific age period.

Within the framework of primary prevention, two fundamental approaches were used (and still are), i.e., the population approach and the approach to an individual or group of persons that are at high risk for CVD. The two strategies complement one another. Social and environmental changes, different population oriented health education activities, appropriate environmental measures in the broadest sense and the legislation for restricting unhealthy behaviour or enhancing the healthier one have an important role in supporting

people to change their risky behaviour and the degree of expression and quantitative levels of risk factors that physicians may face in individuals in a clinical environment.

Systematically prepared national programme on CVD primary prevention is oriented both, towards health promotion and lowering of risky behaviour at the level of the whole population (population approach) as well as to active identification, stratification and selective treatment of those individuals at high risk for development of manifest disease (individual high-risk approach). In general, this programme consists of population screening and identification of individuals at high CV risk, followed by health education intervention and other therapeutic measures, if necessary.

Population approach

The important basic step is to continuously monitor and evaluate the prevalence of NCD and their risk factors among the population and its specific subgroups, as well as their influence on health in general. Public media assistance is appreciated and selected with respect to the target public and the type of message to be conveyed to the people.

The applied model includes the application of various methods for monitoring, education, organizational partnership, the provision of health care services and the appropriate legislation/policies and programmes in various social circumstances, such as at the working place, schools, health care institutions or local communities.

Individual approach to high risk individuals

In 2001, the MoH issued an amendment to the previously mentioned recommendations, which represents the basis for the preparation of the National programme on primary CVD prevention. As far as this programme is in question, the recommendations seek to cover all adults in the age group of 35-65 for males and the 45-70 age group for the female part of the population (by such a definition, it was calculated that the gender balance would be achieved, these groups cover 50.96% males and 49.04% females). The main aim of the programme is to screen the whole population in these age groups within five years period. The intervention part of the programme is intended to cover also all other adults with extremely expressed any one of the major CVD risk factors, like obesity, smoking, risky drinking of alcohol, diabetes and high blood pressure.

In terms of organisation, the individual approach to identify persons at high-risk for CVD and other NCD is based on the implementation of four relatively simple, clear and practical steps (Figure 1):

- selection of priority visits/examinations on the basis of a screening questionnaire;
- invitation of individuals for interview/examination (with prior obtainment of lab values on blood glucose and total cholesterol levels);
- execution of a preventive visit (interview/examination) and assessment of absolute global cardiovascular risk;
- intervention – additional diagnostics needed and/or measures for changing the risk profile, based on the healthy lifestyle advice/education intervention and, if necessary, also pharmacological treatment.

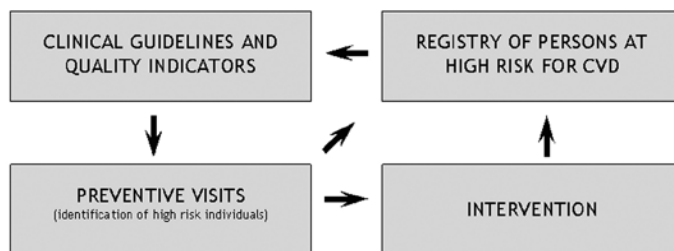


Figure 1. Schematic presentation of the elements and organization of the programmes of primary CVD prevention in Slovenia.

In Slovenia, we have adopted and even »institutionalized« the concept of the so-called global, absolute cardiovascular risk. Every GP in Slovenia performs the preventive interview/examination to an individual person, in order to predict its absolute risk for the occurrence of a cardiovascular event within the next 10 years. Afterwards she/he uses the specially designed risk assessment evaluation form which takes into account the presence and quantitative values of few of the most important, major independent CVD risk factors (age, sex, smoking, systolic blood pressure and total cholesterol). The basis for global individual risk assessment in this case is CVD risk equation derived from the well known Framingham study.

During the first year of full implementation of the programme, a total of 84,434 visits were performed (50.7% were men), representing around 56.51% of exams as were envisaged following the starting conditions of the programme (i.e., to check 18% of the specific age groups of the adult population annually). In 2003, 114.599 preventive visits/exams were performed, while in 2004 further 111,673 visits were registered. All these give a figure of total 310,706 visits performed in first 3 years of the programme (around 45% of the whole population defined for health risk assessment).

After the global risk is calculated, pharmacological treatment is prescribed, where absolutely indicated, and health education for all individuals at high risk is carried out. Healthy lifestyle advice/education is performed using group or individual treatments, according to the most relevant risk factors identified. Group treatment consists of five workshops (Table 1) which are attended by at least 10-15 people.

Table 1. Healthy lifestyle advice/education - group treatment approach in the programme of primary prevention in Slovenia.

Workshop	Module	Duration
1. Health Promotion and Risk Factors	a. Promotion of Health b. Physical fitness c. Risk Factors	(short: 3 times 2 hours)
2. Healthy Weight Loss		(12 weeks)
3. Healthy Nutrition		(5 weeks)
4. Physical Fitness		(5 weeks)
5. Yes, I quit smoking		(7weeks)

Within the framework of individual approach, all the active primary care physicians, who are mainly specialists in general/family medicine, carry out individual counselling to people who confirmatively expressed their wish to quit smoking and for those who wish to give up risky consumption of alcoholic beverages. Individual counselling encompasses five sessions, each lasting about 15 minutes.

Health education centres establishment, networking and capacity building

Healthy lifestyle advice/education activities are carried out by the Health Education Centres which have been set up in most community health centres around the country, and currently the network of 60 of them operating all over Slovenia. The MoH appointed these centres in 2002.

The personnel performing healthy lifestyle advice/education programmes include physicians, registered/graduated medical nurses and other health care professionals, health education or sport teachers, physiotherapists and psychologists. They have all attended special training to qualify for this work at »School for health promotion and the prevention of chronic non-communicable diseases« and they are constantly improving their knowledge in advanced training seminars, all organized by the CINDI Slovenia Preventive Unit. The »education of educators« principle has been applied. General practitioners are continuously educated by their professional colleagues and nurses are educated by other nurses.

Administratively, the leadership, coordination of implementation of the National programme on prevention of CVD in whole, as well as coordination of implementation and quality assurance of health education programme, in health education centres, is under the responsibility of the CINDI Slovenia Preventive Unit. Under its organisational umbrella the experts from different medical fields are involved within the programme (cardiology, diabetology, dietetics, healthy physical activity, etc.). So far, the »CINDI schools« have trained over 800 health professionals and teachers in the health promotion field who are spreading their knowledge among their colleagues and lay public. With their participation, also local health promotion groups in different community settings in all Slovenian regions were set up.

Over 85,000 participants received advice/education for healthier lifestyle within these workshops and by the individual counselling in the period of 2002-2005.

Legislation, policies and actions

CINDI Slovenia Preventive Unit, together with its partners, takes active role in preparation of public health legislation and different kinds of strategies and policies in the country.

Legislation

From 1996, Slovenia adopted and enacted two very important laws in the field of public health, which intention was to tackle, and to reduce selected unhealthy behaviour in Slovene population:

- The Act on Restriction of the Use of Tobacco Products (1996), which has been recently amended (summer 2007) and is now much stricter than its predecessor, since it prohibits smoking in all covered public places, and
- The Act on Restriction of Alcohol Consumption (2003).

Strategies and policies

In the field of public health strategies and policies, some very important documents have already been adopted in Slovenia. Here again, the CINDI Slovenia Preventive Unit experts and its partners have played the leading role in the preparation and creation of the strategies to achieve the planned strategic goals in the area of chronic NCD. These documents are:

- The Resolution on National Programme of Food and Nutrition Policy from 2005–2010, which was adopted in the Parliament in 2005 (13);
- The Strategy of the Government of the Republic of Slovenia on the field of Health Enhancing Physical Activity 2007-2012, which was adopted by the Slovene government in March 2007 (14);
- The national strategy for tackling inequalities in health on the basis of experiences of project MURA (collaboration of MoH, Flemish government and WHO Centre for Health and development, and local experts) - Health promotion strategy and action plan for tackling health inequalities in the Pomurje region (15);
- the National healthy nutrition guidelines for educational institutions (starting from age 1 year), which was adopted in the Parliament in 2005 (collaboration of MoH and Ministry of education and sport) (16).

All these documents are directed in ensuring health supporting environment in different types of settings (e.g. healthy schools and healthy kindergartens), and for vulnerable groups of Slovene population, e.g. pregnant women, children, socially and economically deprived citizens, citizens at risk for NCD, and elderly people.

For ensuring health supporting environment for people at workplace, another type of activities with active CINDI Slovenia Preventive Unit cooperation takes place at the National Institute for Occupational Medicine, Traffic and Sports. The project »Fit for work« was established to help in creation of healthier environments and healthier life style of workers in some specific occupational settings (17).

Actions to influence health determinants and tackle inequalities in health

In Slovenia there exist some great interregional differences in many different respects. There exists a very clear trend from southwest to northeast of Slovenia, with the lowest social economic and the worst health indicators in the most north-eastern part of Slovenia, Pomurje Region, where the life expectancy is for about 3 years for men, and for about 2 years for women shorter than in the western part of Slovenia. Additionally, the highest specific mortality for CVD has been registered in this region. MoH has launched an intersectorial and interdisciplinary pilot project MURA, financially supported by the Government of the Republic of Slovenia, to influence health determinants in the broadest sense, in this region.

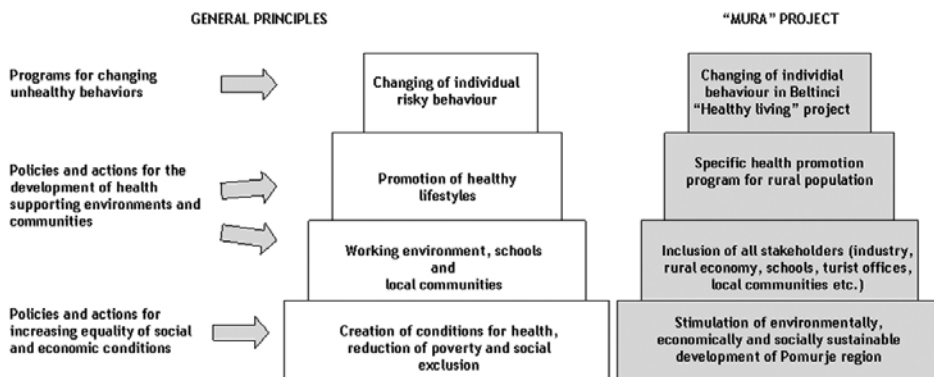


Figure 2. Basic elements for the continuous health promotion among the population - MURA project in Slovenia.

The core philosophy of this project is to stimulate environmentally, economically and socially sustainable development, combined with health promotion programmes in different settings, leading to better health of the population and individuals (Figure 2). Experts from the Regional Public Health Institute Murska Sobota, together with the MoH personnel, played the leading role in the project development, coordination and implementation. Specific health promotion programmes for rural population, who is at the greatest risk for unhealthy lifestyle and for manifest NCD, was developed and broadly implemented in this region. CINDI Slovenia Preventive Unit is actively involved in this project (development of different intersectorial strategies, development and implementation of specific health promotion interventions, the evaluation process).

Project is characterized by strong networking of the regional health promotion coordinators, NGOs and interdisciplinary experts, working together in the health promotion in thirty smaller local communities (health promotion project »Healthy Living«). It is probably of special interest to mention also that a network of small and medium size tourist providers has been created to work together with the Regional Public Health Institute to develop a new, healthy tourist offer. Intersectorial collaboration has resulted also in reorientation of agricultural practices towards higher proportion of ecological growing as well as higher proportion of fruit and vegetables growing. Two new high-level educational programmes in the field of tourism and agriculture had been developed in Pomurje Region during the course of the project. Results concerning short-term changes in life style are very promising. This issue is discussed later on. At the same time, the »Healthy living« project has been disseminated from Pomurje Region to all regions in Slovenia.

Collection and evaluation of data as a support to evidence based policy development

Data collection and evaluation, as well as analysis of such information constitute the basic element of the quality management process of the health promotion and NCD prevention programmes in Slovenia. There exist three key orientations of collecting data, being at the three different levels with regards to the depth of the problem analysis.

1. CINDI Health Monitor Survey (18).

This surveys offer the most rough but comprehensive overview on the problems tightly associated with NCDs. This kind of survey was performed in Slovenia for the first time in 2001, and for the second time in 2004. With its national and regional levels, CHMS represent very strong support to development of evidence based policy on both levels, what is extremely important in the process of diminishing interregional differences. At the same time, it is very powerful tool for evaluation of the effectiveness of health promotion programmes. Both databases include data on about 9000 participants' health behaviour. According to the results of the comparison of the data for 2001-2004 in Pomurje region (19), we can conclude, that, in short-term, the activities were extremely successful. For example, the prevalence of use of lard as the kind of fat for food preparation dropped from 30.3% in 2001 to 20.8% in 2004, while the prevalence of every-day consumption of soft drinks dropped from 42.9% to 29.1%. Both differences were statistically highly significant.

2. CINDI Risk Factors and Process Evaluation Survey (3).

This type of surveys provide the basic data on the WHO CINDI programme progress in Slovenia.

So far, there were three surveys performed at the demonstrational level (Ljubljana demonstrational region) – in 1990/1991, 1996/1997, and 2002/2003.

The results showed that, since organized activities, what happened after the 1996/97 survey, CINDI Slovenia Preventive Unit register quite good results of joint national efforts to diminish the prevalence of physiological risk factors. For example, prevalence of smoking decreased by about 18%, from 30.4 to 25.1%, the percentage of people with BMI over 25.0 decreased by nearly 10%, from 61.6% to 56.4%, hypertension prevalence decreased from 43.4% to 39.6%, and the prevalence of people with high LDL-cholesterol from 78.7% to 70.8%.

3. Registry of Individuals at High Risk for CVD (20).

Data gathered during performed prevention visits (interviews/exams) and individual intervention activities are entered into the specially prepared individual computer forms/frames, installed to the computer programmes running in the consulting rooms (offices, surgeries) of physicians working as family physicians/GPs at the primary health care level. The software and a central data collection system have been created within the framework of the national »Registry of Individuals at High Risk for CVD«. According to The Act on Healthcare Data-bases, the responsible data-holder of this database is the University Medical Centre Ljubljana, with its Department for Vascular Medicine, while operative activities of data collection tasks are carried out according to the special contract with the CINDI Slovenia Preventive Unit.

4. Other data sources.

There exist also several other very important data sources.

Among ad-hoc data sources, the Beltinci process evaluation data-base should be mentioned in the first place (21). The data from this data-source also show that the intervention process in Pomurje region is very successful. The study was performed on 158 adults with monitoring/observation of health indicators on physiological risk factors before and after the intervention programme was carried out. After only one year of intervention activities, the average values of systolic blood pressure decreased by 4.7%, diastolic blood pressure by 4.1%, and blood cholesterol by 4.9%. All

differences were statistically highly significant. As there were no significant differences in participants being medicated with antihypertensive ($p=0.581$) or cholesterol lowering drugs ($p=0.267$), the decrease could be assigned almost exclusively to the changes in health behaviours (prevalence of use of lard for food preparation: prior the intervention 42.4%, after one year 27.2%).

Two other databases, which could also indirectly serve in the evaluation of the progress of the process, and are of national importance, should be mentioned as well. The Database of Deaths and Death Causes (data-holder: Institute of Public Health of the Republic of Slovenia) (22), and Cancer Registry (data-holder: Cancer Registry at Institute of Oncology of Republic of Slovenia) (23).

Providing scientific information/evidence for evidence based public health activities

The first scientific paper was published in 1993 (8). Unfortunately, this activity was not the priority for several years, since other activities, like spreading the programme countrywide, were felt as of much greater importance.

In the period after 2001, when the partnership with experts mainly from University Medical Centre Ljubljana, and Department of Public Health of Ljubljana University Faculty of Medicine was established, the period of producing strong scientific evidence was started. Since then, several scientific papers were published in international and domestic scientific and other periodicals (19, 21, 24-38).

Partnership in CINDI programme

During the 1999-2004 period, CINDI movement in Slovenia succeeded to join numerous scientific, professional and performance forces in Slovenia and internationally, working within various medical professional societies and health care institution, non-medical institutions and professionals, governmental structures and non-governmental organizations in carrying out their specific activities inside comprehensive programme presented.

Important partnership was developed with the entire primary health care society, with health professionals working in primary health care and public health professionals working in regional public health institutes as well as with some media.

The development of partnership cooperation and strong coalitions for the common welfare of the society is of vital importance for ensuring success of efforts to deal with such a great general societal problem as CVD are. Such a mission has been recognized in our country and a Slovene Forum for the Prevention of Cardiovascular Diseases was established in 2000. This body is operating under the auspices of the Slovenian Society of Cardiology, and within its framework numerous institutions, organizations and societies cooperate, including CINDI Slovenia Preventive Unit.

Additionally, in 2001 within CINDI movement, a strong partnership between University Medical Centre Ljubljana, Department of Vascular Medicine, Preventive Cardiology Unit, Department of Public Health of Ljubljana University Faculty of Medicine, and CINDI Slovenia Preventive Unit was established, what started to create a very strong public health scientific basis in the field of CVD prevention.

CINDI Slovenia Preventive Unit itself has also very close collaboration with CINDI WHO, CINDI Finland, CINDI Canada, UKK Institute Tampere Finland, WHO centre for Health and Development in Venice, National Public Health Institute Sweden, Karolinska

Institute Sweden, and European HEPA Network.

In this place, we need emphasize again, that without a strong and dedicated collaboration of several important partners of the CINDI Slovenia Preventive Unit, the CINDI movement in Slovenia would not be as efficient as it is. In fact, these partners represent at the same time the »outer base« of the CINDI Slovenia Preventive Unit (which is the »inner base«), and stakeholders for the CINDI programme in Slovenia being a sustainable process and not just an attempt.

Funding by the Health insurance Institute of the Republic of Slovenia

The population-oriented programmes for the CVD risk reduction include many of the providers of health care services and their working environment. The implementation of the programme that is carried out in the entire territory of the Republic of Slovenia involves all GP/family physicians practicing in primary health care system who are responsible for their assigned population. As it was already mentioned the family medicine physicians/ GP's (contractors with the Health Insurance Institute of Slovenia) are obliged to perform preventive visits/exams of up to 18% of their total assigned population of a defined age group annually. Health Insurance Institute of Slovenia is funding comprehensive National programme on primary prevention of CVD in Slovenia, including screening, health education interventions, collection and evaluation of data including registry of persons at risk for CVD, coordination of the implementation of the programme as well as whole functioning of the CINDI Slovenia Preventive Unit.

Exercise

Task 1:

Carefully read the following document:

World Health Organization, Regional Office for Europe. Protocol and guidelines: Countrywide Integrated NCD Intervention (CINDI) Programme (Revision of 1994). Copenhagen: WHO Regional Office for Europe, 1996. Available from: URL: http://whqlibdoc.who.int/hq/1994/EUR_ICP_CIND_94.02_PB04.pdf.

Task 2:

Discuss the WHO CINDI programme characteristics with other students.

Task 3:

Visit the WHO CINDI Web Site:

World Health Organization, Regional Office for Europe. Countrywide Integrated Noncommunicable Diseases Intervention (CINDI) programme. Home page. Available from: URL: <http://www.euro.who.int/CINDI>.

On the Publication Site find the last issue of CINDI Highlights (Available from: URL: http://www.euro.who.int/CINDI/publications/20020322_3) and read it.

Task 4:

Discuss the WHO CINDI programme development with other students.

Task 5:

Carefully read the following document:

World Health Organization, Regional Office for Europe. A strategy to prevent chronic disease in Europe. A focus on public health action. The CINDI vision. Copenhagen: WHO, Regional Office for Europe; 2004. Available from: URL: <http://www.euro.who.int/document/E83057.pdf> (Accessed: August 10, 2007).

Task 6:

Discuss the WHO CINDI programme process in the light of the vision for the future with other students.

Task 7:

Critically assess the importance of intervention public health programmes in controlling NCD.

NOTE: For the process being shorter different groups of students could do different tasks and then present their findings to each other.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Implementation of the New Public Health Principles: Case Study of Montenegro
Module: 1.9.5	ECTS: 0.25
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Key words	public health, Montenegro, health indicators, health care system, health promotion, healthy life style, health policy
Learning objectives	<ul style="list-style-type: none">• Presenting situation in the field of public health in Montenegro.• Description of health policy development in the future• Basic problems in population health status related to life styles

<p>Abstract</p>	<p>According to the survey in 2003, 617,749 of inhabitants live in the Republic of Montenegro, and 62% of them live in urban area. Since 1950, changes have been marked in rates of demographic indicators especially significant for the presentation of getting population older, on the territory of Montenegro. The tendency of the rate decrease of born alive, of vital index and increase of expected life's length are evident, as well as the average age of the population and the index of getting older of the population.</p> <p>Development of the new public health is priority in health policy in Montenegro and Institute of Public Health is the base for the implementation of principles in new public health as an ethical issue which is related to health expenditures, priorities and social philosophy.</p> <p>Development of the public health policy in Montenegro has the next priorities:</p> <ul style="list-style-type: none"> • primary health care reform process and developing the new doctor's model; • health promotion and disease prevention; • modification of the life style: Increasing physical activity, good eating habits and safe food, reducing tobacco smoking, harmful alcohol consumption, drug use prevention; • improving social security and reduction poverty; • political power, influence and participation - democratic rights for all groups in society, participation in the political decision-making process; • creating secure and good conditions for health care of children and young people; • creating secure and good conditions for health care of women; • healthy workplaces and an improved level of occupational health; • a healthy environment and the provision of safe products; • reducing the spread of infectious diseases and promoting safe sexual behaviour; • reducing injures and violence; • improving oral health; • improving mental health • collecting and processing of data about health status of population.
<p>Teaching methods</p>	<p>Methods of interactive education.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection; • target audience: master degree students.
<p>Assessment of students</p>	<p>Assessment is based on oral exam</p>

IMPLEMENTATION OF THE NEW PUBLIC HEALTH PRINCIPLES: THE CASE OF MONTENEGRO

Agima Ljaljevic

Theoretical background

For accomplishing this module properly, it is necessary first to recapitulate what the main characteristics of the new public health are (1-4), especially the health promotion characteristics (5).

New public health

The main characteristics of the new public health are:

- health promotion with a key objective to improve health and social welfare;
- primary and secondary prevention with a key objective to reduce specific determinants of diseases and risk factors;
- tertiary prevention with a key objective to set targets based on the size of the problem, the feasibility of successful intervention in a cost-effective way.

Health promotion

Health promotion is the process of enabling people to exert control over the determinants of health and thereby improve their health and practical implementation of new public health. Main focus in health promotion is related to the determinants of health, especially to the non-health factors associated with life styles. Health promotion characteristics are:

- responsibility for all;
- focus on the global population;
- emphasis of the prevention, especially the primary prevention;
- aimed to the most important socio-economic determinants and risk factors;
- multidisplinary;
- partnership with population;
- creating the mechanisms for rapid response on great health threats.

Health promotion is conceptually based on the Ottawa Charter (6) which consists of 5 key strategies:

- building healthy public policy,
- creating supportive environments,
- strengthening community action,
- developing personal skills,
- reorienting health services

This approach has so far showed extremely good results, one of them being North Karelia, Finland project (7).

Case study – Implementation of the New Public Health Principles: the Case of Montenegro

The Government of the Republic of Montenegro together with public health experts from this country, and with the help of international public health experts, is implementing in the present time the new public health principles in the country (8-14), since the demographic trends and trends of health indicators were worrying (15-18).

General country profile

The Republic of Montenegro is located in the south of the Balkan Peninsula and has the area of 13.812 km². There is the contact to the Adriatic-Mediterranean geographic area on one side, and on the other side it is connected over the Pannonian basin to the Middle Europe and the world.

Although Montenegro belongs to the Mediterranean group of countries, it could be described as a mountainous country, since mountains over 1000m² of height above sea-level take even 60.5% of its territory.

The Montenegro relief has its own characteristics, and three zones can be easily noticed (Montenegro has no administrative division into regions), that is to say:

- the south part or the Montenegro coast;
- the middle part, and
- the north part or the Mountain area.

Demographic characteristics of Montenegro

According to the survey in 2003, 617.749 of inhabitants live in the Republic of Montenegro, and 62% of them live in urban area. The data from the previous survey in 1991 showed that 591.269 of inhabitants lived in the Republic of Montenegro in 1991, that is to say, that the population growth by the rate of 104,5 was registered in this 10-year period. The most significant index of population growth compared to the previous period in 1991 was registered in municipalities of Budva (135.8), Herceg-Novi (122.2), Tivat (120.9), Podgorica (115.9), Bar (115.8) while municipalities in the north of the Republic of Montenegro register mostly a negative growth index.

More than 27% of the whole population of the Republic of Montenegro lives in Podgorica that is the cultural and administrative centre of the country.

According to the official data from the survey in 2003, speaking of total number of inhabitants who live in Montenegro, the most numerous are the Montenegrins, who participate in general population structure with 41%, then the Serbs with 30%, then the Moslems with 4%, the Bosnians with 9%, the Albanians with 5%, the Croats with 1%, and the rest with 1.25%. According to these data, the Romas are represented with 0.43% (the researches of the Roma centre for strategy, development and democracy from Podgorica, state that around 3% of people of the Romany ethnic community live in Montenegro).

According to the data of the Commissariat of displaced people, 31,288 of displaced people and refugees have lived in Montenegro since September 2003, which is 4, 65% of the total number of inhabitants of the Republic (Table 1).

Table 1. Basic indicators of the natural moving of population of Montenegro in 1991, 2001 and 2002

INDICATOR	YEAR					
	1991		2001		2002	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
Natality	9606	15.6	8829	13.3	8499	12.8
Mortality	3970	6.4	5431	8.2	5513	8.3
Infant mortality	108	11.2	129	14.6	92	10.8
Natural growth	5636	9.1	3398	5.1	2986	4.5
Vital index	9606/3970	241.7	8829/5431	162.6	8499/2986	154.2

Since 1950, changes have been marked in rates of demographic indicators, especially significant for the presentation of getting population older, on the territory of Montenegro. The tendency of the rate decrease of born alive, of vital index and increase of expected life's length are evident, as well as the average age of the population and the index of getting older of the population.

Organisation of health care system in Montenegro

Health Care System in Montenegro is organised as follows:

- Parliament;
- Government;
- Ministry of Health;
- Health Insurance Fund;
- Medical Chamber, Dentistry Chamber, Pharmaceutical Chamber;
- Medical Association:
 - Primary level of health care: health centres, health stations, private health organizations and pharmacies which are in the process of reform (new model of chosen doctor).
 - Secondary level of health care: general hospitals, special hospital
 - Tertiary level of health care: Clinical Centre, Institute of Public Health and other institutes.

Development of the new Public Health is priority in health policy in Montenegro and Institute of Public Health is the base for the implementation of principals in new public health as an ethical issue which is related to health expenditures, priorities and social philosophy.

Institute of Public Health

Institute of Public Health of the Republic of Montenegro is the public health institution of the highest rank in the country. It is organized in several units:

- Centre for Health Promotion;
- Centre for Development of Health System;
- Centre for Disease Control and Prevention;
- Centre for Health Ecology;
- Centre for Microbiology, and
- common services, which consist of Centre for Continuous Education and informative communication technology and administration.

It is concerned with monitoring, researching, and perusing of:

- health status and culture of population;
- quality of the environment;
- impact of ecological factors on health status;
- causes, spreading and prevention of communicable diseases;
- risk factors of chronic non-communicable diseases and other diseases of high socio-medical significance, as well as
- health service development, and
- proposes and lays out appropriate measures in order to prevent and improve health status of population.

It also performs preventive, diagnostic and other health care activities and professional activities in the field of preventive medicine.

Institute of Public Health presents the teaching base of the Faculty of Medicine and performs scientific-research, educative and teaching activity in the fields it deals with. In the process of reorientation of public health of The republic of Montenegro to the new public health, Institute of Public Health of the Republic of Montenegro has a special position. It endeavours to strengthen the new public health methods in the country.

Development of the public health policy in Montenegro

Development of the public health policy in Montenegro has the next priorities:

- primary health care reform process and developing the model of “new doctor”;
- health promotion and disease prevention;
- modification of the life style: Increasing physical activity, good eating habits and safe food, reducing tobacco smoking, harmful alcohol consumption, drug use prevention;
- improving social security and reduction poverty;
- political power, influence and participation - democratic rights for all groups in society, participation in the political decision-making process;
- creating secure and good conditions for health care of children and young people;
- creating secure and good conditions for health care of women;
- healthy workplaces and an improved level of occupational health;
- a healthy environment and the provision of safe products,
- reducing the spread of infectious diseases and promoting safe sexual behaviour;
- reducing injures and violence;
- improving oral health;
- improving mental health;
- collecting and processing of data about health status of population

The public health areas implemented in Montenegro

There exist several different priority public health areas on which the development was or should be intensified

Smoking prevention

The studies that would examine the range of smoking in all categories of population in Montenegro have not been done so far. When we speak about the surrounding countries, the fact is that having the similar attitudes and civilisation level, the prevalence of smoking in adult male population is about 50%, while in adult about female population is about 30%. Also, it is estimated that currently between 200,000 and 250,000 of inhabitants are smoking in Montenegro (according to the judgement of the experts from non-governmental sector - The Report of the Montenegrin Association for the Struggle Against Cancer).

The study according to the unique methodology of the World Health Organization and the Canadian Association of Public Health was done during 2003 in the territory of the Republic of Montenegro, as well as in about 120 other countries of the world.

In terms of the received results from more than 2000 respondents (children of elementary schools) between 12 and 15 years, and slightly above 2000 respondents in high schools between 15 and 19 years, the problem of smoking is significantly present in this part of the population. Every third student of elementary school and more than half of students of high schools experimented with smoking. There are around 4 % of constant smokers among students of elementary schools, and around 20 % among students of high schools,

what corresponds to the results received from the research done on the same population groups in Montenegro, in 1999. The study done on children population between 12 and 18 years in 1999, showed the same number of smokers between girls and boys. There are interesting results of the study on tobacco consumption among the young (GYTS - Global Youth Tobacco Survey, performed in 2003 on population of students from elementary and high schools, that there were more constant smokers among boys in elementary schools than girls, and on the other side, more constant smokers among girls in high schools. These data indicate that girls start smoking when they are older, but they use cigarettes more often than boys do, when they are in high school.

Beside that, study results indicate that almost all children are constantly exposed to the influence of cigarette smoke, because of their parents' smoking, friends' smoking, or smoking of other people who visit their homes and families. These data show that children in Montenegro are under serious risk of getting diseases related to smoking.

Noxious effects of smoking are rarely discussed in schools, and there is no link between educational programmes and health-education curricula. More than half of the respondents did not know that smoking has bad influence on their health. Consecutively, it is necessary to create educational activities that are to be incorporated into educational programmes with the aim of promotion of non-smoking and prevention of the diseases caused by smoking because of the fact that the schools are places of children's biggest gathering.

At the time, when this study was done, the Law for the Restriction of tobacco products' usage was not adopted, and access to cigarettes was simple to all users regardless to their age. Children could buy freely cigarettes before the Law was adopted. Beside that, cigarettes' prices are very low; cigarettes' purchase is very easy especially if it is known that between 70-90% of cigarettes' distribution is done on the street by illegal trade's mechanisms. Cigarettes are easy to reach for children in almost each house as a result of smoking of bigger number of their family members.

Before the Law was adopted, the ban of tobacco products' advertising had not been regulated and it is completely understandable that the respondents stated that they had been "bombed" by cigarettes' advertisements everywhere.

National Action plan for prevention of drugs use

National Action plan for prevention of drugs use, treating prevention at national level, was adopted by Government.

The Centre for prevention of addiction diseases was established in Podgorica, which organized forming of units for drug prevention in the schools.

Poverty Reduction Strategy Paper for Montenegro

In November 2003, the Government of Montenegro adopted Poverty Reduction Strategy Paper for Montenegro. The main strengths of Poverty Reduction Strategy Paper in Montenegro include:

- a broad participatory process;
- a comprehensive diagnosis of poverty, which explores poverty in its many dimensions;
- a commitment to a sound macroeconomic framework and implementation of market-oriented reforms; and
- emphasize that the most critical poverty is in rural areas (northern Montenegro), and

among excluded groups (Roma, IDPs, refugees, disabled). In terms of poverty profile, Poverty Reduction Strategy Paper in Montenegro has shown that:

- 12.2% of the population of Montenegro is absolutely poor, and 34 % is classified as economically vulnerable (the absolute poverty line is defined at €116.2 and the line of economically vulnerable population is set 50% above the poverty line, €173.4);
- the poverty rate is highest with Roma, Ashkalia and Egyptians (52.3%), than Refugees and Internally Displayed Persons (40%), and smallest with local population (9.6%);
- 45% of the poor live in northern part of Montenegro; around 35% live in the central region, and 19% in southern part of the country;
- poverty gap index is 3.6%. The consumption of the poor person is about 29.9% below the poverty line. With a poverty line of 116.2 € per month, this implies an income gap of 37.4 million €, or 2.7% of GDP;
- in terms of the income sources, the majority of households acquire income through employment (75.7%), in the second place are pensions (45.5%), and third are private transfers received from relatives in-country and abroad (19.3%).

In order to avoid these factors it is especially important to address or strengthen the following areas during PRSP implementation, and its subsequent updates:

- continuous efforts to strengthen, participatory mechanisms and ownership, focusing on capacity for implementation and building up the proposed institutional framework for monitoring and evaluation;
- clear prioritisation of the most pressing poverty reduction needs by sequencing reforms consistent with medium-term fiscal consolidation and with realistic assumptions on foreign assistance; develop alternative financing scenarios that would be pursued in the event that external financing projections do not materialize; and
- strengthen the proposed set of indicators by adding regional indicators and better alignment of Poverty Reduction Strategy Paper, European Partnership, and Millennium Development Goals (19).

The basic aim of the PRSP is protection and improvement of population health status and reduction of inequality in health through the process of improvement the health status in vulnerable groups. PRSP in the field of health is aimed to regulation of the health care system in lines with real possibilities, providing rational and efficient functioning of the health care system. This could be obtained through health promotion and diseases prevention as a base of health care system.

Maternal and Child health, Reproductive health

Reproductive health means compatibility and normal functioning of physical, mental and social processes connected to reproductive system and its functions. Mainly it regards to normal sexual development, normal fulfilling of reproductive function to healthy and desired way and prevention of diseases and injuries related to sexuality and reproduction, and it means sexual fulfilment, as well as development of healthy, equality and reasonable relationships especially regarding reproductive health of adolescents.

Education of young people in order to create proper attitudes on family planning and taking responsibilities for sexual behaviour, as well as knowledge about prevention and

improving of reproductive health, and especially knowledge about possible consequences of unreasonable sexual behaviour, unwanted pregnancy and sexually transmitted infections.

- Global Monitoring 2004: Child and Adolescent Health;
- action plan for children;
- programme for immunization.

Decade of Roma Inclusion

National Action plan for Roma inclusion is very comprehensive plan aimed to improvement of life conditions in Roma population.

Many diseases occurring in Roma population, especially among women are caused by unacceptable behaviour and could be prevented.

Health protection and improvement and disease prevention in Roma population - in order to protect and improve health status in Roma, as vulnerable population, it is necessary to design the National programme for this population. Health sector prepared action plan with following goals:

- better inclusion of the Roma population in healthcare system – inclusion of possible suggestions of the National council of Roma population as well as the young Roma population groups in the process of preparation of new law regulation particularly for the Health insurance fund costs.
- improvement of health protection for the whole Roma population, particularly vulnerable groups – establishment of health promotion programmes for all groups, particularly for vulnerable population.
- definition of morbidity as well as mortality and clear dates for health status of Roma population – better health indicators and data for the Roma population
- decrease in mortality as well as morbidity of Roma population – development of programme of s food and nutrition safety, permanent immunization reproductive health, alcoholism, smoking and drug abuse, epidemiological supervision of unhygienic Roma settlements, systematic control of children and other vulnerable groups, raising awareness with healthcare professionals about specific needs of Roma population.

Reducing the spread of infectious disease and promoting safe sexual behaviour - National Strategy for prevention of HIV/AIDS

Prevention of HIV transmission in the all population particularly young people, sex workers, tourist workers, drug users, Roma population and the other vulnerable groups, access the quality of HIV counselling, testing and treating, improvement of HIV/AIDS surveillance and forecasting to strengthen planning of national response, provision of health care and mental support and global support for people living with HIV/AIDS and capacity building and coordination for all sectors.

The Voluntary Counselling and Testing (VCT) Centre is established in the Institute of Public Health of Montenegro.

Reducing injures and violence-National Strategy for violence prevention and Action plan

Project “Violence and Health” out of which the “Project Protection of children against abusing and neglecting” was implemented. This is educative project, which involved all professionals who work with children.

Other public health areas

Other areas of implementation of new public health principles are:

- lifestyle other than smoking;
- international cooperation: Public health capacity building for strengthening tobacco control in south east Europe;
- Improving mental health: National Strategy for mental health, and establishing of Mental health centres.

Development of public health in the future

The intention of The Government of the Republic of Montenegro is to adopt the Strategy and Action Plan for Food and Nutrition of the Republic soon, while the Law for food safety has already been adopted by the Parliament of Montenegro. Other important public health laws/projects to be adopted/ implemented are:

- Law on evidences in public health;
- Law and the Strategy for protection against noise;
- Project for improvement of health status in elderly;
- Project of improvement health status in invalids;
- Project investigation of the impact ecological factors for health population.

Exercise

Task 1:

Read the following documents:

Lalonde M. A new perspective on the Health of Canadians. A working document. Ottawa: Government of Canada, 1974. Available from: URL: http://www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/pubs/1974-lalonde/lalonde_e.pdf (Accessed: September 14, 2007).
and

Puska P. Successful Prevention of Non-Communicable Diseases: 25 Years Experiences with North Karelia Project in Finland. *Public Health Med* 2002;4:5-7. Available from: URL: http://www.who.int/chp/media/en/north_karelia_successful_ncd_prevention.pdf (Accessed: September 14, 2007).

You can supplement your knowledge with other recommended readings.

Task 2:

Discuss the new public health characteristics with other students. Also discuss the effectiveness of comprehensive approach to solving the major public health problems on the case of North Karelia case.

Task 3:

Carefully read the content of this module.

Task 4:

Discuss with other students the progress of the process of implementation of new public health principles in Montenegro.

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19. World Health Organization. Health and the Millennium Development Goals. Available from: <http://www.who.int/mdg/en/> (Accessed: September 14, 2007).

Recommended readings

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2. Lalonde M. A new perspective on the Health of Canadians. A working document. Ottawa: Government of Canada, 1974. Available from: http://www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/pubs/1974-lalonde/lalonde_e.pdf (Accessed: September 14, 2007).
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Chapter

2

**SETTINGS'
APPROACH IN
HEALTH
PROMOTION**

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Healthy Cities Project: Phase IV
Module: 2.1	ECTS: 0.5
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Key words	healthy cities project, phase IV, healthy ageing, healthy urban planning, health impact assessment, physical activity
Learning objectives	After completing this module students should: <ul style="list-style-type: none"> • Be familiar with the »Healthy Cities concept«, and the main characteristics of the WHO »Healthy Cities« project; • be aware of importance of project such as Healthy Cities project is; • recognise the need for establishing such a programme; • increase knowledge about how to launch such a programme; • be familiar with core themes of Phase IV of the project.
Abstract	<p>Healthy Cities is a dynamic concept/approach, which seeks to put health high on the political and social agenda of cities and to build a strong movement for public health at the local level.</p> <p>The WHO European Healthy Cities Network consists of a network of cities from around Europe that are committed to a comprehensive implementation of the Healthy Cities concept. Based on the criteria that are renewed every five years, the cities are designated to the WHO Network. Each five-year phase focuses on a number of core priority themes, which are launched with a political declaration and a set of strategic aims.</p> <p>Phase IV (2003–2008) has three core themes being, healthy urban planning, health impact assessment, and healthy ageing, with additional core theme and encourages action to tackle obesity and promote physical activity and active living.</p> <p>In Slovenia, Celje with its around 50.000 inhabitants become one of the 50 cities, included in basic WHO Healthy Cities Network in the Phase IV of the project. It is presented as an example to illustrate this phase of the project.</p>

Teaching methods	<p>Teaching methods include introductory lecture, exercises, and interactive methods such as small group discussions.</p> <p>Students after introductory lectures first carefully read the recommended reference on healthy cities project. Afterwards they are asked to identify the most important elements of »Healthy Cities« project and discuss them with other students.</p> <p>In the next step they read in details the description of the project Phase IV core themes. Afterwards they discuss the most important features of each core theme with other students.</p> <p>At the end they should visit the Web Site of one of the healthy cities, identify the key features of a process in this city, and present them to other students.</p>
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• training materials: recommended readings are mainly available in the internet;• target audience: master degree students according to Bologna scheme.
Assessment of students	<p>Assessment is based on seminar paper and oral exam.</p>

HEALTHY CITIES PROJECT: PHASE IV

Ivan Erzen, Lijana Zaletel Kragelj

Theoretical background

The very beginnings of the »Healthy Cities« movement

The term Healthy Cities was launched in 1985. It was the title of a speech given at an international meeting in Canada on the theme »health is the result of much more than medical care«. At that meeting, it was stressed that people are healthy when they live in nurturing environments and are involved in the life of their community, when they live in healthy cities (1).

World Health Organization initiative for broader action

The World Health Organization (WHO) soon opened a Healthy Cities office in Europe, and in 1987, it has launched a project entitled »Healthy Cities« (2, 3). Cities all over the Europe were encouraged to target and solve local problems, and get people from many parts of the community involved in the Healthy Cities process.

Today, this project is one of numerous project and programmes of WHO which intend to translate health promotion concepts and strategies into practice in different kind of settings¹. These include the Healthy Cities, Healthy Villages, Healthy Municipalities and Healthy Islands projects, the networks of Health Promoting Schools and Health Promoting Hospitals, and the Healthy Marketplaces and Health Promoting Workplaces projects, as well as WHO action plans on alcohol and tobacco, active living and healthy ageing.

»Healthy Cities« project characteristics

The main purpose of the »Healthy Cities« project was to examine the chances how to practice out the »Health for All« principle (4) on the local (community) level. It was a common project of the two WHO sectors:

- the Sector for Health Promotion, and
- the Sector for Environmental Health.

At the beginning, 11 pilot cities participated in the project.

The project expanded quickly and gained high visibility. Only few years later it has reached a response nobody expected.

Nowadays, there are more than 1500 cities included in the project, beside 50 cities, which represent the basic WHO network of healthy cities in the phase IV of the project. These cities are connected not only on national level in range of national networks, but also on international level, especially on the level of common activities, directed towards solving individual problems (2).

In 1991, the Assembly of the WHO agreed that Healthy Cities Project represents an activity, which is important for solving health problems in urban areas, in developed countries and in developing countries, too.

¹ According to WHO, a setting is the place or social context in which people engage in daily activities in which environmental, organizational and personal factors interact to affect health and wellbeing (5). Examples of settings include schools, kindergartens, work sites, hospitals, villages and cities.

The influence of the »Healthy Cities« project has already overgrown European region at its beginning. Regional networks have expanded to Australia, Canada and the USA, but there are also some cities in other countries of the world, which take part in the project.

»Healthy Cities« project has arisen from a principle that wider social communities and their citizens, who are health-aware, are those who should take over bigger responsibility for improvement of their own health and quality of life in general. In this respect, health not only represents the most important component of life-quality, but also a prerequisite for general social and economic growth.

The definition of a »Healthy City«

According to WHO (5), a »healthy city« is the one that continually creates and improve those physical and social environments and expands those community resources, which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential.

It is important to be aware, that »healthy city« is defined by a process, and not by an outcome (6). WHO stresses among others, that a healthy city is not one, which has achieved a particular health status. What is required is a commitment to health and a process and structure to achieve it. The »Healthy Cities« approach seeks to put health high on the political and social agenda of cities and to build a strong movement for public health at the local level. Thus any city can be a »healthy« city, regardless of its current health status.

In another words, the healthy city can be determined as a city that has realised the health to be a problem of a city, tries to improve it by developing the city-surroundings and city-capacities, and stimulates and supports its citizens by their attempts to achieve as good quality of life as it is possible.

European Healthy Cities Network

European network of healthy cities that works within the sphere of European Office of WHO, has set main strategic aims:

- promotion of policy and activities for health and balanced growth on local level all across Europe. Specially stressed are the determinants, which define health, and population groups, which are specially vulnerable;
- enlarging the accessibility of European network of healthy cities for all countries in Europe;
- stimulating the solidarity, cooperation and connection between European cities and networks of cities, which have connected within the Healthy Cities Projects;
- helping to maintain and strengthening the state of healthy cities and supporting their efforts to put into effect the politics of Health for All (not only on individual urban area but also on the national level);
- cooperating with other organizations and agencies, that occupy themselves with problems of city-life and also uphold health in Europe as well as on global level, and
- policy-planning, presenting practical approach, data about achievements and case studies, which the cities across Europe could use to improve the health in their own sphere by them selves.

Methods of work

The movement that has been aroused out of »Healthy Cities« project has developed in time and became a programme. The methods of work within the programme have developed as well (7-10).

From the very beginning, it has already been clear that this will be a dynamic project with tendency to grow. Therefore it would not be possible to foresee everything in advance and consequently there has been made a decision that project should be divided into phases, each lasting for 5 years.

The project has been so far implemented over three 5-year phases (1988–1992, 1993–1997 and 1998–2002). The phase IV has been launched in 2003, and it will last until 2008.

That way it has been easier to harmonize the course of the project and to define aims of the project, so they could suit the needs of development and situation in society. The latter is mostly connected with the fact that new strategies and approaches are being formed on the base of new cognitions and experiences from past. Especially important were the results of different preventive health care measures and measures, oriented at preserving and improving health.

The influence of social and political development, and organizational changes in cities, has not to be forgotten as well, since it has an important effect on course and development of the project.

Such a dynamic and phase-determined process gives an impression that there is some continuity in development missing, but it is not so. In each phase of the Healthy Cities Project there is one of problems specially appointed as key problems, and enjoys all of attention.

Nonetheless, there were no changes in basic principles, main methods or visions of healthy city in the course of time. Any of these remains pointed at four key spheres of activity:

- determinants of health and basic »Health for All« principles,
- promotion of European and global priorities in the field of health,
- striving to place the health among basic social and political goals in the city and
- continuous attempts to improve the management and close cooperation between partners in the phase of planning and performing activities for better health.

As the project was in development, networking played an important role. In every phase of the project, individual cities stood as candidate to become a project city within the basic WHO-network of healthy cities.

The approach and key fields of work in Phase IV

In the phase IV, the »Healthy Cities« programme approach is based on two key elements (11-13):

- investing in improvement of health, and
- cooperation of cities/towns in the European region with the WHO, Regional office for Europe to win recognition of core themes (key developmental fields).

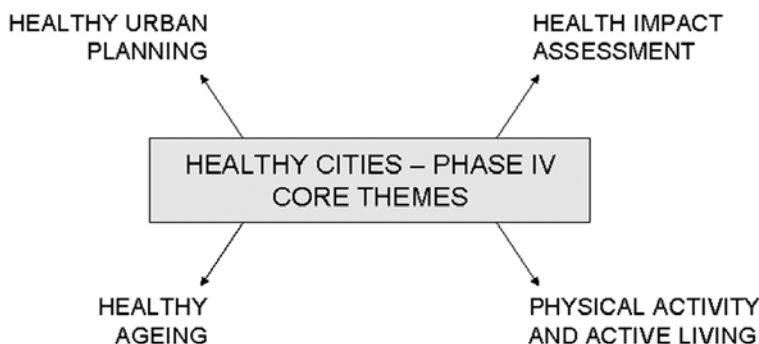
Investments in improvement of health

Investments in improvement of health are basing on partnership. Special efforts have been undertaken to reach a higher phase of equality, also stressed are the determinants of health, balanced development and democratic regulation, which enables one to cooperate actively. The development of health in cities still maintains the main task within the healthy Cities Project.

Core themes

It was agreed that in period 2003-2008, for the cities/towns it is necessary to ensure a close collaboration with regional office of WHO for Europe on three key developmental fields (13-16): healthy urban planning, health impact assessment, and healthy ageing (Figure 1). A complementary core theme, being promotion of physical activity and active living, was set as well (Figure 1).

Figure 1. The »Healthy Cities« programme - Phase IV core themes.



1. Healthy urban planning.

The plans, policies and initiatives of urban planners and related professions affect the conditions in which people live and work, their access to facilities and services, their lifestyles and their ability to develop strong social networks. These are key determinants of the health, well-being and quality of life of people in cities. According to WHO, the overall goal of this core theme is to integrate health considerations into city urban planning processes, programmes and projects and to establish the necessary capacity and political and institutional commitment to achieve this goal (6).

2. Health impact assessment.

Health impact assessment is defined as »a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population« (6). Four values are particularly important: democracy, sustainable development, equity and the ethical use of evidence. It can be a useful tool for promoting integrated planning, reducing inequalities and achieving sustainable development in the cities.

According to WHO, the overall goal of this core theme is to integrate health impact assessment as a systematic framework in cities, which enable decision makers to take account of people's health and well-being during policy, programme or project developments (6).

3. Healthy ageing.

Regarding the demographical trends in most of countries in the Europe, this core theme is the most important. Today, cities hardly meet the criteria to be friendly to elderly citizens.

According to WHO, the overall goal of this core theme is to generate a strong local political commitment and to introduce policies and planning processes that will ensure a holistic and well-balanced approach to older people's needs for health development and care. A healthy approach to ageing considers the ability of people of all ages to live a healthy, safe and socially inclusive lifestyle. It recognizes the factors beyond health and social care that affect health and well-being, and the contribution needed from all sectors that influence the determinants of health (6).

4. Physical activity and active living.

Physical activity benefits the physical, social and mental health of people of all ages. Beyond the direct medical benefits, increasing physical activity through an integrated programme that account of transportation and urban planning policy can increase social interaction throughout life, provide recreation, and reduce violence, urban traffic congestion and pollution. People's participation in physical activity is influenced by the built, natural and social environments in which they live as well as by personal factors such as sex and age and ability, time and motivation. Local governments have a crucial role to play in creating environments that promote opportunities for physical activity and active living.

According to WHO, the overall goal of this core theme is to develop strategies and innovative interventions (including changes in the urban design and environment) that facilitate and encourage physical activity and active living for all ages, and the tackling of obesity (6).

Case study – The »Healthy Cities« project Phase IV in the city of Celje/Slovenija »Healthy Cities« project in Slovenia

In Slovenia, the »Healthy Cities« project was introduced at the end of eighties (3, 17). In the last almost twenty years, it became a strong movement, which is still gaining on its importance (17).

The Slovenian Healthy Cities Network was formally launched in 1992 by seven cities, building on initiatives that had begun in 1989. Celje was one of these cities (3, 17).

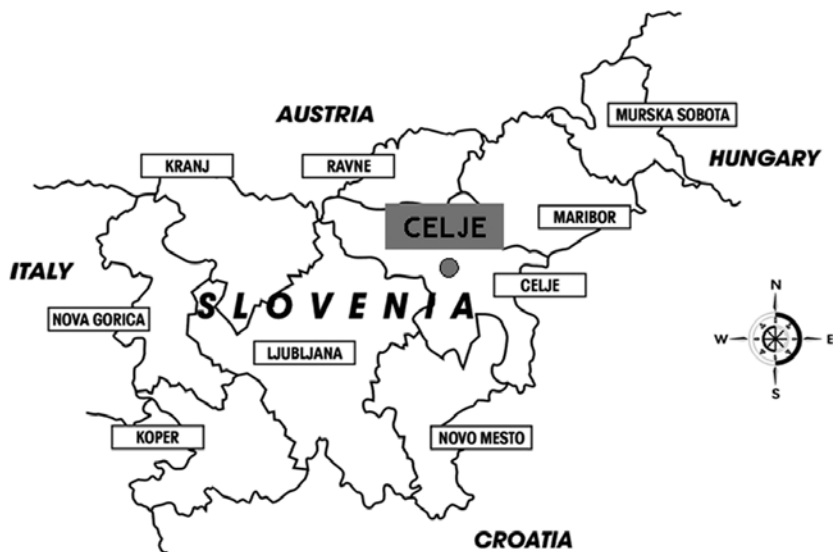
Today the Network is a nationally recognized policy actor in developing urban health. The coordinating body of the Network is the Healthy City Centre, a support centre within the Regional Institute of Public Health Maribor, one of the nine regional public health institutes (3).

Work within the sphere of the project is exacting piece of work, therefore proper knowledge and experiences are of great importance to carry it out. Especially important is the knowledge of project work and project making.

Introducing Celje

Celje is, in respect to other cities/towns in Slovenia, with around 50,000 citizens a middle-size city. It is situated in the Eastern part of Slovenia in the Celje Health Region, one of the nine health regions of Slovenia (Figure 2).

Figure 2. Slovenia with its nine health regions, and the location of the city of Celje within the Health Region Celje.



In Celje, citizens and authorities were very enthusiastic about the WHO »Healthy Cities Project«, and they decided to launch it in Celje as well. The first and the main author of this module is an active member of the »Celje – Healthy City« project. In continuation, the experiences of the project team are described.

A project »Celje - Healthy City«

The beginnings

The project »Celje – Healthy City« started in 1991. The Regional Public Health Institute Celje elaborated the project and took over the coordination.

When the project team took over the coordination and the responsibility for the project, the great enthusiasm was what gave us the strength to take up with the work with great dash.

At the beginning, we faced with several problems. The leading problem was that we did not have much of required knowledge. Consequently, as we carried on with our work, we met several obstacles. Luckily, we managed to solve most of them or at least we knew how to handle them properly. Knowledge we have gained in the meantime helped us a lot.

Applying for being the WHO network project city in the Phase IV

In 1993, as we were in phase II of the WHO »Healthy Cities« project, »Celje – Healthy City« already applied to be one of the project city in the WHO-network of healthy cities. At that time the second biggest city in Slovenia, Maribor (about 115,000 citizens), was the city that became WHO project city in phase II (period 1993–1998). It took over the role of national coordinator as well (3). At the same time, in Maribor the headquarters of new-established network of Slovene healthy cities - the Healthy City Centre was established.

In 2004, city council of Celje accepted a decision that Celje should re-apply as to become a designated city in the Phase IV of WHO's »Healthy City« project. This time the application was successful and in this phase of the project, Celje is included directly into the basic WHO network, together with more than 70 other cities.

Meeting the core goals

1. Healthy urban planning.

In the last 15 years, the city of Celje has developed very quickly. It has been very significant for this period the transformation of industry in different spheres: ownership, administration, technology and use of space. In the meantime, they built several important infrastructure objects. Some important ecological problems were solved as well. Therefore, it came that the city changed a lot in that period. Renovation is to see on every aspect. Nowadays Celje is less and less a city of heavy industry and is becoming more an important commercial centre. That kind of development is more acceptable from the sight of ecology and from the sight of benefit.

In the past few years, the city of Celje gave special attention to Local agenda 21. First starts in connection with implementation of Local agenda 21 were in year 2000 and since then there was more activity on that field. They adopted a complete program of Local agenda 21. All of these have had an important influence on city planning. In our opinion, the capital still has too much power and influence on providing priorities of development in the city. For this reason, we wish to intensify activities to prepare a unified city plan of Celje.

They wish to stimulate changes in planning that would ensure a unified long-term city plan and consider the needs of suitable living conditions and therefore they must first analyse current conditions thoroughly. They are going to work out what are the weakest points and what are the advantages the city of Celje has. Afterwards a plan of measures that would help to eliminate obstacles for development and a plan for further promotion of positive achievements is going to be prepared. Besides, it is necessary to:

- expect the investment process to calm itself down,
- consider all crucial points that were set in Local agenda 21,
- consider environmental, social and economic needs of particular population groups.

2. Health impact assessment.

Back in 70-ties in Celje, the citizens and the authorities became aware of some problems that were a consequence of air-pollution, pollution of drinking water, ground and water-flows. Consequently in the beginning of 90-ties, as the project "Celje – Healthy City" started, it was understandable for Celje to pay most of attention to ecological problems. They developed special treatment and sanitation program. It showed the treatment was very suitable because in relatively short time we achieved essential changes and improvements.

They gain lots of experience how to cooperate with different non-governmental organizations, politicians, experts and interested public by solving ecological problems. They connect all of these partners. In a similar way, they plan to evaluate the influences of different policies on health. Currently, main attention is given to the promotion of such approach. Good practice in Prekmurje, the most Northeast part of Slovenia (Health

Region Murska Sobota – Figure 2), was of immense great help (in Prekmurje they evaluated the influence of new agricultural policy on health; Ministry of health was the one who coordinated the project). Two experts, who otherwise work in project “Celje – Healthy City”, took part in that project, too. Now we need to carry over the information on the project council, above all in sense of presenting alternatives such an approach has. Thus, it will be possible to check the effects of certain policies or projects on health in Celje, too.

Main project that they are planning to carry out in the next period is to evaluate, how “healthy aging policy” affects health of Celje-inhabitants. For once, healthy aging policy was defined very approximately, without any details. Considering aging of population will have an important influence on quality of life in near future, we have decided a long-term strategy on that must be prepared. It will be possible to adopt it in the middle of 2008 and the implementation will follow immediately after that. In 2008, an evaluation of the efficacy of that kind of approach will be conducted and complementation of the policy will follow, if necessary.

Besides, we expect to use that approach later as we will have to plan some new policy in connection with social life in Celje or change the last one. At the same time, this would be the best assurance the inhabitants as well as resolution-holders have accepted the policy. We would also be sure, that kind of policy has best chances to realize and that every inhabitant is going to benefit by it.

3. Healthy ageing.

In the past proper care for older people was one of more important tasks of the project »Celje – Healthy City«. The activities were mainly pointed at construction of social infrastructure. With social infrastructure, we wanted to minimise architectonic and social obstacles older people meet in their everyday life. The proportion of older people in Celje is rising and consequently the number of those who need special care is rising, too. Therefore, different programs that help to meet the needs of the older (such as help at housekeeping, meal delivery, visits to older people to cheer them up, etc.) have been developed. These activities have been supported partly by social resources and partly with the help of volunteers.

Problem is that the information on needs of people who grow older is not very exact and comprehensive. They are often unreliable and relate only to those ones who came looking for help; on many fields, no data about the rest (those who do not know how or cannot express their problems) exist. Such big and important group of population needs special social attention and care and a long-term strategy that would define social manners and social activities important for healthy aging and quality of life in that period of life need to be prepared. A research among older population has been conducted. That research serve to collect data about health condition, social and living conditions, about needs older people have and how well are these needs satisfied. These data are a foundation for completion of the profile of older city inhabitants. At the same time these data are good foundation for analysis of factors that have an influence on health, social and living characteristics of older population, and a proposition of »healthy aging strategy« should be based on that data, too. A close international cooperation in this field is very important. »Celje – healthy city« is included into sub-network »healthy aging«, the latter is coordinated by Swedish institute for study of problems of aging population.

4. Physical activity and active living.

Promotion of physical activity is a new task that was previously not included in 4th phase of the project. The initiators were above all the cities that are members of WHO-network of healthy cities. IN Celje Healthy City decided to review the actual situation on this field. Purpose for this is above all to collect data about current situation and identification of problems that hinder a higher physical activity of city-inhabitants.

Main challenges of the project »Celje – Healthy City« in Phase IV

Active cooperation of the project »Celje – Healthy City« within Phase IV of WHO project has brought new challenges for all those who are directly involved in the project. These challenges are not new, but now they have come more to an expression (18).

1. To ensure active cooperation between leading politicians, professionals and other representatives of the city by the project.

It is not enough for leading politicians, professionals and other important persons to understand the idea and aims of the project. What is needed is their active cooperation. It is dangerous, if the project does not run continuously and there are only periodic actions. In such cases, it is very hard to get strong collaboration, and development of the project slows down or even stops.

2. To ensure the project necessary resources for work.

Essential predispositions for successful work are qualified workers, rooms, reasonable financial resources and information required for work. Lack of knowledge and work qualification presents a big hindrance for successful work within the project.

3. Efficient project council that works as motive power is of great importance.

In order to avoid problems with communication, members of project council need to be very good informed about the principles of work. It is highly important for council members to be acquainted with project way of work and to acknowledge it.

4. High inclusion rate of the public by individual sub-projects.

Project Healthy City stresses the right and duty of the population to do something on their own for health and better quality of life. Therefore, it is very important for inhabitants to have right information that enables them to take part in decision-making. These information need to be available to the broadest circle of people on time and in proper and understandable form. Besides, we need to set ways the inhabitants could use to have influence on final decisions.

5. Intersectional collaboration.

Intersectional collaboration is a fundament for forming and executing public policy that is in favour of health. Traditional vertical hierarchy, bureaucratizing of life and fear of subordination are factors, which make collaboration between sectors harder.

6. Media support.

Work within the project must be public. All activities have to be presented to the public in the most extended way. Media themselves have a crucial part, because we can access to the people with their help only.

Of course, there are also other factors, which can accelerate the development of the project. Education and cooperation with other cities that have joined the program are one of most important ones among them. Exchanging experiences between the cities and cooperation in concrete projects has an enormous positive influence on growth of the project and speeds up reaching the qualities of healthy city.

Despite numerous problems, we have faced in the project »Celje – Healthy City« we look in the future with the great measure of trust in our success. That means achieving changes that would significantly influence on better quality of life and improvement of health, in Celje and all across Slovenia. Being a part of WHO network of healthy cities in Phase IV should not be understood as a privilege. In fact, it is an obligation to pass the knowledge, experience and trusted methods on to other cities in Slovenia. This way it is possible to contribute to quicker and more even development of health in urban areas in Slovenia.

Exercises

The main aim of the exercise is to get the students acquainted with the »Healthy Cities concept«, and the main characteristics of the WHO »Healthy Cities« project. Special attention is given to the current activities – the Phase IV of the project.

Task 1:

Carefully read the description of the project on the WHO Web Site:

World Health Organization, Regional Office for Europe. Healthy Cities and Urban Governance. Available from: URL: <http://www.euro.who.int/healthy-cities> (Accessed: August 28, 2007).

Task 2:

Identify the most important elements of »Healthy Cities« project and discuss them with other students.

Task 3:

In details read the description of the project Phase IV core themes on the WHO Web Site:

WHO Regional Office for Europe. Core Phase IV themes (3 + 1). Available from: URL: http://www.euro.who.int/healthy-cities/city/20040715_6 (Accessed: August 28, 2007).

Task 4:

Discuss the most important features of each core theme with other students.

Task 5:

Visit the nearest healthy city Web Site to your residence settlement and identify the key features of a process in this city.

Task 6:

Present your findings to other students. Compare your findings to the findings of other students.

After accomplishing this module, students will become aware of the complexity of the built, natural and social environments of the cities and its influence on sustainable health development.

Students will understand that the programme implementation, development and evaluation is a complex task where all partners need to be fully involved and where also a strong support from the local community is necessary.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Regional and Local Settings for Capacity Building in Public Health – Croatian experience
Module: 2.2	ECTS: 0,75
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Key words	Public health, health policy development, decentralization, community health planning, Croatia
Learning objectives	<p>After completing this module students and public health professionals should :</p> <ul style="list-style-type: none"> • recognise tools for community needs assessment • recognise tools for educational capacity building • understand capacity building process • identified critical issues for public health management • improve knowledge on the healthy policy development
Abstract	<p>This paper describes how was incorporated a multi-disciplinary and inter-sectoral approach into development of public health policy and plans at the local (county) level in Croatia by educational program. Method used was the public health capacity building program »Health – Plan for it«, which was developed with the aim to assist the counties to overcome recognized weaknesses and introduce more effective and efficient local public health practices. Two main instruments were used: Local Public Health Practice Performance Measures Instrument, and Basic Priority Rating System.</p> <p>This program has helped counties to asses population health needs in a participatory manner, to plan for health and, ultimately, assure provision of the right kind and quality of services (better tailored to population health needs).</p> <p>This program's benefits are going beyond and above the county level. It provides support for the Healthy Cities project locally, and facilitates changes in national policymaking body's mindset that a »one-size-fits-all« approach is sufficient.</p>

Teaching methods	<p><i>Lectures:</i> Public health policy and community health; Management in public health and health promotion; Decentralization</p> <p><i>Exercise:</i> How to recognize needs and organize capacity building for local public health?</p> <p><i>Small group discussions:</i> Croatian experiences and regional setting</p> <p><i>Individual work/Seminar:</i> Role of the public professionals (my role!) in the capacity building</p>
Specific recommendations for teachers	<p>If possible, use some real life local (community) setting to discuss, compare and analyse presented Croatian model.</p>
Assessment of students	<p><i>Structured essay:</i> “Health promotion – Health policy – Capacity building”</p> <p><i>Case problem presentations:</i> Health promotion in selected (specific!) community</p>

REGIONAL AND LOCAL SETTINGS FOR CAPACITY BUILDING IN PUBLIC HEALTH – CROATIAN EXPERIENCE*

Selma Sogoric, Tea Vukusic Rukavina, Aleksandar Dzakula, Ognjen Brborovic

**Adapted text of:*

Sogoric Sm Vukusic Rukavina T, Brborovic O, Vlahusic A, Zganec N, Oreskovic S. Counties Selecting Public Health Priorities – a »Bottom-up« Approach (Croatian Experience). Coll Antropol 2005; 29:111–9.

Theoretical background

During the last fifteen years we have been witnessing tremendous changes in European societies, some of them been caused by globalization, economic transition, by demographic transition or by wars. Whatever the causes were their consequences were detrimental to health. Today's Europe is challenged with complex public health issues like poverty, terrorism and violence, social exclusion, pollution, depression, substandard housing, the unmet needs of elderly and young people, homeless people and migrants, unhealthy spatial planning, the lack of participatory practices, and unsustainable development. Due to the war and post-war transition, South-East Europe is faced with many others, like, for example, mental health, posttraumatic disorders, quality of life of disabled, family health, community regeneration and community capacity building, unemployment, especially among young and mid career workers, stress, alcohol, tobacco and substance misuse, etc.

Citizens in the Balkans and South East Europe (SEE) feel a lack of social well being and a sense of vulnerability as a result of the war and post-war experiences (1,2,3,4,5,6). The shift from a socialist government with centrally planned economies to democratic governments and more market-based economies has taken place rapidly in the SEE, but the transition has not been without economic problems. Variations in socio-economic factors have had strong impact on the health systems of the countries and the health of their citizens (7,8,9).

Public health can make a small, but significant contribution to the enhancement of social justice here and now in the SEE region (1). More than ever, public health is being viewed as a catalyst for peace (10,11,12,13,14,15) and an important factor in the socio-economic development equation (16). Of practical importance to the reversal of present negative trends is the strengthening of all public health structures, including policy-making support (17), human resources training (18), and population health research (19, 20).

The World Health Organization (WHO) and the Council of Europe have called attention to growing health status disparities and population vulnerability in SEE (21). The regional Health Development Action Plan for SEE undertaken by the Council of Europe and WHO European Office within the scope of the Stability Pact, led to the Dubrovnik Pledge in 2001 (22) – a political instrument to improve social well-being and promote human development in SEE.

During the last fifteen years, public health became insufficient due to wars, economic and political changes. There is a recognized lack of competence in public health, particularly in health management and strategy development, but also in health surveillance and prevention. There was a need for sustainable collaboration, and support in advanced training and continuous education of qualified professionals to reach required conditions

(23). Thus the Open Society Institute, New York, and the Association of Schools of Public Health in the European Region (ASPHER) became actively involved in public health developments in the region (24). In the spirit of the new public health, there was a strong initiative to assess the need for human resources in the health sector and to provide much of the needed interdisciplinary training. Such training is described in this paper.

The central challenge for public-health practitioners is to articulate and act upon a broad definition of public health, a definition that incorporates a multidisciplinary and inter-sectoral approach to the underlying causes of premature death and disability (25). Public health education for much of the world (not only SEE countries) is welcome, and public health leadership programs are under development (26). These programs will encourage empowerment of local communities, a necessary step in rejuvenation of public health (27). Nevertheless, questions arise as to whether public health practitioners should be concerned with fundamentals such as employment, housing, transport, food and nutrition, and global trade imperatives, as opposed to just individual risk factors for diseases. A broad focus inevitably leads to involvement in the political process (28), an arena that is as well emphasized in the program described in this paper.

Within the European public health community there is a widespread recognition of the importance of inter-sectoral collaboration. An extensive research from WHO's Healthy Cities (29) and Regions for Health movements showed what can be achieved by building effective cross-sectoral alliances (30,31,32).

From Healthy Cities to Healthy Counties – chronological order of events

Healthy Cities Project – gaining experience in bottom-up policy building

The Healthy Cities (HC) Project, initiated by the WHO European Office in 1986, is a long-term international development project that seeks to put health on the agenda of decision-makers in cities and to build a strong lobby for public health at the local level.

The crucial notion that stimulates HC project development was the recognition of importance of the political will. The Healthy Cities Project challenges cities to take seriously the process of developing health-enhancing public policies that create physical and social environments that support health and strengthen community action for health. Initiating the Healthy Cities Project process requires explicit political commitment and consensus across party political lines, leading to sound project infrastructure, clear strategy, participation mechanisms and broadly-based ownership (33,34). Healthy Cities is about change, openness to participation, innovation and formal system reorientation. It is changing the ways in which individuals, communities, private and voluntary organizations and local governments think about, understand and make decisions about health.

European cities in general are challenged with complex public health issues like poverty, violence, social exclusion, pollution, substandard housing, the unmet needs of elderly and young people, homeless people and migrants, unhealthy spatial planning, the lack of participatory practices, and unsustainable development (35).

The Healthy Cities Project framework provided the testing ground for applying new strategies and methods for addressing these issues in Croatia. Especially helpful was the second phase of the European Healthy Cities Project (1993–1997), which encouraged the process of development and implementation of the strategic city health documents: the City Health Profile and City Action Plan for Health (36,37). It was a breaking point that renewed dignity and a sense of mission to the public health profession, and emphasized

issues of health, participation and community development. While working on those key documents, public health physicians, who act as the process facilitators, had legitimacy and access to all main players – city politicians and administration, professionals and institutions, citizen representatives and NGOs. It gave them a chance to conduct community based needs assessment, and to open dialogue between different interest groups, i.e. future main »health stakeholders« (38,39).

Unfortunately, the Healthy Cities experience has remained quite localized and undervalued by the formal health policy system at the higher County and national levels since the end of the 90s. The process of decentralization and health and social welfare system reform has imposed a great pressure for change on the local governments and health sector at the end of 90s. It encouraged them to consider new (public health) approaches, techniques and methods. Public health professional involved in the Healthy Cities project decided that future engagements at the higher County level would likely yield more positive results.

Case study - healthy counties – public health capacity building in Croatia

Due to the war and post-war transition, Croatian cities are faced with many others, like, for example, mental health, posttraumatic disorders, quality of life of disabled, family health, community regeneration and community capacity building, unemployment, especially among young and mid career workers, stress, alcohol, tobacco and substance misuse, etc.

Developing the paradigm – situation analysis

Key players able to bring changes in public health policy development and implementation at the county level were identified: as those who can (have political power), as those who know (have knowledge and skills) and those who care (have direct interest in bringing change). Political power at the County level in Croatia is within County Councils* and their executive bodies County Departments for Health, Labor and Social Welfare. Technical expertise is within County Institute of Public Health and Centers for Social Welfare. Citizens groups and associations were seen as the most direct representatives of citizen's interest. The assumption was that only active participation of all mentioned key players from the political, executive, technical, and community arenas could improve process of creation and implementation of the county's health policy and guarantee better health outcomes.

But due to the centralized state policy and vertical process of decision-making used in the previous years, collaboration among the various players mentioned above has not been established. Non-existence of an articulated County health policy was a logical consequence of the lack of collaboration. County officials had insufficient knowledge of new population health needs resulting from the war, post-war transition and economic and social difficulties, and these needs have not been addressed properly. Consequently, the population is receiving traditional services, hardly those that respond to real needs. Throughout 90s County Councils did not have real political power and County Governors acted more as Central Government than County Government servants. With the exemption of the few old and well-equipped Institutes of Public Health majority of them was established within the last eight years. Through the collection of data, monitoring and reporting they provided primary, information to national Institute of Public Health and did not see themselves as the players at the county level.

The first step in development of public health policy and plans at the local level in Croatia was assessment of present state and conditions. In the summer of 1999, directors of the Motovun Summer School of Health Promotion convened a panel of 25 Croatian public health experts to review existing public health policy and practice at the county level. The group used an assessment tool called the Local Public Health Practice Performance Measures Instrument, which was developed by the U.S. Centers for Disease Control and Prevention Public Health Practice Program Office (40,41,42). This instrument recognizes three core functions of public health: assessment, policy development and assurance, and 10 practices associated with them. Three of the 10 practices emphasize important components of the assessment function: assessing community health needs, performing epidemiological investigations, and analyzing the determinants of health needs. Another three practices address the policy development function: building constituencies, setting priorities, and developing comprehensive plans and policies. Finally, four practices relate to major aspects of the assurance function: managing resources, implementing or assuring programs to address priority health needs, providing evaluation and quality assurance, and educating or informing the public. The 10 practices mentioned can be used as performance standards, supported by the 29 associated indicators to measure the effectiveness of local public health practices.

The original Local Public Health Practice Performance Measures Instrument was translated into Croatian, with appropriate revisions. The finished instrument allows situation analysis for each of 10 practices and measurement of associated indicators, i.e., whether or not they exist, whether they are satisfactory or unsatisfactory, and who is or should be in charge of this activity. The panel of 25 Croatian public health experts discussed all topics and identified the following as the weakest points in existing public health policy and practice at the county level: formulating public health policy, especially in selecting priorities among health needs; strategy formulation and comprehensive planning for solving priority issues; coalition building and gaining support from the community and relevant organizations; public health policy assurance, an issue stemming from the lack of objectives and therefore an inability to determine whether they are achieved; and, finally, lack of analysis of the adequacy of existing health resources. From the results, it was obvious that counties require professional public health guidance and assistance to develop more effective and efficient local public health practices, i.e., to assess population health needs in a participatory manner, plan for the health of the population, and assure the provision of the right kind and quality of services based on the population's needs.

Healthy Counties project development

Given this scenario in mid-2001, the process of change caused by decentralization was seen as an excellent opportunity for improving Public Health practices in Croatia at the County level. A »learning-by-doing« training approach appeared to be the best tool for public health capacity building and strengthening of collaboration between health policy stakeholders at the county level in order to both build knowledge and skills. Based on Healthy Plan-it™ program (43) (developed by Centers for Disease Control and Prevention, USA) for identifying and prioritizing healthcare needs and developing plans for addressing them, and other materials, the faculty members tailored a public health capacity building »Health – Plan for it« program proposal for Croatia. The program's aim is to provide guidance and assistance to counties, while introducing more effective and efficient public

health policies and practice. By the end of 2001, the program was discussed with several panels: public health physicians from County and National Institute of Public Health, county officials, health managers, Ministry of Health and Ministry of Labor and Social Welfare officials. Finally, it was revised and sent for comments to the pilot group of counties.

Topics included were:

- Public health management (from identification to better satisfaction of public health needs, i.e. provision of the right kind and quality of services)
- Organizational and human resources management (improvement of personal managerial abilities, routine use and application of modern management techniques),
- Collaboration and community participation (emphasizing the necessity of continuous consultation with the community in all stages of health policy development, and reorienting the health care and social welfare system to make them more responsive towards county specific public health needs).

After two months of consultation the main program stakeholders reached consensus about the aims and content of the program. County teams will first complete four months of intensive training, which will be followed by biannual monitoring and evaluation meetings. Since mutual learning and exchange of experience is an important part of the process, three counties from different parts of Croatia with different levels of local-governance experience will be in training at a time. Each County team should be composed of 9 to 10 representatives: three from the political and executive component (County Council and Department for Health, Labor and Social Welfare), three from the technical component (County Institute of Public Health departments, Center for Social Welfare); and three from the community (NGO's, voluntary organizations and media). The Ministries will support the direct cost of training (training packet development, teaching and staff expenses) and the counties will cover lodging and travel expenses.

“The counties training program” – strengths and weaknesses

From March 2002 till June 2007, six training cohorts (18 county teams or about 180 participants) had completed the Healthy Counties program and produced County Health Profiles and County Health Plans with prioritized health needs and specific recommendations for addressing them. Since the City of Zagreb, as the largest city in Croatia, has County authority it completed a slightly modified program alone, as a seventh cohort (with 24 participants). Each cohort of three counties went through the following training scheme (44):

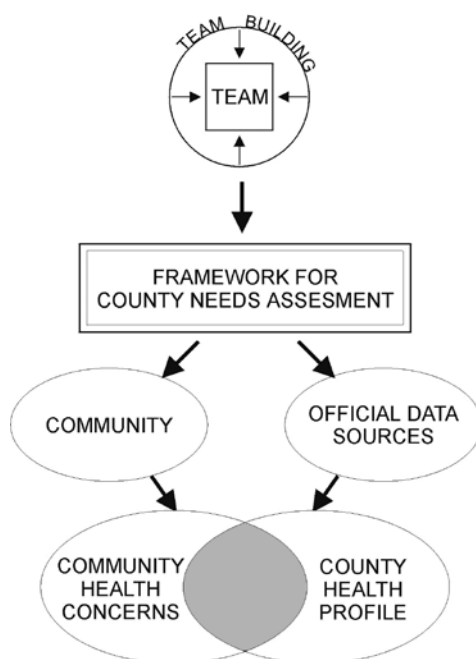
Module 1 – Assessment functions (4 days intensive training)

During the first module, county team members reviewed the core public health functions and practices and become familiar with the participatory needs assessment approach, methods and tools. Each team developed a framework for its county health needs assessment and decided on methods to involve citizens. Considerable attention was devoted to self-management and group management techniques, especially time management and team development. Analysis of information gained through the Local Public Health Practice Performance Measures Instrument that all county teams completed before the training

brought a new insight on how to improve process of creation and implementation of the county's health policy.

Estimation of the assessment function given by most of the training teams was similar, it does exist but is unsatisfactory. The biggest differences among counties were noticed in assessment of health policy development and formulation function. In estimation of assurance function counties, again, very strongly agreed that this is the weakest one of all three, since it hardly exists in any of the counties. Homework assigned to the county teams for completion prior to the next module involved creating a draft version of a County Health Profile. To accomplish this, the teams had to apply one or more methods of participatory needs assessment, identify sources of information inside and outside the health sector, formulate county health status indicators, and collect appropriate data (Figure 1).

Figure 1. County needs assessment

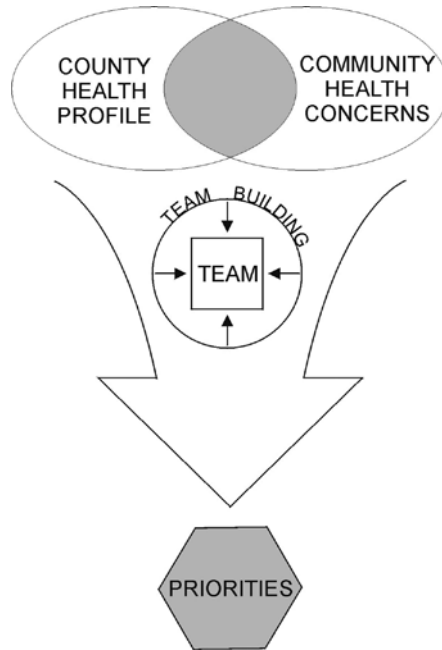


*Module 2 – Healthy Plan-it™
(4 days intensive training)*

At the beginning of the second module, the county teams presented the results of the health needs assessment exercise they performed. Although still in draft form, the County health Profiles reflected community health concerns and served as a basis for selecting priorities. Through application of »Healthy plan-it™«, an educational program developed by the CDC's Sustainable Management Development Program, county teams. Prior to the next module, the teams were to identify county »health stakeholders« and conduct consultation with them about selected priorities. Following these meetings, each county

team could revise priorities, add or select new ones and begin drafting their County Health Plans (Figure 2).

Figure 2. County Health Plans development



CONSULTATION PROCESS

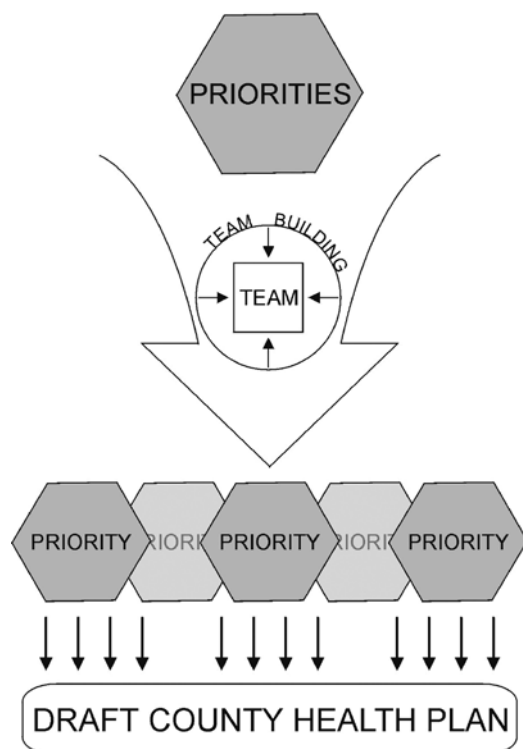
1. LOCAL POLITICIANS
2. PROFESSIONAL GROUPS
3. CITIZEN GROUPS
4. POPULATION GROUPS

*Module 3 – Policy development function
(4 days intensive training)*

This module began with team presentations of the results gained through the consultation process. Majority of the county teams found that the parties they consulted shared most of their views, so only minor revisions to the priorities they had developed were required. The consultations were a good introduction to the process of building constituencies, a key topic in the third Module. Participants learned interpersonal communication, collaboration, advocacy and negotiation skills. Collaboration with the media, public relations and social marketing were addressed, as well. The remaining time was devoted to developing a plan and determining how best to intervene (Figure 3).

Homework assigned to the county teams required them to convene local expert panels in their respective counties to secure their advice on appropriate policies and interventions to address their priority health issues.

Figure 3. Intervention Plan development



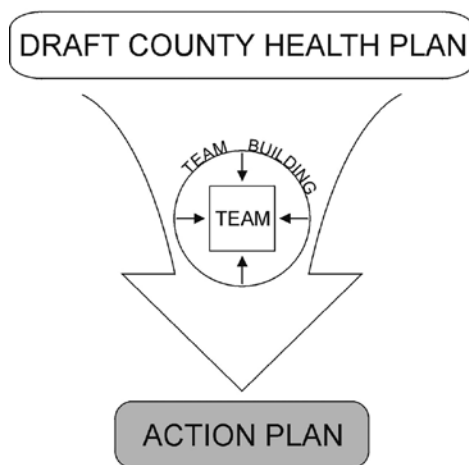
*Module 4 – Assurance function
(4 days intensive training)*

At the beginning of the fourth module, the county teams presented draft versions of their County Health Plans, including priorities and intended activities. Skills developed in this module include planning change, building institutional capacity for change, and conflict recognition and resolution. Another training objective was to familiarize participants with methods for analyzing the wider environment. Presentations given by representatives of the Ministry of Health, Ministry of Labor and Social Welfare and by the leader of the national health system reform project helped participants to view their county project from a larger, national perspective, anticipate changes and foresee potential obstacles. Skills like resource planning and management (both human and financial), implementation, quality assurance, monitoring and evaluation were also part of this module. Homework for this module was to finalize the County Health Profile and the County Health Plan for public presentation six months later. The assignment required the teams to present the results as well as describe the processes used to obtain them, including the participative assessment of health status and needs, selection of priority areas, policies and programs to address priority health needs, implementation plans, monitoring and quality assurance mechanisms, and evaluation plans (Figure 4).

Teams had to present their County Health Profiles and Plans locally to their own County Councils, and then nationally to other (not jet involved) Counties, and Ministries.

After the fourth workshop, for each cohort of Counties, a tutorial system of guidance and monitoring was introduced to ensure that team members not lose their commitment and enthusiasm. County team coordinators met mentors monthly and expert help and support to the counties was provided by the faculty on request throughout the process of development of the County Health Plans, till the “final exam”. At the beginning of 2003 “Health – Plan for it” training program was officially recognized as postgraduate (continuing education, i.e. re-licensing) training course by Medical School, University of Zagreb and by Croatian Medical (and Dental) Chamber. So for every County the modular training was successfully accomplished when the County Health Profile and Plan were orally presented (i.e. publicly defended) in front of the members of public health academia.

Figure 4. Action Plan development



In mid 2003, after three cohorts of Counties completed their modular training we decided that the best way to proceed (actually, open the second “implementation” stage of the project) is to work simultaneously with all nine counties reduced training teams, so called troikas. “Troikas” are groups of 3 people in county leadership positions: one elected official, one professional civil servant from the county administration, and one professional from the county public health institute. Their members liaise own county team with other counties and trainers from Stampar School. So, as soon as County completed its’ modular training her troika joined the second phase, assuring program continuity. During 2003 till 2007 troikas were regularly gathered to report on progress and get additional training that will enable them to steer the process of change locally (Mljet - October 2003, Samobor - March 2004, Uvala Scott – May 2004, Motovun – July 2004, Split – October 2004, Terme Tuhelj – February 2005, Vinkovci – April 2005, Motovun – July 2005, Labin – November 2005, Topusko – February 2006, Motovun – July 2006, Dubrovnik – September 2006, Motovun – July 2007).

Another second phase innovation was the introduction of the thematic gatherings. In order to assure the quality, in selection and implementation of public health interventions, we invited County troikas to “extend” their core teams with the local experts in field for each occasion. Thematic gatherings were covering Counties’ most frequently chosen priorities

– breast cancer, cardiovascular diseases, quality of life of elderly, quality of health care, water supply and sanitation, early drinking among youngsters, mental health, etc.

Conclusions

There are several changes in counties' health policy and practice that could be, even without thorough evaluation (will be published by December 2007), attributed to the "Healthy Counties" project.

1. The pure existence of eighteen Counties (and the City of Zagreb) Health Profiles and Plans is the evidence that this program had built counties capacity to assess public health needs in a participatory manner, to plan for health and assure provision of the type and quality of services better tailored to local health needs. Neither Croatian Counties had Health Profiles nor Plans before "Health-Plan for it" program nor non-participating Counties managed to develop one.
2. The Healthy Counties project has successfully engaged stakeholders from political, executive, and technical arena. It involved numerous and various community groups (youth, elderly, unemployed, farmers, islanders, urban families, etc.), hundreds of local politicians, and institutions in the needs assessment, prioritizing and planning for health cycle. None of the previous projects managed to do so.
3. County Health Plans are accepted politically, professionally and publicly.
4. Proposed interventions, for health improvements, rest on local organizational and human resources and are financially (by free will not by legal obligation) supported by the County budgets. With professional and academic scrutiny we tend to avoid the danger of offering easy and quick solutions (campaigning) for hard to solve problems. We tend to give a realistic value to behavioral change programs and push programs that are indeed addressing wider determinants of health.
5. The program's benefits in Croatia are extending both below and above the county level. It is providing support for the more localized Healthy Cities project, as well facilitating a paradigm shift in national Ministries' mindset that a centralized "one-size-fits-all" approach is no longer sufficient. (Still, there is lot to be done with the latest one).
6. This program had impressive impact on public health doctors. It brought back their dignity and the sense of mission, proving that "something" could be done. Through this program they realized that their split professional identity (divided between health services, politics and community) could be advantage because they are equipped to act in all those surroundings. With this program we supported public health doctors' professional transformation - from (poorly) trained statisticians into skilful mediators and community developers.
7. Post-war situations, migrations, and the process of transition were the reasons why it was hard to generate credible demographic analyses, statistical studies and quantitative health indicators. Therefore, we chose to use qualitative analysis as a corrective mechanism in the formulation of the public health policy. With the application of these very methods, we introduced a new perspective and strengthen (give credibility to) community views.
8. Above all, this program was faced with heavy constrains as for example short policy cycle (national elections at the end of 2003 and local, county elections in 2005) or passivity of the public sector (county and state administration, health care and social

welfare administration) which were overcome, with casualties but without the change in vision or spirit. We, tutors together with the Counties are, still, seeing this program as the learning opportunity sure that the next time, in the next project cycle, we will do it better.

9. The program's benefits in Croatia are extending both beyond and above the country level. It is providing support for the more localized Healthy Cities project, as well as facilitating a paradigm shift in national Ministries' mindset that a centralized »one-size-fits-all« approach is no longer sufficient. With the experience gained through this program Croatian faculty are extending their assistance to the other South East Europe countries, which are undergoing the same process. The first one to try out and test nationally our training model (since June 2003) was Republic of Macedonia.
10. At the 3rd Biannual Conference on "Strengthening Global Public Health Management Capacity: Leadership, Innovation, and Sustainability", held in May 21–26 in Cape Town, South Africa, CDC's SMDP program awarded "Health–Plan for It" - Healthy Counties program with Management Training Excellence Award, recognizing the use of "Health–Plan for It" program to strengthen the management capacity of county health departments in Croatia (45). The program was chosen for its impact on public health program planning nationwide. Istria County team has been awarded twice with The Applied Management Learning Awards, in 2004 for Istria County Health Plan, and in 2006 for "Improving patient flow process for the early detection of breast cancer in Pula General Hospital".

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Promoting Schools
Module: 2.3	ECTS: 1.0
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Key words	Health Promoting Schools, healthy schools, European network of health promoting schools
Learning objectives	After completing this module students and public health professionals should:: <ul style="list-style-type: none"> • be able to define the idea of Health Promotion Schools and describe the development of health promoting schools • understand the comprehensive view of health in school as a setting for health • differentiate health education and health promotion in schools from health promoting schools • be able to define the criteria for Health Promoting Schools • improve knowledge about the European Network of Health Promoting Schools and Health Promoting School Network in his/ her own country be aware of preventive medicine for improvement of school children health; • recognise the role of school physician in preventive medicine; • increase knowledge of evidence-based health promoting schools and effectiveness of work • critically compare the experience of Health Promoting Schools Network in own country with others
Abstract	The school, in conjunction with the family, is one of the key setting where individual and social development occurred. The health promoting school is based on a social model of health. This emphasizes the entire organization of the school, as well as focusing upon the individual. Paper describes the development of health promoting schools movement (from practice to policy), main principles and concepts, differences between school health promotion and health promoting schools. Special emphases is given to the criteria and set of guidelines towards which schools aspiring to the status of health promoting school were required to work.

Teaching methods	The module will comprise interactive lectures, field visits, small group discussions and individual work.
Specific recommendations for teachers	Use also the Case study Croatian Network of Health Promoting School as a stimulus for group discussion about similarities and differences between countries.
Assessment of Students	Written essay, case problem presentations.

HEALTH PROMOTING SCHOOLS

Gordana Pavlekovic, Lidia Georgieva

Educating children at school on health should be given the highest priority, not for their health per se, but also from the perspective of education, since they are to learn their need to be in good health.

Hiroshi Nakajima, WHO former president

School as a setting for health promotion

School is natural and favourable environment for health promotion. Health promotion in schools sets out from the need to create a setting in which pupils, teachers and parents work and live in a healthy manner. The health promoting activity in schools takes the well being of children and youth for a starting point by developing their self-respect and a respect of others, in a setting of peace and security, understanding and support, and one of healthy social and physical surroundings with the conservation of a healthy environment.

Since the 1950s, schools have been a popular setting for health promotion and health education (1). Early programmes focused on teaching children about health and its determinants, but the importance of enabling them to develop the skills to resist unhealthy lifestyles was soon recognized. Most programmes now teach these skills.

The development of school health promotion programmes has been influenced in general by developments in health promotion policy. The Declaration of Alma-Ata in 1978 (2), which aimed to provide a framework for the development of health strategies in WHO Member States, called for multisectoral approaches to health promotion and for public participation in developing and providing health programmes.

The Ottawa Charter for Health Promotion (3) drew attention to the effect of the environment on health and health promotion and to the importance of developing personal skills. The latter, developing personal skills, advocated the settings approach to health promotion and formed the basis for the development during the 1990s of the health promoting schools initiative, led by WHO in collaboration with the European Commission and the Council of Europe. The Health Promoting School movement is aligned with similar movements supported by the WHO such as Healthy Cities and Healthy Communities, Health Promoting Hospitals, Healthy Prisons, Healthy Workplaces, Agencies, T

It was clear that the school, in conjunction with the family, was one of the key setting where individual and social development occurred. It was also clear that school as a setting must move from school health promotion and education towards health promoting school.

In the 1990s, many countries in the European Region started to introduce radical changes to their education and health system. These rapid changes, particularly in the countries in transition, presented challenges and new opportunities and started to address such issues as:

- How the school setting can be conducive to the development of healthy lifestyles;
- How it contributes to creating and maintaining the health of its staff, pupils, parents and local communities;
- Which school procedures and environments require change to make the social and physical environment more health enhancing?

In 1995, WHO produced a set of guidelines towards which schools aspiring to the status of health promoting school were required to work (4). The guidelines covered six areas:

- school health policies
- the physical environment of the school
- the social environment of the school
- school/community relationships
- the development of personal health skills
- school health services.

Schools that aspire to be health promoting schools will focus on developing programmes that promote health, extending the teaching beyond health knowledge and skills to take account of the school social and physical environment and to develop links with the community.

The concept of whole school approaches has been emphasized so-called hidden curriculum in either reinforcing desirable attitudes or contradicting undesirable attitudes to health taught in the explicit (or formal) curriculum. This hidden curriculum includes the following:

1. the ethos (culture) established by the atmosphere of the school
2. the school's code of discipline
3. the prevailing standards of behaviour
4. the attitudes adopted by staff towards pupils
5. the values implicitly asserted by its mode of operation.

Subsequent guidelines on health promoting schools have emphasized related issues, such as the following (5):

- development of good relationships within the school
- the promotion of staff health and well-being
- promotion of self-esteem among pupils
- consideration of staff exemplars in health-related issues.

Main principles and criteria to be a health promoting school

From WHO Health Promotion Glossary, "a health promoting school can be characterized as a school constantly strengthening its capacity as a healthy setting for living, learning and working" (6).

The health promoting school is based on a social model of health. This emphasizes the entire organization of the school, as well as focusing upon the individual. At the heart of the model is the young person, who is viewed as a whole individual within a dynamic environment. Such an approach creates a highly supportive social setting that influences the visions, perceptions and actions of all who live, work, play and learn in the school. This generates a positive climate that influences how young people form relationships, make decisions and develop their values and attitudes. Healthy, well educated young people can help to reduce inequities in society, thus contributing to the health and wealth of the population at large.

The health promoting school is constantly strengthening its capacity as a healthy setting for living, learning and working. Furthermore, a Health-Promoting School (7):

- Fosters health and learning with all the measures at its disposal.
- Engages health and education officials, teachers, teachers' unions, students, parents, health providers and community leaders in efforts to make the school a healthy place.
- Strives to provide a healthy environment, school health education, and school health services along with school/community projects and outreach.
- Implements policies and practices that respect an individual's well-being and dignity,

provides multiple opportunities for success, and acknowledges good efforts and intentions as well as personal achievements.

- Strives to improve the health of school personnel, families and community members as well as pupils; and works with community leaders to help them understand how the community contributes to, or undermines, health and education.

The health promoting schools' principles are based on the Resolution of the First Conference of the European Network of Health Promoting Schools held in Athens in 1997. The principles are (8):

Democracy

The health promoting school is founded on democratic principles conducive to the promotion of learning, personal and social development and health.

Equity

Healthy schools ensure that the principle of equity is enshrined within the educational experience. This guarantees that schools are free from oppression, fear and ridicule. Healthy schools provide equal access for all to the full range of educational opportunities. The aim of healthy schools is to foster the emotional and social development of every individual, enabling each to attain his or her full potential free from discrimination.

Empowerment and Action Competence

Health promoting schools improve young people's abilities to take action, cope and generate change. It provides a setting within which they, working with their teachers and others, can gain a sense of achievement. Young people's empowerment, linked to their visions and ideas, enables them to influence their lives and living conditions. This is achieved through quality educational policies and practices, which provide opportunities for participation and critical decision-making.

School environment

Health promoting schools place emphasis on the school environment, both physical and social, as a crucial factor in promoting and sustaining health. The environment becomes an invaluable resource for effective health promotion, through the nurturing of policies and practices that promote well-being. This includes the formulation and monitoring of health and safety measures and the introduction of appropriate management structures.

Curriculum

A healthy schools curriculum provides opportunities for young people to gain knowledge and insight and to acquire essential life skills. The curriculum must be relevant to the needs of young people, both now and in the future, as well as stimulating their creativity, encouraging them to learn and providing them with necessary learning skills. The curriculum of a healthy school also is an inspiration to teachers and others working in the school. It also acts as a stimulus for their own personal and professional development.

Teachers' training

Teacher education (pre-service and in-service) is an investment in health as well as education. Legislation, together with appropriate incentives, must guide the structures of teacher learning using the conceptual framework of the health promoting school.

Measuring success

Health promoting schools assess the effectiveness of their actions upon the school and the community. Measuring success is viewed as a means of support and empowerment, and a process through which health promoting school principles can be applied to their most effective ends. In other words, assessment and evaluation are an integral part of instruction and planning.

Collaboration

Shared responsibility and close collaboration between schools, parents and communities is a central requirement in the strategic planning of healthy schools. Roles, responsibilities and lines of accountability must be established and clarified for all parties.

Communities

Parents and the school community have a vital role to play in leading, supporting and re-enforcing the concept of school health promotion. Working in partnership, schools, parents, NGO's and the local community, represent a powerful force for positive change. Similarly, young people themselves are more likely to become active citizens in their local communities. Jointly, the school and the community will have a positive impact in creating a social and physical environment conducive to better health.

Sustainability

All levels of government must commit resources, both financial and human, to health promotion. This commitment will contribute to the long-term sustainable development of the wider community.

The health promoting school is "healthy" in the way it functions as a community and organisation. There is a dynamic inter-relationship between the health of individual members of the school and the health of the school as a community (9).

The criteria for health promoting school are (10):

Active promotion of self-confidence of all pupils by demonstrating that everyone can make a contribution to the life of the school.

- Development of good relations between staff and pupils and between pupils in everyday school life.
- Understanding and evaluation of aims of HPS by staff and pupils.
- Provision of stimulating challenges for all pupils through a wide range of activities.
- Using every opportunity to improve the physical environment of the school.
- Development of good links between school, home and community.
- Development of good links between pupils from first, secondary and higher educational school grades for planning of a uniform health educational curriculum.
- Active promotion of the health and well being of the staff.
- Consideration of the role of staff exemplars in health-related issues.
- Consideration of the complementary role of school meals (if provided) to the health education curriculum.
- Realisation of the potential of specialist services in the community for advice and support in health education.
- Development of the education potential of the school health services beyond routine screening towards active support for the curriculum.

Four main themes highlighted factors that facilitated translation of health promotion principles into practice are (11):

Ownership and empowerment

A sense of ownership was considered crucial to the success of the project. O'Hara 2001 draw attention to the need to empower staff through «shared ownership» of change and innovation, an a framework enabling each member to take a much fuller role in strategic planning and professional decision-making.

The teachers are the key «agents of change» within schools (Turunen 1999, O'Hara 2001).

A sense of own.. was facilitated through various means. The initial needs assessment allowed schools to identify issues relevant to them and the local community. This was reinforced through the flexibility with which they were able to interpret the results, develop aims and objectives. Identifying a member of school staff as a project coordinator, as well as involving teachers, the catering team, pupils and parents helped to reinforce the message that all members of the community had a role to play.

The funding was not crucial – it simply provided the impetus for change.

Leadership and management

Each school was required to appoint project coordinator and typically a head teacher or member of senior management took on this role. It gave the project status and their involvement. Nonetheless, it is important to recognize that although effective leadership is critical, and an enthusiastic «driver for change» particularly so, responsibilities need to be shared among a larger group of staff.

Collaboration

Collaboration means to use intersectorial approach but also involvement of parent and pupils that pupils can share the perception that school did «listen» and act on their views, parental involvement

Integration

Integrating new initiatives into ongoing life of the school is considered crucial to sustainability in the longer term.

Aims and target groups in health promoting schools are (12):

For children and young people:

Helping children achieve a healthy and creative growth with the development of self-respect, self-reliance and security, a positive acceptance of the reality and the development of personal attitudes and skills for healthy life and communication with adults. This requires:

1. Development of self-reliance and self-respect;
2. Recognition of the importance of personal health;
3. Development of healthy lifestyle skills;
4. Development of the feeling of personal responsibility;
5. Development of communication with peers;
6. Development of good communication with adults;
7. Personal feeling good at school.

For teachers and other school staff:

Helping teachers and other school staff (headmasters, psychologists, pedagogues, dialectologists, etc.) to cope with their personal problems effectively and constructively, and develop an awareness of special needs of children, their parents and other professionals from the society coupled with the

development of attitudes, knowledge and skills by communicating with them. This means:

1. Recognizing the importance of personal health;
2. Learning the facts about health and disease;
3. Developing good communication with other school staff;
4. Developing a better communication with pupils and their parents.

For parents:

Helping the parents face effectively and constructively their personal problems by developing attitudes, knowledge and skills in communication with children and professionals from the school and local community.

For school doctors:

Helping physicians to effectively and constructively cope with the problems in daily work by developing a realization of children's needs and by developing the communication between children, adults and health promoting sites (schools and local community).

For local authority representatives:

Helping in the realization of current programs in schools and the local community basing oneself on the precepts of active cooperation and participation of young people and adults.

Effectiveness of health promoting schools

Over the last years, several research studies have been conducted with the aims to assess levels of effectiveness of health promotion practice in schools, to monitor health outcomes, to ascertain the needs of those involved, to indicate areas for development and to highlight indicators of success (13,14,15,16).

The IUPHE had developed a report on the evidence of health promotion effectiveness, which described effective health promotion in schools as follows (17):

The evidence indicated that programs were most effective when they were comprehensive, linking the school with other partners in the community. The results also showed that effectiveness and sustainability are governed by how closely the health promotion programs are linked to the primary role of schools in developing educational skills, on cognitive and social outcomes, rather than concentrate on achieving specific behavioural outcomes. One of the most important conclusions is that health promoting school practice depends on healthy policy framework and contextual factors influenced by decision-makers.

Selected results from the European analysis of evaluation practice present many challenges in methodology of evaluation and measurement of effectiveness. Health indicators at national and school's levels are still in doubt. The answers to questions why, to whom, what and who should be involved in assessment required more discussion and support. There is a variety in needs and competences. Therefore, a tailored approach based on experience in practice seems the best way to help in further development in the field of evaluation.

School health promotion interventions could be effective in transmitting knowledge, developing skills and supporting positive health choices. But the evidence indicated that programmes were most effective when they were comprehensive and "holistic", linking the school with agencies and sectors dealing with health, and where they continued for several years. Attention needed to be given to training teachers for health promotion.

School had been shown to be cost-effective sites for HP interventions. The effectiveness and sustainability of school health interventions were governed by how closely the HP interventions were linked to the primary business of school in developing educational skills and the knowledge base of young people. Evidence showed that programmes should focus primarily on cognitive and social outcomes, rather than concentrate on achieving specific behavioural outcomes.

Instead of conclusions

There is no doubt that health promoting schools have the potential to empower pupils, parents, teachers and health professionals to achieve and have control over their health, but the setting's approach still has many challenges to be discussed and managed. The evidence is clear that schools could not be expected to solve health and social problems in isolation from other forms of public health action. The Bangkok Declaration supports this need to move from practice to policy and the crucial roles and responsibilities in this process belong to governments and states.

There are many different programs in schools, mainly focused on disease prevention and health interventions, including intensive health educational programs. In further development, more attention should be paid to relationship between different programs running in particular school – this is the time for cooperation, not competition. Special attention must be done in health sector-educational sector-civil society relationships. Creation and availability of opportunities for sharing information at local, national and international levels must be supported. It is a prerequisite for harmonisation, not unification, in planning, implementation and evaluation of health promoting schools.

Further participatory research is crucial in development and sustainability of health promoting schools. Both sharing methodology experiences and information dissemination in monitoring and evaluation of the program at local, national and international levels should encourage participatory approaches to evaluation that provide meaningful opportunities for involvement by all those with a direct interest in health promotion initiatives.

“Every child and youth in Europe has the right should be educated in school promoting health”(8).

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2.3.1 COMPREHENSIVE VIEW OF HEALTH: CROATIAN NETWORK OF HEALTH PROMOTING SCHOOLS

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European Network of Health Promoting Schools (ENHPS)

In 1992, supported by the World Health Organization, Regional Office for Europe, the European Commission and the Council of Europe, the European Network of Health Promoting Schools (ENHPS) was set up to establish a group of model schools that should demonstrate the impact of health promotion in the school setting (1). The idea was that this model schools would disseminate their experience and information to the health and education sectors, influencing policy and practice in school health promotion, both nationally and internationally.

The ENHPS has expanded rapidly. Many countries have entered, through the creation of national networks of schools. The health promoting schools set out to create a means for all who live and work within it to take control over and improve their physical and emotional health. Participating schools adopt an integrated, holistic approach to health, prioritising it within the curriculum, school management and healthy lifestyle practice. It does this through changes in its internal and external relationship, the teaching and learning styles it adopts and the methods it uses to establish synergy with its social environment (2).

The concept of a European Network of Health Promoting Schools was conceived at a 1990 conference on health education sponsored by the European Commission, the Council of Europe and the WHO Regional Office for Europe. These three organizations agreed to work together to organize such a network. They started in 1991 with pilot schools in four countries of central and eastern Europe: the Czech Republic, Hungary, Poland and Slovakia. The network has since expanded to 41 countries with over 5,000 schools, 10,000 teachers and 500,000 pupils involved (3).

Countries wishing to join the network are required to have support from both their Ministers of Education and of Health and ten designated pilot schools willing and able to collaborate. Most networks have grown considerably, with other schools in the country joining and learning from the practices of the model pioneering schools.

To join the ENHPS each country produces:

- a signed commitment from people at the highest political level of the ministries of health and education
- the name and curriculum vitae of a designated national coordinator approved by both ministries
- a list of about 10-20 pilot schools, representing all levels of education and ensuring equal representation from different parts of the country
- a project plan for a period of at least three years a national support centre for the project plans for evaluation; and
- a fundraising strategy

Croatian Network of Health Promoting Schools (CNHPS)

In 1993, Croatia was still in the war, suffering and trying to solve many essential problems:

refugee and displaced children represented 11,4% of primary school children and 7,2% of secondary pupils, total number of 74,636 pupil over – classes were much larger, funding was not available to hire additional teachers, quality of education suffered, psychological and physical problems – the children as victims and witnesses of war, malnutrition, etc. were present. Development of the program based on the principles of health promoting schools has not being on the list of priorities.

However, both ministries – Croatian Ministry of Health and Ministry of Education and Sports recognized the value of the investment in health to children and youth and a great need to act immediately. Because of this, both ministers signed the official document (agreement) to join European Network of Health Promoting Schools, accepting their concepts and principles and promising to do the best in extremely difficult political and economic circumstances. Croatian Network of Health Promoting Schools (CNHPS) formally inaugurated in September 1993 with 11 primary Croatian schools, located mainly in the first-front-line cities and in Zagreb.

Besides war and post-war situation, there were (and still present) many other problems influencing the great need to initiate programme for health promoting school development in Croatia as follows:

- *Rational approach to health and health education:*

Professionally dominated educational and health care sector working FOR the benefit of children. The cognitive approach to the subject matters of health and disease is still present in subject teaching syllabi. Similarly, school health physicians see as their educational task the lecturing on specific topics for pupils or parents. Hence, the health-FOR-children approach has been one of the leading problems in the approach still present. It should be replaced by the partnership approach of health-With-children, and with the health-BY-children initiative and activities.

- *“Sectoral isolationism”:*

One of the example in which the gap between the intentions and realities, rhetoric’s and deeds, declaration and practice is the widest.

- *Absence of a holistic approach to health and a failure to perceive school as a health promoting setting*

While school is oriented toward “subjects and marks”, health is oriented to “problems and their solving”. Creation of targets subsuming the responsibility of those who live and work in a school setting have not been properly recognized nor adequately used. Besides, the public does not fully recognized the potential and the power possessed by school as an element of local community. In Croatia, the emphasis is on the role of family in forming the knowledge, attitudes and behaviour of children and youth.

- *Inadequate qualifications of health workers and educationalists:*

Lack of undergraduate and vocational training as well as continuous education on the subjects related to health and innovative learning-teaching methods.

- *Lack of teaching materials and teaching aids (manuals) to facilitate work with children and youth.*
- *Health systems reform*

The new Health Care Act re-constructed the system of health care and provided for privatisation of primary health care. At present, school health physicians are responsible only for preventive measures (no more curative care). Health care workers are more likely to provide anthropometrics measurements, vaccination, examination, than health promotion and health education.

- *Low general economic hardship (salaries of teachers and doctors), affecting their motivation.*
- *Present psychological problems arising from the war; including deviant and delinquent behaviour; drug addiction, etc.*

Comprehensive View of Health: Health Promoting Primary Schools in Croatia

With support given by UNICEF Office for Croatia (1996-2000), the Croatian Network of Health Promoting Schools (CNHPS) was extended. Since 2002 the number has been raised to 40 model schools and the work enriched by new contents and activities. Croatian Network of Health Promoting Schools added “Comprehensive View of Health”, trying to distinguish those eleven schools who participated in European project and point out the need to enlarge the idea and develop new strategies (4).

All those schools were NOT the members because they are “THE BEST” or “EXCELLENT” schools. They were members because they expressed the need and accepted the challenge to face with many school and health problems in their local settings. They are model-schools perceived the need to be aware of the commitment needed and time it involves. These schools have a great level of responsibilities; they are small and large (in size), located in different parts of Croatia (continental, coast, Slavonia-Istria-Dalmatia, rural and urban areas, etc.), active in local community activities variously.

The main task of the programme “Comprehensive View of Health” was to promote healthy life styles in primary schools and school settings. It intended to achieve this by encouraging and promoting healthy habits and attitudes and by fostering a more responsible stand toward one’s health.

The objectives were as follows:

- To develop holistic and comprehensive approach to health;
- To reinforce intersectoral collaboration between educational and health sectors;
- To utilize all opportunities (resources) within and out of schools;
- To involve children as active participants and to support self-help and mutual aid skills (“youth-for-youth program”);
- To act: school as a source of information and motivation for the family and for the community.

The first step was to make a clear difference between traditional health education in schools and health promoting schools (Table 1).

Table 1. Differences between the traditional health education and health promoting school

Traditional health education	Health promoting school
<p>Concerned with health education.</p> <p>Emphasizes personal hygiene and physical health while excluding the broader aspects of health.</p> <p>Focuses on health information and the adopting of facts.</p> <p>Lacks a holistic and continuous approach, which would take account of pupils.</p> <p>Strives to respond to serious problems or crises.</p> <p>Considers that psychosocial factors have a limited influence in relation to health issues.</p> <p>Recognizes only a limited importance for the school and school setting.</p> <p>Does not consider active direct action on health and well being of the school staff as essential.</p> <p>Does not include parents directly into the health educational program development.</p> <p>Recognizes the role of school as being limited only to preventing diseases.</p>	<p>Concerned with the wider aspects and views of school life and relations with the community.</p> <p>Based on a health model, which includes an interaction between physical, mental and environmental conditions.</p> <p>Based on active pupil participation and having a wide range of methods for the development of pupil skills.</p> <p>Recognizes a broad spectrum of influences on health, pupils' influence and endeavours to take share in pupils' current beliefs, values and attitudes.</p> <p>Admits that because in many health issues basic observation skills and procedures are customary they should be planned as part of curriculum.</p> <p>Views the development of positive self-awareness and gives people who aspire to more control over own life's a central role in health promotion.</p> <p>Recognizes the importance of the school setting to be proportionate to its aesthetic and direct psychosocial impact on pupils and staff.</p> <p>Views health promotion as important for the school staff's well being, recognizes that school staff has a role model.</p> <p>Considers having the parent's support and cooperation essential.</p> <p>Wants the School Health Services to take not only a broader view and role, including screenings and the prevention of diseases, but as well as make efforts to create an integrated services within which both curriculum and pupils' help become equal participants.</p>

Adapted from: Pavlekovic G, Kuzman M, Juresa V, 2001 (4)

Working methods and activities

Members of the working group represented health (Andrija Stampar School of Public Health and National Institute of Public Health) and educational (Ministry of Education and Sports) sector. Each school has a School program team (8 to 12 members), including main coordinator and responsible person. School director and school physician is always a regular member of the team.

Individual school health promoting project

Each primary school in the Network and the accompanying school health team develop health programme they selected themselves. They followed the aim and objectives of the programme as a whole, while specific objectives and tasks were selected according to local needs. Additionally, each school developed (by children) their own LOGOTYPE and SLOGAN. The list of individual schools' projects titles, aims, objectives and activities are printed in two publications: "Our first successful stories" and "Our new successful stories". Their main task is to stimulate and motivate others to follow good experiences from the model-schools (5,6).

Annual workshops

It was recognized that at least two workshops per year for the representatives of health promoting schools and their school physicians must be held as a prerequisite for mutual collaboration and development of common tasks. Each workshop has been attended by 80 – 90 persons (teachers, pupils, medical doctors) but also representatives from media, ministries and scientific community. Workshops usually had three main objectives: (a) assessment of development and plan for individual future school activities; (b) decision on common project activities and (c) professional theme – usually one important topic related to school health, prepared by different experts and guests. The themes covered mental and emotional children health, puberty, self-esteem, how to work with youth, how to work with parents, health risk behaviour, primary prevention in smoking, alcohol and drugs, healthy environment, active learning and innovative teaching methods, family planning, violence in schools, etc.

Educational kits

Additionally to individual projects, CNHPS decided to develop, apply and evaluate the Educational Kits on jointly selected topics. The first Educational Kit "A Steady Step and Right to Air: The Youth, Smoking and Alcohol" were printed in 1998 and disseminated in all primary schools in Croatia (7).. Two others – "Promoting the Health in Primary Schools" and "How to grow up and become an adult?" were published in year 2001 (4,8).

Differently from other recommendations, useful subjects and texts for the youth prepared by various experts, these Educational Kits are result of experiences of those who have been working with youth day by day and by youth themselves. Authors of the publications are engaged in direct everyday practice. There are pedagogies, psychologists, class teachers, etc. Methodologically, the Educational Kits are an innovation not only for us but also in the ENHPS.

Lessons learnt

The prerequisite to encourage the formulation of policy, including legislation, is to have a "hard" data to indicate what needs to be put in place by way of enabling mechanisms.

However, after different models developed and reported, there are still two main questions to be addressed:

1. What does it mean to be a health promoting school? What does it mean in everyday school-life, to achieve twelve recommended criteria?
2. What are (minimal) prerequisites at school-level that one school should develop a comprehensive health-promoting programme – does it possible in all schools in present national (both educational and health) circumstances?

Some preliminary results of our investigation/evaluation are listed below. 1040 teachers from 38 schools in CNHPS were involved in this research, answering on questions about factors influencing health promoting programme and their own perception and expectation of school as a setting for health promotion.

Table 2. What does it mean “the health promoting school?”

What does it mean «the health promoting school»?	Teachers’ response, means*
Pupils’ self-respect is developed.	3,6
Good relationships are valued between teachers and pupils and among pupils themselves	3,6
The school’s role is pedagogical and social, and not only educational	3,7
Pupils’ affirmation is encouraged through different extracurricular activities	4,1
Health of the environment is promoted	3,6
School, family and community are closely related	3,4
Primary and secondary schools are linked	2,6
Health of teachers is promoted to set an example to pupils	2,9
Healthy nutrition is promoted and taught	3,6
School physician and the school cooperate	4,0
School physician is encouraged to teach on health and illness	3,5

*means from 1 – not at all, to 5 – very much

Table 3. Factors influencing program implementation

Factors influencing program implementation	Teachers’ response, means*
General climate at the school	4,9
School Director’s attitude	4,9
Stimulation of other school staff	4,7
Past activities at the school	4,8
Teachers’ readiness to accept innovations	4,5
Training at the Network workshops	4,6
Other (additional) forms of education	4,0
Material resources	2,8
Knowledge and skills of new working methods	4,8
Stimulation of school physician	4,1
Personal motivation	4,7
Pupils’ satisfaction and interest	4,2
Awards and acknowledgements	3,5
Official appointments of a school	4,8
Challenge of innovativeness	3,9
Ideas by others	4,6

*means from 1 – not at all, to 5 – very much

Table 4. Ten prerequisites for health promotion programme to be implemented in all schools

Ten prerequisites for health promotion programme to be implemented in all schools	Rank*
Complete revision of primary school curriculum (task of the Ministry of Education and Sports)	1
Complete revision of standards and norms in the work of school physicians (task of the Ministry of Health)	2
Development of final design at the school level (local authorities)	8
Development of additional methodological manuals and educational kits for program implementation	3
Availability of additional audio and visual aids for program implementation	7
Availability of additional material resources for program implementation	9
Additional training of teachers in health and illness related topics	4
Additional training of teachers in innovative teaching and educational methods (creative learning)	5
Additional training of physicians in innovative teaching and educational methods	6
Motivation and stimulation of pupils for active participation in the activities «the youth for the for the youth»	10

*rank from 1 – most important, to 10- least important

After one decade of international experiences and many years of our national experiences it is well recognized that health-promoting education must be the essential part of social and economic development. The overall aim in our future development is to move from project to policy.

Exercise

Task 1.

Make your own comments on resultants from the Croatian Health Promoting Schools Network. Compare these results with the main principles in health promoting schools and factors facilitating and influencing development of the program. Develop proposal how to move from program towards policy.

Task 2.

Visit one of health promoting school in your community and make a structured interview with teachers, pupils and parents. Write critical essay on situation, using the guidelines for health promoting school.

Visit your national coordinator or visit Website WHO/EURO to be informed about current situation in your country. Discuss the available data and a real situation with other participants. Make a list of priorities to be done to improve the situation.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Healthy Kindergartens
Module: 2.4	ECTS: 0.5
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Key words	pre-school child, health promotion, kindergarten
Learning objectives	After completing this module students should: <ul style="list-style-type: none"> • be aware of importance of project such as Healthy Kindergartens project is; • recognise the need for establishing such a programme; • increase knowledge about how to launch such a programme;
Abstract	<p>Pre-school period is extremely important in adopting individual health behaviour. Consecutively it is very important how to present health and healthy behaviour to the child. The project is directed to create conditions for children's well-being and health, education for a healthy behaviour, and support of social and professional partners.</p> <p>At the beginning of the nineties, a project entitled »Healthy Schools« was launched by the World Health Organization to stimulate schools for incorporation of health promotion in their curricula and everyday life. Since this project was relating to primary schools only, similar project entitled »Healthy Kindergarten« was developed in some European countries.</p> <p>Two case studies are presented to illustrate the development, aim, and goals of healthy kindergartens, and as an example how the project concepts could be implemented as a routine.</p> <p>The first case study is presenting the development of the »Healthy Kindergarten« project in Slovenia, and the »Health in the Kindergartens« programme, the successor of the project, implemented as a routine.</p> <p>The second case is presenting an intervention tool in Hong Kong where children's health status was found to be poor.</p>

<p>Teaching methods</p>	<p>Teaching methods include introductory lecture, exercises, and interactive methods such as small group discussions. Students after introductory lectures first carefully read the recommended reference on healthy kindergartens. Afterwards they visit local kindergarten and discuss with the pedagogic workers special challenges and obstacles, which they bring out in connection to the implementation and development of the programme. At the end they discuss about possible indicators of programme development, which could be used for qualitative and quantitative evaluation.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are mainly available in the internet; • target audience: master degree students according to Bologna scheme.
<p>Assessment of students</p>	<p>Assessment is based on case problem presentation and oral exam.</p>

HEALTHY KINDERGARTENS

Ivan Erzen, Lijana Zaletel Kragelj

Theoretical Background

Definitions

According to Oxford Advanced Learners Dictionary (1) a kindergarten is defined as a school or class to prepare preschool children (i.e. mostly children between the ages of about two to five or six years old) for school. The synonym used in Great Britain and Australia is a nursery school.

The expression »healthy« is in this module used in a meaning »good for health« and »friendly to health«, and in any case not as a criterion of any formal classification of educational settings in healthy and unhealthy. It is rather expressing the main goal if initiative for stimulating kindergartens to in all respect become friendly to children's health.

Children's health and kindergartens on the agenda

Health of the youngest population groups is of enormous importance for the population as a whole. Creating an environment, which allows children to develop their physical, emotional and social potential, is an investment with long-term health effects. Consequently, giving children a healthy start in life should be a top priority for any society (2).

Since starting from the early life children are acquiring basic social and health values, it is very important to give them the right values. In the process of health behaviour literacy the educational system settings¹ has one of the key positions, kindergartens being one of them. In Health 21, the health for all policy frameworks for the European Region of the World Health Organization (2) the important role of the kindergartens in health behaviour literacy process and in supporting healthy natural and social environment is evident. It is set out in four out of twenty-one targets of this policy:

- Target 3 – healthy start in life;
- Target 4 – health of young people (up to 18 years of age); target 4.1 is especially important in exposing the role of kindergartens being children and adolescents should have better life skills and the capacity to make healthy choices;
- Target 13 – settings for health; target 13.4 is especially important in exposing the role of kindergartens being at least 50% of children should have the opportunity of being educated in a health-promoting kindergarten, and 95% in a health-promoting school;
- Target 20 – mobilizing partners for health.

Important aspect will be discussed later on.

Settings for health

»Settings for health« is being one of the most important approaches to promote health through community action. Action itself can take many different forms: through organizational development, including change to the physical environment, to the organizational structure, administration and management. Settings can also be used to

¹ According to WHO, a setting is the place or social context in which people engage in daily activities in which environmental, organizational and personal factors interact to affect health and wellbeing (3). Examples of settings include schools, kindergartens, work sites, hospitals, villages and cities.

promote health by reaching people who work in them, or using them to gain access to services, and through the interaction of different settings with the wider community (3).

Educational settings, e.g. kindergartens, primary and secondary schools, are very important in this respect since childhood and adolescence are stages of life during which there are particular periods of intellectual and physical development of a human being, and during which social and health skills are acquired, being very important for the adulthood as well.

Among educational setting perhaps the most important role have those caring for education and upbringing the youngest population groups. Kindergartens play extremely important role in helping children to start their life in healthy environment as well as in environment friendly to health since they convey basic health values to children and help them to develop basic social skills (2).

Health promoting schools and kindergartens

Focusing only on kindergartens in this context and not considering at the same time at least primary schools is rather difficult since health promoting schools and health promoting kindergartens have a lot in common. Also, the »The Healthy kindergarten« initiative arose from »The Healthy School« initiative. Consequently, it is reasonable to introduce health promoting schools first.

Health promoting schools

Schools are those settings in which health can be created and sustained. Children's perception of health can be greatly enhanced by the content of the formal teaching curriculum. Action to protect and promote health can be brought to life in the school's physical environment. The school influences the perceptions, attitudes, actions and behaviour not only of pupils but also of teachers, parents, health care workers and local communities.

A health promoting school is defined as a school constantly strengthening its capacity as a healthy setting for living, learning and working (3-5). According to WHO (5), the main characteristics of health promoting schools are:

- they foster health and learning with all the measures at its disposal;
- they engage health and education officials, teachers, teachers' unions, children, parents, health providers and community leaders in efforts to make the school a healthy place;
- they strive to provide a healthy environment, school health education, and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation, and programmes for counselling, social support and mental health promotion;
- they implement policies and practices that respect an individual's well being and dignity, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as personal achievements;
- they strive to improve the health of school personnel, families and community members as well as children; and works with community leaders to help them understand how the community contributes to, or undermines, health and education.

They are focused on:

- caring for oneself and others
- making healthy decisions and taking control over life's circumstances
- creating conditions that are conducive to health (through policies, services, physical / social conditions)
- building capacities for peace, shelter, education, food, income, a stable ecosystem, equity, social justice, sustainable development.
- preventing leading causes of death, disease and disability, e.g. drugs and alcohol, violence and injuries, unhealthy nutrition, etc.;
- influencing health-related behaviours: knowledge, beliefs, skills, attitudes, values, support.

All aspects of life organized in schools contribute to physical, social and emotional health of children and adolescents. Moreover, the young learn best about responsibility and empowerment through direct participation in decision-making. The same holds for kindergartens as well.

In 1991 Regional Office of WHO for Europe launched the project »Healthy Schools« to stimulate schools for incorporation of health promotion in their curricula and everyday life. This project, as well as the network of schools joining this project, European Network of Health Promoting Schools – ENHPS (6, 7), the network of »Healthy Schools« in the European region, was relating to primary schools only.

Health promoting kindergartens

One of the most important aspects of relationship between health and education in early childhood is empowering young people for clashing with health threats. Strong sense of coherence seems to be one of the most beneficial factors in this context (8).

A sense of coherence and belonging must be built up starting from infancy and childhood. Experiences acquired in child's basic communities i.e. the family, kindergarten community, and afterwards a school community, play an important role in ensuring that young people get a consistent message and acquire the resources and coping skills for managing health and other threats (2). Thus, health promotion needs to be an important aspect of formal and informal educational process.

The most important aims of kindergartens friendly to health, e.g. health promoting kindergartens, are (2):

- education aims to provide the skills and action required for behavioural change, and not merely to transmit knowledge;
- equity, solidarity and human dignity, the cornerstones of good health of the population, are to be experienced and taught;
- teachers contribute to the healthy development of children by providing a model of a healthy physical and social environment, by:
 - teaching and using fundamental attitudes to support health e.g. by introducing basic hygienic behaviour, healthy eating habits, and basic health enhancing physical activities;
 - laying down the ethical foundations and foundations of social responsibility for health;
- education also serves to transmit and develop cultural identity and concepts of social responsibility, democracy, equity and empowerment.

In health promoting kindergartens principals, teachers, parents and the children should be partners who together design, implement and evaluate programmes to enhance their basic health values, promote healthy lifestyles for themselves, prevent accidents and acquire basic life skills. This partnership would be stronger when supported by school health service.

»Healthy kindergarten« and related projects

As a response to »Healthy Schools« project, in some European countries few years later grew up an idea to launch a similar project for kindergartens. Two of the first countries where this process was started were Slovenia (9) and Czech Republic (10, 11).

The movement was especially strong in Czech Republic, where the sixteen principles of healthy kindergartens were elaborated by a group of professionals in the project entitled »Healthy Kindergarten« (10):

GROUP I: Creating conditions for well-being and health.

1. Holistic health concept;
2. Meeting the needs;
3. Spontaneous play;
4. Free movement;
5. Healthy diet;
6. Self-esteem support;
7. Social climate of respect and cooperation;
8. Rules and rhythm;
9. Environmental comfort;

GROUP II: Educating for a healthy lifestyle.

10. Early education for a healthy lifestyle;
11. Experiential learning;

GROUP III: Seeking the support of social and professional partners and collaborating with them.

12. Kindergarten and family community;
13. Participation in management and education;
14. Teacher's healthy lifestyle;
15. Kindergarten as part of the community;
16. Stress-free transition to primary school.

Similar projects were launched few years later in other European countries, as for example in Slovakia (12), Germany (13), and Estonia (14), and also in Asia, as for example in Hong Kong (15).

Case study 1 – kindergartens and health in Slovenia Kindergartens in Slovenia and their role

In Slovenia, kindergartens are institutions with a very long tradition. They are organized separately from primary and secondary schools. Besides being a day care centre for children between 2 and 5 years of age they are an important educational setting since the kindergarten teachers in Slovenia are pedagogical professionals with university educational level.

Major part of pre-school children in Slovenia is entrusted to the care provided by the kindergartens. In school year 2004/2005, for example, 61% of this population group was included in kindergartens educational system (16).

Short history of implementing the healthy kindergarten concept in Slovenia

The healthy kindergarten project started in Slovenia as early as in 1993. At that time it became obvious that it was of enormous importance to enhance the awareness in the population that the great gulf between knowledge of what is good for health and between actual circumstances in the sphere of health behaviour had to be diminished. In that aspect, it was of great importance to strengthen the awareness that every individual is also responsible for his/her own health and not only the society or the state what was the case before Slovenia became independent.

However, it was obvious as well that this difficult task could be accomplished only if the individuals would be adequately educated to have habits and skills that would help them to solve health problems and to meet decisions in favour of their health. It has been clear at that time already that the success on that field would be expected only if close and constant collaboration of all those, responsible for health of the children (or those who could in any way affect the health of the children) would be provided. In the first line, this could be achieved through establishing an environment well disposed to health.

On this basis the project »Healthy Kindergarten« was started as incentive and under the auspices of CINDI (Countrywide Integrated Non-communicable Disease Intervention) Slovenia preventive unit, located at Community Health Centre Ljubljana (9, 17, 18).

The project in a following ten years outgrew into a programme entitled »Health in the Kindergartens« (16).

»Health in the Kindergartens« programme

The programme »Health in the Kindergartens« was started in 2006. It is run in the frame of Regional Public Health Institute Ljubljana (16).

In the first phase only the kindergartens from Ljubljana region are included in the programme. In the second phase it will be extended countrywide.

Important characteristics of the programme

Within the project, special attention is given to health promotion and promotion of healthy way of living, prevention of risk factors and stimulation of forming a healthy and safe environment in kindergartens and its surrounding.

Innovative management is significant for the project (19). Parents, educators, professionals from other fields and representatives of local administration are included in the management. Such approach enables to solve the problems immediately, to pave the way for intersectional cooperation and to instate conditions for healthy way of living. Besides, on local level, the project is included in Healthy Cities Project and that way it represents (together with Healthy Schools Project) a foundation for higher quality and for healthier life of next generations.

Aims of the programme

Basic aims of the project are:

- to give every child an opportunity to develop his physical, psychical and social potentials in highest measure;

- to form, initiate and encourage healthy way of living and work in kindergartens (for children, staff, parents and visitors in kindergarten);
- to encourage the children, their parents and educators to gain knowledge and skills, that are needed in everyday wilful decision-making about health;
- to stimulate personal, family and social responsibility for health, and
- to include all social sectors, which have an effect on children's health.

Goals of the programme

Goals of the programme are divided into two main groups. The first group is consisted of goals directed to achieve healthy environment for pre-school children, while the goals of the second group are directed in diminishing the burden of major health problems e.g. non-communicable diseases, communicable diseases, injuries, and mental disorders (16).

1. Group 1.

Basic goals of this group are:

- linkage of the partners (kindergartens principals, teachers, parents and the children) to achieve the common aims;
- empower kindergartens to accomplish their mission in the field of health promotion including health education;
- empower kindergartens to increase inclusion of children with special needs in their programmes.

2. Group 2.

Basic goals of this group are:

- in diminishing the burden of non-communicable diseases:
 - to increase healthy food consumption, and healthy nutrition behaviour,
 - to increase health enhancing physical activity behaviour, and
 - to decrease passive smoking;
- in diminishing the burden of communicable diseases:
 - to increase personal hygiene behaviour,
 - to decrease transmission of communicable diseases by increasing knowledge about characteristics of diseases of this group, and
 - to promote vaccination programmes;
- in diminishing the burden of injuries:
 - to assure safe and secure physical environment, and
 - to increase safe behaviour in kindergartens, at home as well as in the transport;
- in diminishing the burden of mental disorders and diseases:
 - to increase good interpersonal communication,
 - to increase self-esteem, and
 - to decrease violence and violent behaviour in the kindergartens and in the family.

First steps of the programme

In the first year the main task to be accomplished was to make a snapshot of the situation left after the predecessor of the programme, the project »Healthy Kindergarten« was finished, and to evaluate the extent of the effects of this project. All kindergartens in Ljubljana region were handed the questionnaire for achieving this goal.

Also the activities to introduce the programme in a suitable and effective way (e.g. by using social marketing methods) were started. For achieving this goal in the above mentioned questionnaire the questions about needs of kindergartens in the field of health promotion were included. For the first information the pamphlet describing the most important characteristics of the programme was prepared and distributed to all kindergartens in the region

Case study 2–Kindergartens join CUHK’s healthy schools (pre-school) award scheme

A health survey done by the Centre for Health Education and Health Promotion of the Faculty of Medicine (the Centre), The Chinese University of Hong Kong indicated the health condition of pre-school children needs great improvement. It demonstrated a considerable concern for pre-school children’s eating habits, hygiene practices and living environment. Capitalizing on the success of the Healthy Schools Award Scheme, the Centre launched the »Healthy Schools (Pre-school) Award Scheme« to promote the collaboration in parents, schools and the community, building a healthier future for next generation (15).

Identification of the problem

In 2004, the Centre has conducted a health survey for 1,639 pre-school children aged 2-7 by means of parent questionnaires. The results showed that 14.2% of these children were reported over-weight. Nearly 75% of them had a daily intake of vegetables less than 1-2 servings and the intake of fruits less than 1 serving as recommended by dietitians. Though 86.6% of these children would consume milk frequently, 61.3% of the parents would choose full cream milk for their children and only 14.1% of the parents would choose low fat milk or skimmed milk. As well, only 74% of these children had five times or more outdoor activities in a week. In addition, only 20% of these children would wash hands before meals and almost 78% of them had never have dental check-up. On the other hand, 24.1% of these children were exposed to second-hand smoke at home more than one hour per day and more than 34.4% of them were exposed to second-hand smoke at indoor environment more than one hour per day. It was reported that the sources of the second-hand smoke were mainly the family member (23%) and the public area (63.3%).

The findings of the study thus demonstrated that the parents of the pre-school children in Hong Kong should pay more concern on maintaining a balanced diet and regular exercise for their children. Also good hygiene practices should be developed, especially when children are still very young, since it is more effective to establish healthy living style and good hygiene practices when children are young than changing their bad living habit after it has set in their minds.

The Centre suggested that in order to provide a healthy living and learning environment for children in Hong Kong and to ensure a positive health starting early in their life, a strong collaboration should be built between families and schools.

»Healthy Schools (Pre-School) Award Scheme«

The »Healthy Schools (Pre-school) Award Scheme« is supported by the Quality Education Fund and the Hong Kong Institution of Education is the major collaborating party of the Scheme. The Scheme has gained the endorsement from the World Health

Organization, Regional Office for Western Pacific and is the first health promoting school movement in pre-school education. The Education and Manpower Bureau, the Hong Kong Institution of Education together with the Centre are the awarding bodies of the Scheme.

The »Healthy Schools (Pre-school) Award Scheme« is built on the framework which consists of components for health promoting school in six key areas adapted from the WHO's guidelines including school health policies, health services, personal health skills, social environment, community relationships, and physical environment. It aims to promote a healthy, hygienic, safe and harmonious learning environment and balanced development of different aspects necessary to a child's development and enhance the quality education for pre-school children. A comprehensive framework and guidelines have been provided and there is a system to monitor the progress of development and to accredit the attainment of the participating kindergartens.

The Centre organises training for staff to equip them with knowledge and skills to promote health in kindergarten children and to conduct self-evaluation on the progress of developing a healthy kindergarten. The participating kindergartens are provided with professional support for organising health education and health promoting activities as family health education.

The Centre is facilitating the participating kindergartens in accessing relevant health information and encouraging them to set up health resources corner. District-based healthy kindergarten networks would have been established as a platform for sharing experience and good practices. The Centre also promotes mentor-mentor relationship between Healthy School Mentors and participating kindergartens to realize the full potential of the sustainable development of the concept of health promoting school. As well, the collaboration between kindergartens and primary health care professionals who are interested in promoting child health is promoted to strengthen the health services for kindergarten children.

The Scheme not only aims to promote the all-round development of pre-school children, but also to improve the health and well-being of parents, school staff and the community at large. The Scheme promotes balanced development, better health and emotional well-being for kindergarten children, as well, staff development, parental education, involvement of whole school community and linkage with different stakeholders in kindergarten setting. The Scheme received enormous responses from the public and a total of 83 kindergartens are participating in the Scheme. It is anticipated that the Scheme will eventually extend to all early childhood settings in Hong Kong.

Exercise

The main aim of the exercise is to get the students acquainted with the health promotion programme, which was developed for the very young children that are in kindergarten, with the possibilities and opportunities of such an approach.

Task 1:

Carefully read the reference:

Havlíková M, Kopriva P. The Healthy Kindergarten – Zdravá mateřská škola: a model project of health promotion in the kindergartens in Czech Republic. Prague: Czech Republic National Institute of Public Health, 1996. Available from: URL: http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/16/0b/01.pdf.

Task 2:

Identify the most important elements of Healthy Kindergartens programme and key prerequisites that need to be fulfilled in order to enable implementation and development of the programme.

Task 3:

List the most important signs of Healthy Kindergartens (at least 10) which cover all aspects important for healthy development of children between 2 and 5 years of age.

Task 4:

Visit local kindergarten and discuss with the pedagogic workers special challenges and obstacles, which they bring out in connection to the implementation and development of the programme.

Task 5:

Discuss about possible indicators of programme development, which could be used for qualitative and quantitative evaluation.

After accomplishing this module students will become aware of the complexity of a social programme in term of participator, approaches, different social, cultural and economical environment as well as in term of broader social support from governmental and nongovernmental organisations.

Students will understand that the program implementation, development and evaluation is a complex task where all partners need to be fully involved and where also a strong support from the local community is necessary

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Promoting Workplaces
Module: 2.5	ECTS: 0.5
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Key words	Health promotion, workplace, programs, health circles, strategy
Learning objectives	At the end of this course students should be able to identify the basic concepts of workplace health promotion, and compare different approaches.
Abstract	<p>Workplace health promotion is a process of actively achieving health at workplace by changing working and living conditions. As a key concept it includes measures aimed both at individual and at environmental level from different areas. Good practice in workplace health promotion demands statutory requirements and strong motivation. Increasing consciousness and responsibility for health, identification and dissemination of models of good practice, development and incorporating adequate policies are priorities in workplace health promotion. The basic principles on which workplace health promotion has to be developed are: awareness raising, setting up infrastructure and service management. Beneficial effects can be achieved on individual, enterprise and society levels. The Institute of Occupational Health, WHO Collaborating Center, plays a major role in launching the first workplace health promotion activities in the Republic of Macedonia (education programs for stress managing at workplace, tobacco free workplaces), but the strongest impulse for workplace health promotion in the country is created by the implementation of the WHO's Health, Environment and Safety Management in Enterprises (HESME) program.</p>

Teaching methods	Teaching methods will include introduction lecture, interactive small group discussions on recommended subjects followed by group reports and overall discussion and teacher's evaluation.
Specific recommendations for the teachers	This Module will be organised within 0.50 ECTS credits out of which 2 hours will be done under supervision (lecture and exercise) and the rest is individual student's work. Examples of workplace health promotion programs performed in student's own countries should be used.
Assessment of students	The final mark should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work, reports and final discussion.

HEALTH PROMOTING WORKPLACES

Jovanka Karadzinska-Bislimovska, Snezana Risteska-Kuc, Saso Stoleski, Dragan Mijakoski

Health at workplace

Workplaces are communities with interactive relations of people that share common environment, interests and aims in which interactive process between the individuals and work conditions is established. The concept of work is becoming increasingly flexible and changing in recent years. Situational analysis have indicated that work and work environment in the 21st century are constantly changing and are characterized by globalization, unemployment, increased development of information technology, telecommunications, aging, service and consumer orientation, increased number of employed in small and medium sized enterprises and self-employed people. The most noticeable change in the world of work is the fall of contribution of manufacturing industries to national economies compared to service industries. Global competition demands changes at workplaces. More commitment, creativity, greater flexibility, higher level of social skills are expected, thus leading to development of workplaces based on cooperation and participation of the staff. Economic conditions and trends in working life such as cutbacks, part-time working, and unemployment affect social development and health of people.

Health at workplace refers to effects of work conditions on somatic and mental health and work capacity. There is an evident shift in concept of health at work. It has been extended from the traditional concern with back, muscles, joints, hands, skin, lungs and hearing to a comprehensive definition of health (physical, emotional and social well-being). It has also been additionally extended to inter-human relations (discrimination, bullying, mobbing) and personal problems of dealing and managing diseases (coping, burn out, stress).

The responsibility for health is shared by the employers, workers themselves and society as a mutual responsibility and interest. Healthy work force is essential for sustainable development and prosperity of a country. Health and well-being at work places are basic prerequisites for increased innovative potential of enterprises, contributing to growth and employment. There is a convincing evidence that improvements in workplace health care can be key ingredients of business efficiency and competitiveness. The success of the enterprise is dependent on qualifications, motivation, moral, interpersonal relationship as well as health of workers that requires developing systematic health policy and applying strategies for workplace health promotion. Direct inclusion and motivation of workers in maintaining and improving their own health at workplaces is essential for the process.

Definition

Workplace health promotion is a process of actively achieving health at workplace, by changing working and living conditions. It enables control and improvement of health, gives opportunities for good health as well as enables development of good health and good health related behaviors. It is a strategy aimed both at prevention of diseases at workplace, as well as encouraging the potentials for health promotion and welfare of work force.

According to Luxembourg Declaration from 1997, workplace health promotion consists of combined activities of employers, employees and community to improve the health and well-being of people at work which can be achieved through a combination of: improving

work organization and work environment, promoting active participation and encouraging personal development (1).

Workplace health promotion is a process which enables (far beyond primary prevention on workplace) strengthening resources and capabilities in living and working conditions in individuals and groups. It also clearly goes above and beyond traditionally regulated occupational health and safety including issues such as job satisfaction, personal autonomy, social relationships, technical, organizational as well as communicative dimensions.

The motto “healthy people in healthy enterprises” refers to health and well-being of employees and their families and contributes to achievement of economic success by increasing productivity and economic growth, thus enabling human approach to the enterprise and a basis for solid business practice.

Statutory framework

The major developments of workplace health promotion are linked to the initiatives of the WHO. Alma Ata Declaration (1978) and Ottawa Charter (1986) have set the scene for new theoretical and practical aspects of this activity (2,3). WHO with strategic documents like ILO conventions, Health for All in 21st century, plays an important role in preparing the directions of workplace health promotion. This agenda refers to improvement of economical position due to importance of social welfare, decrease of unemployment, maintenance of work capacity.

From European point of view, Council directive 89/381/EC, (1989) introducing the measures to encourage improvements in health and safety of employees has got a crucial role. This document gave the basis for reorientation of traditional occupational health and created a public health importance of the workplace. In 1996, the European Network for Workplace Health Promotion (ENWHP) was established being supported by the European Commission within the Program for Action on Health Promotion, Information, Education and Training within the framework for action in the field of public health. ENWHP comprises organizations such as national occupational health and safety institutes, public health institutions and ministries of health and labor from all member states of the European Community, countries in the European economic area and a number of candidate countries. ENWHP had defined the workplace health promotion and incorporated it in Luxembourg Declaration on Workplace Health Promotion in 1997 which was a milestone to the network. It views the workplace health promotion as a comprehensive approach, which necessitates a common strategy for all players inside and outside the enterprise. The Lisbon Statement on Workplace Health in Small and Medium Sized Enterprises was launched by the ENWHP and adopted at the network meeting 2001 in Lisbon concerning the growing importance of small and medium sized enterprises in modern economy and specific needs and approach in workplace health promotion.

Motives and interest

Good practice in workplace health promotion demands not only statutory requirements. Statutory pressure does not necessarily guarantee success in workplace health promotion activities and in many countries there is a gap between statutory obligations and reality. Modern understanding of state action in occupational health and safety goes towards fewer statutory regulations, but to more quality assurance and mediation. This is because legislation

is a relatively weak instrument for encouraging workplace health promotion if employers themselves are not interested.

Economical aspect is one of the most important motives for workplace health promotion. Motivation of management team, workers and their representatives is essential. Insurance companies, health insurance funds, pensioners funds, public health services, governmental agencies can also be motivated in workplace health promotion activities.

Economical aims of the management are compatible with the workplace health promotion aims: high productivity, positive image, reduction of sick-leave costs, decreased interruption of production. The reasons for de-motivation of management team can be: decreased freedom of managing decision making, fear of costs and fear of decrease the competitiveness of the enterprise.

The workers and representative bodies might be motivated by enabling an adequate life standard, human work relations, freedom and possibility of action, co-decision making, practical application of knowledge and skills. Skepticism about the measures oriented towards change in behavior and contradiction between contracts that enable higher salaries and efforts to improve health, might be an obstacle in this process.

Services of occupational health and safety at work are usually the initiators of workplace health promotion programs and have an expert role in the process (medical and technical expertise) though initiative can come from every potential partner in the program.

Insurance companies, health insurance fund, pensioners fund, public health services, governmental agencies find their interest in optimal health protection of active population, decreasing costs of social insurance, support of employment policy, partnership with workers, employers or their representatives.

Concept and targets for action

Workplace health promotion as a key concept includes measures aimed both at the individual and at environmental level from different areas. A diverse range of causes trigger workplace health problems including poor working and ergonomic conditions, unsatisfactory working environment, bad diet or lack of exercise. When looking at the physical and psychological demands of the ordinary working day, situations which pose a threat to health can be identified and elimination or reduction process proposed. Two strategies are combined: strategy of risk reduction and strategy for development of factors for protection of health potentials. The aims of these measures and strategies are promotion and coordination of efforts for better physical, mental and psychic health of workers and employers, more efficient and more creative work, improvement of interpersonal relations, decreasing of sick-leave costs, increasing of productivity. The emphasis in dealing with health problems at work has shifted from preventive screening, prevention of accidents, management of chronic problems and access to health care to concern with health related and health directed behavior (lifestyle), family health and individual obligations as well as problem of absenteeism. Workplace health promotion programs are largely centered on exercise, nutrition, relaxation and stress reduction as well as projects related to addiction (tobacco, alcohol, drugs). Change in demographic structure of workforce, rapidly changing working conditions brought about by modern technology need to be addressed by modern workplace health promotion. In Canada, 2002, 948 female were included in a research in order to assess the influence of educational interventions, pamphlets and lectures at workplace to positive prevention behavior for breast cancer (4). It

is evident that work hours combined with educational material produce important changes in the behavior and the results of this study can be used for development of effective workplace health promotion programs. The aim of The Happy Heart at work Program in Ireland (5) was to promote a healthy lifestyle through specially designed materials at 785 sites for preventive activities (tobacco free work environment, health and welfare of employees, good nutrition habits). The assessment has shown improvement of lifestyle behavior of employees and their moral as well as company image. It is found that risk behavior is frequent in employees and that even 79% of the examined individuals have a positive attitude towards workplace health promotion interventions (6). The important aspect of workplace health promotion is development and implementation of coherent and well planned strategy against violence at workplace that is based on needs assessment, formulating policies, management, registration of incidents and support strategy (7). Important directions in workplace health promotion are the interpersonal relations at workplace (8). Evaluation of the effectiveness of Patient-centered Assessment and Counseling for Exercise and Nutrition Program conducted with individual counseling at workplace has indicated positive influence of the program to physical activities and fitness (9). Research of 1029 workers in Japanese factories showed that the trends of absenteeism decreased after the application of psychosocial workplace health promotion program (10). The aims of ENWHP program till 2010 are: reduction of injuries at work and work related diseases (cardiovascular, spine and musculoskeletal disorders, respiratory disorders), reduction of chronic diseases of general population caused by work activities and technologies, reduction of sickness absence by work related diseases (11).

In some countries (Austria and Germany) the pilot projects “employer models” are based on the philosophy that the biggest obstacle to effective prevention is the employer’s lack of knowledge and motivation when occupational health and safety issues are concerned. Therefore, this model focuses on training courses and seminars designed to inform and inspire the employers (learning about risk assessment, cost efficiency, responsibility, organization, hazardous substances and development of action programs). In France and the southern European countries medical professionals exert a great deal of influence on workplace health promotion while in northern Europe an interdisciplinary orientation predominates. These two approaches result in different philosophies: the first one with emphasis placed on employee health and the second one with multidisciplinary cooperation where the enterprise appears to be the “patient”.

Increasing consciousness and responsibility for health, identification and dissemination of models of good practice, development and incorporating adequate policies are priorities in workplace health promotion.

Principles

The basic principles on which workplace health promotion has to be developed are:

1. Awareness raising (motivation, cooperation, consultancy, interest and acceptance);
2. Setting up infrastructure - developing new policies and integrating existing ones (setting up workplace health promotion institutes, establishing dialogue between interested parties, making political commitments to workplace health promotion targets, developing policy documents, providing subsidies, employing workplace health promotion professionals, networking and partnership building). Creating interest and partnership between all participants is essential with respect of multidisciplinary and intersectoral approach;

3. Workplace health promotion service management with respect to: integration (in which services and measures must be closely related in terms of content to practical problems), participation (involvement of employees), balanced approach (seeking to improve the quality of working life and conditions as well as focusing on the behavior of the individual employee), based needs (ensuring that any action is based on an analysis of the health requirements) and accessibility (as local as possible) (12).

Approach

The most advanced approaches in workplace health promotion have mainly been developed in northern European countries, such as Finland, Sweden, Denmark, the Netherlands, Germany and Austria (13). They are characterized by the following elements, in spite of various differences in detail:

1. Analysis

Health promotion measures are developed on the basis of information and data about the health situation in the enterprise (for example: absenteeism, employees fluctuation, quality production, human resources and budgets, accidents and injuries at work, monitoring of risk factors, medical check-ups, health insurance, questionnaire).

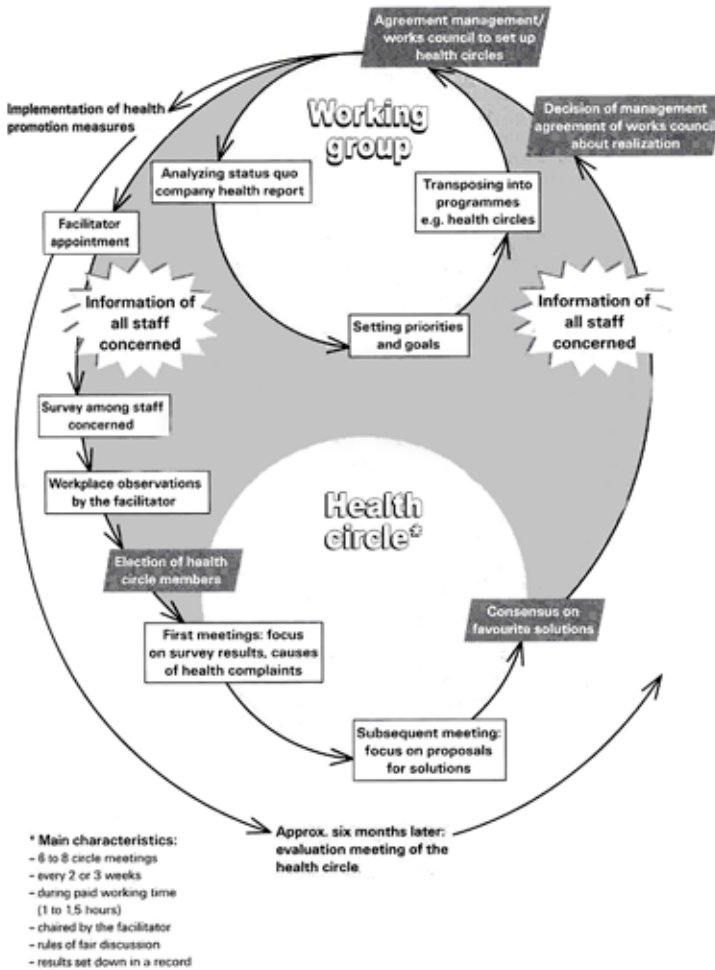
2. Planning and project control

The interpretation of health problems, decisions on key measures and planning and control of health promotion activities take place in a co-operative manner with the participation of all relevant experts and decision-makers in the company (plant or company management, human resources and departmental management, employee representatives and professional occupational health and safety officers). Central steering committees are set up for this purpose. Targets and priorities are established with plan and control of individual actions for WHP. Taking a positive approach and integrating workplace health promotion with other management goals such as quality and productivity are vital to success.

3. Developing measures and implementation

Specific indications of health problems at workplace as well as areas where change and improvement are needed are worked out. Health circles (Fig. 1) are used successfully as part of the workplace health promotion concepts. The proposed measures are implemented.

Figure 1. The process of establishing a health circle and how it works (14)



4. Evaluation

Finally effects are assessed, e.g. through repeated data evaluation.

5. Project management and organizational development.

Improving of the skills of key players within the company should enable them to identify and solve problems by themselves and to encourage collective change (integration and organizational development).

Benefits and weaknesses

Implementation of workplace health promotion program can be a key factor of business efficiency, competitiveness and success of the enterprise. Beneficial effects can be achieved on individual, enterprise and society levels. Some of the key benefits of WHP include:

- improvement of health status of individuals;
- increased productivity;
- decreased absenteeism and early retirement;
- decreased injuries at work, accidental poisoning and complications due to constant surveillance over risks;
- increased motivation for work;
- decreased incapacity for work;
- improvement of interpersonal relationship;
- low level of stress at work;
- healthy working and living environment;
- lower insurance costs;
- increased social responsibility.

On the other side, practical implementation of workplace health promotion tasks can face serious weaknesses. In many countries appropriate regulatory instruments and comparable quality standards are missing or are at best voluntary. Lack of occupational health and safety infrastructure, lack of fundamental skills and qualifications, negative perception of occupational health requirements, inadequate co-operation as well as bureaucratic requirements can be obstacles in work health promotion programs development and implementation. Additionally, practical models and solutions have to be integrated into the workflow without any major cost as well as attempts have to be made these projects not to remain isolated from other projects in the company.

Workplace health promotion in the Republic of Macedonia

The Republic of Macedonia became an independent state in 1991 after disintegration of former Yugoslavia. System transition problems, as well as long term recession, decreased living standard, high rate of unemployment and older technologies create the background in which workplace health promotion activities have been started. The Institute of Occupational Health, WHO Collaborating Center, plays a major role in launching the first workplace health promotion activities. (Educative programs for stress at workplace and development of program for tobacco-free workplaces). The strongest impulse for workplace health promotion in the Republic of Macedonia was created by the implementation of HESME (Health, Environment and Safety Management in Enterprises) program of WHO which was promoted in 2001 and is still ongoing. It presents a multidisciplinary approach for creating a policy and improvement of health at workplace on national, local and enterprise levels. The good practice of HESME is focused on improving health through prevention of professional diseases, work related diseases, injuries at work, preserving of environment, control and management of production and adequate use of the eco-resources. HESME strategy is directed to improvement of organization of work, conditions and safety at work, health and safety of workers, development, control and supervision of occupational risks, encouragement of workers in promotional activities and establishment of adequate management in enterprises.

The organizational strategy is reflected on 3 levels: strategic, tactical and operational. The HESME model of health promotion is based on the principles of Total Quality Management of the European Foundation with indicators for quality and quantity of good practice of HESME on the enterprise level. The indicators define the profile of the enterprise by assessment of the condition and health trend of workers, lifestyle, living and working environment and social

management of the enterprise. The goals of the workplace health promotion are fulfilled through the basic segments of HESME program: HESME policy, human resources and organization of work, social responsibility, implementation and results of HESME which include assessment of health conditions, workplace ergonomics, lifestyle (smoking, drinking alcohol, physical activities), education and training, special groups problems (young-old workers) etc. For further development of the program, the bondage should be encouraged and supported between workers and experts from the fields of occupational medicine and safety at work seen as a process of continuous meetings and availability of information for all interested parties.

Exercise

After the introductory lecture, students will be given small group discussion task on recommended subjects:

- The situation of workplace health promotion activities in your country;
- Identify possible workplace health promotion problems in student's country and comment on challenges of workplace health promotion programs development;
- Propose solutions to promote wider access and increase motivation.

Each group will nominate a person who will present the results in a plenary session, followed by an overall discussion. The results will be evaluated by the teacher.

The assumed time span for the exercises is about 2 hours.

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1. Luxemburg declaration on workplace health promotion in the European Union. Available from: <http://www.enwhp.org> (Accessed: August 15, 2005).
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Recommended readings

1. Schroer A, Sochert R. Health Promotion Circles at the Workplace. Essen: Federal Association of Company Health Insurance Funds, 2000.
10. Demmer H. Worksite health promotion: How to go about it. European Health Promotion Series Nr. 4, WHO/Europe, Copenhagen, Essen, 1995:9.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Case Study of Analysis and Targets Setting in Workplace Health Promotion: Pilot Implementation of Health Environment and Safety Management in Enterprises (HESME) Program in the Republic of Macedonia
Module: 2.5.1	ECTS: 0.25
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Key words	Analysis, targets, pilot implementation, safety management, enterprises
Learning objectives	At the end of this course students should get information about workplace health promotion activities in the Republic of Macedonia and should be able to understand and compare practical concepts, principles and approaches.

Abstract	<p>HESME program concept is based on building and strengthening existing national structures and practices for health promotion at workplace, occupational health and safety, and environmental health. As part of the global HESME program, which includes different activities in the Republic of Macedonia, HESME pilot projects in two enterprises in 2003/2004 were aimed at analysis and setting targets of workplace health promotion. The analysis was made by the Institute of Occupational Health, WHO Collaborating Center and conclusions and recommendations to all stakeholders were presented. Workplace health promotion needs and priorities were defined: control of work environment hazards, smoking and alcohol consuming, encouragement of sport activities. Dealing with health problems (specific indications on stress, muscle pains, injuries at work, respiratory and allergy problems) and addiction problems (alcohol consuming, smoking), application of self-protection measures, education of managerial team on workplace hazards and ergonomics. HESME pilot implementation in both enterprises is centered on encouraging the integration of workplace health promotion issues at enterprise level as preparation for further steps.</p>
Teaching methods	<p>Teaching methods will include: introduction lecture, interactive small group discussions on given tasks, followed by group written reports.</p>
Specific recommendations for the teachers	<p>This course will be organised within 0.25 ECTS credits out of which 2 hours will be done under supervision (lecture and exercise) and the rest is individual student's work. Teacher should advise students to use as much as possible electronic libraries to gather ideas and select examples of good practice in workplace health promotion.</p>
Assessment of students	<p>Written report produced by each group</p>

CASE STUDY OF ANALYSIS AND TARGETS SETTING IN WORKPLACE HEALTH PROMOTION: PILOT IMPLEMENTATION OF HEALTH ENVIRONMENT AND SAFETY MANAGEMENT IN ENTERPRISES (HESME) PROGRAM IN THE REPUBLIC OF MACEDONIA

**Snezana Risteska-Kuc, Jovanka Karadzinska-Bislimovska, Dragan
Mijakoski, Saso Stoleski**

HESME concept

Formulation of the concept and development of an international instrument on good practice in health, environment and safety management in enterprises (HESME) was made by the WHO, based on the WHO's Global Strategy on Occupational Health for All (1996), which initiated innovative approaches and active participation of the enterprises and other workplaces. At the WHO's Third Ministerial Conference on Environment and Health (London, 1999) ministries of health and environment from 51 countries made a commitment to develop HESME as a new approach for strengthening public health action in Europe with involvement of public authorities in promotion of holistic concept for good practice in health at workplace. At the First meeting of HESME with representatives of the ministries of health, environment and labor, representatives of ILO, UNEP and other international organizations held in Bilthoven, The Netherlands, in 2000, the development of common criteria and indicators on good practice of HESME was found to be the first priority.

HESME program concept is based on building and strengthening existing national structures and practices for health promotion at workplace, occupational health and safety, and environmental health (1,2,3,4,). It promotes development of modern views of workplace health policy, collaboration, coordination of different sectors in the country, based on the idea that efforts of different stakeholders with comprehensive multidisciplinary approach can be combined to reach a common goal (5).

The Republic of Macedonia plays a pioneering role and is the first country in the region that practically developed and implemented HESME program. Activities were planned, coordinated and evaluated by the Institute of Occupational Health, a WHO Collaborating Centre, Skopje and a National HESME coordination center in the Republic of Macedonia. Macedonian Ministry of Health and WHO Regional Office for Europe have also played a crucial role in development of HES strategy, activation and integration of own national resources.

HESME pilot implementation

As part of the global HESME program, which includes different activities in the Republic of Macedonia, HESME pilot projects in two enterprises in 2003/2004 were aimed at analysis and targets setting of workplace health promotion. HESME methodology was applied and this included:

- Interdisciplinary approach in which managing team, safety at work service, occupational health service and Institute of Occupational Health were the main stakeholders;
- Developing cooperation and commitment by all stakeholders;
- Application of the European working conditions survey questionnaire (created by European foundation for improvement of living and working conditions-EFILWC)

with an interview protocol. This enabled establishment of indicator system for survey of physical and organizational environment, time, social outcomes and demographics. The questionnaire was modified with addition of lifestyle determinants.

Makstil, Skopje, Steel production enterprise

Pilot implementation started in 2003/2004 in Makstil, Skopje a medium sized, private steel production enterprise with step by step activities. As a first step full support to the implementation and dedication to active participation was given by the managing team, services for safety at work and occupational health specialists. The employees (119 company workers) were adequately informed for the policies and aims of this program and they accepted to be active participants. Implementation activities were guided and coordinated by the Institute of Occupational Health. Questionnaire data analysis showed that employees, from different workplaces, most of them from Macedonian ethnic origin, had average working experience in the company of 24,47 SD 9,45 years with dominantly collective work in 5-9 people units. Physical environment vibrations, noise, gases vapors, dust, uncomfortable microclimate were detected to be main work environmental hazards. Average working hours of 44,2 SD 4,2 per week, night shifts, working on Sundays and Saturdays and often work over 10 hours a day appeared to be a problem. The employee's perception of social environment and interpersonal relations was dominantly positive with no mental, physical violence or discrimination on any basis. Employees reported that work in the enterprise had affected their health mostly in onset of stress, hearing problems, problems with eyes, muscle pains, and injuries at work. More than 53% of the examinees were not at all satisfied with their working conditions. High rate of smoking (in 40, 3%) and alcohol consuming (in 17, 6%) as lifestyle data were detected.

After the analysis made by the Institute of Occupational Health, conclusions and recommendations to all stakeholders were presented. Elements distinguished to be further on encouraged were: excellent knowledge of employees about the work environmental hazards, full implementation of self protection measures, good interpersonal relations, flexibility of work process and management, paid training to improve work capacity, organized canteen for meals during work. Certain elements of work conditions survey were pointed out as workplace health promotion needs and priorities in future: control of work environmental hazards, coping with health problems (stress, muscle pains, injuries at work), smoking and alcohol consuming, encouragement of sport activities.

“Dimko Mitrev” Veles, leather processing enterprise

HESME pilot project was also applied on 75 employees in a medium sized leather processing enterprise “Dimko Mitrev”, Veles using the same methodology (awareness rising, creating interest and partnership, cooperation and collaboration of different stakeholders and multidisciplinary as well as application of indicator system). The evaluation process revealed the main environmental problems, such as: inadequate control of workplace hazards, vapors, gasses, dust, chemical substances (reported by 97,33% of employees) and microclimate conditions (reported by 37,3% of employees). The ergonomic problems like repetitive movements (92%), exhaustive static work (82,67%), manual lifting of heavy objects (41,33%) and working at very high speed (98,6%) were dominant. Health problems mostly referred to respiratory system (57, 33%) and allergy problems (40%). Lack of application of self-protection measures (54, 67%), lack of paid training (not available at all

in the last 12 months) with very little access to telephone or making private calls (only in 17,33%) were pointed out as problems. Smoking (52%), alcohol consuming (in more than 35%), very little sport activities (in 13,33%) needed further attention. Half of the employees (50, 67%) were not satisfied with working conditions. On the other hand, more than 80% of employees were very well informed about the work place health hazards. Physical, mental violence, discrimination on any basis were not registered at all and positive social working and good interpersonal relationships were detected (97, 33%). The analysis created basis for setting health promotion targets and priorities, which included: control of work environmental hazards, dealing with health problems (specific indications on respiratory and allergy problems) and addiction problems (alcohol consuming, smoking), encouragement of sport activities, application of self-protection measures, education of managerial team on workplace hazards and ergonomics.

HESME pilot implementation in both enterprises has been centered on encouraging the integration of workplace health promotion issues at enterprise level. Taking into account that workplace health promotion activities are at the starting point in the Republic of Macedonia, the established comprehensive multidisciplinary dialogue and building partnerships need to be broadened and further developed.

Exercise

After introductory lecture, students work in small groups and are asked to discuss on these topics:

- Make proposal for further steps of workplace health promotion in Macedonian example. Make selection of priorities. Suggest improvement, take into account possible obstacles;
- Give an example from your own country and compare it with Macedonian experience.

Each group will produce a written report on the tasks.

Timing: 2 hours.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Policy in Prisons
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Key words	Health policy, prison health, primordial prevention,
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none"> • understand the pitfalls of the technicistic approaches to health policy; • understand the advantages of the complex approach to health policy; • get familiar with the concept of social determinants of health; • understand the importance of the primordial prevention; • get the basic knowledge of the health in the prison environment.
Abstract	The subject of the prison policy is mostly male population (there are, 5-7% of woman among prison inmates). Most of them are living under the harsh physical, psychical and social conditions. In addition, many prison inmates came to serve their sentence with developed risky life styles. That is why prisons are breeding an array of health problems. Typical are mental health problems, drug addiction and infectious diseases among which dominant role have tuberculosis, AIDS and hepatitis. The prison health care is rather neglected area. Recently, there were efforts to change this situation. The most prominent changes were characterized by measures of primary prevention, screening and systematic check-ups. That orientation has brought some improvements. However, introducing of the concept of the social determinants of health brought into the domain of the prison health care additional demands. From the point of view of these demands, the health policy in prisons should be based on two principles: the holistic principle, and the principle of human rights. The two blind alleys should be avoided: biomedical approach because of its superficiality and the risk factors approach because of its partiality. The four priorities should be followed: the professional one, the contextual one, the developmental one, and the economical one. The engagement should focus on the primordial prevention, domain of meanings, psycho- social development and sustainability. This is the health directed approach and not the medical one, and it can be allied with the similar engagement of other professionals working along the similar directions.

Teaching methods	<ul style="list-style-type: none">• Lecture: Social determinants of health and primordial prevention;• small group discussion: students are reporting how they react when they are under the stress and what are the typical obstacles meeting their compensatory strategies;• Small group discussion: biomedical approach to health and its deficiencies;• Small group discussion: the risk factors approach to health and its deficiencies;• Lecture: Basic priorities of health policy;• Seminar: students prepare and report the basic problems of physical, mental and social health in a prison environment;• Small group discussion: Students are matching basic problems in prison environment and basic priorities of health policy;• Presentation: students prepare and present the basic elements of health policy in a virtual prison;• Simulation: students in role of prison inmates criticize, and students in the role of health policy planners defend the presented health policy;• Conclusions;
Specific recommendations for teachers	1 ECTS (work under teacher supervision - 10h / individual and group students' work – 20h).
Assessment of Students	Presentation and simulation stand instead of multiple choice questionnaire and other evaluation methods (structured essay, seminar paper, case problem presentations, oral exam, attitude test etc).

HEALTH POLICY IN PRISONS

Vuk Stambolovic

Introduction

The health policy in prisons should be based on two principles: the holistic principle, and the principle of human rights.

The holistic principle means that the health policy in prisons should deal with the prison population as a whole, i.e., that it must cover both prison inmates and staff. The specific position of prison inmates is by itself demanding attention. However, the prison staff should be taken care of as well. The point is that the prison environment is stressful for them also and that their life context is typically adding to that job induced stress load. In addition, the health of prison inmates and the health of the prison staff are interconnected. Namely, because of the significant disbalance of power, very often, both ill health and bad moods of staff members can have harmful effect on the health of prison inmates (1).

The health policy in prisons should also be in accord with international standards dealing with human rights of prison inmates. Among them the three documents are of a special importance:

- Guidelines of the European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (2);
- United Nations Standard Minimum Rules for the Treatment of Prisoners (3);
- Recommendation of the Council of Europe Concerning the Ethical and Organizational Aspects of Health Care in Prison (4).

Of course, there are professional guidelines which are of a significant importance as well.

The first one is «The Health in Prison Project» which was initiated in 1966 by World Health Organization (5). Within this Project several good practice guides have been developed like: «Mental Health Promotion in Prisons», «Status Paper on Prisons, Drugs and Harm Reduction», «Status Paper on Prisons and Tuberculosis», «Public Health Consequences of Imprisonment», «Promoting the Health of Young People in Custody», «HIV in Prisons» etc. (6).

The short prison health agenda could be found in «Declaration on Prison Health as Part of the Public Health», known also as «Moscow Declaration» (7).

It is also important to take into consideration that in prison conditions three groups of nosological entities are prevailing: drug addiction (8), mental health problems (9), and infectious diseases, particularly tuberculosis (10), AIDS (11,12), and hepatitis (13).

It is also important to consider that the prison walls are not tight proof. There is the continuous social exchange between prison and the «outside world». That exchange is making possible the penetration of dominant prison pathology into the population living outside, and vice-versa, which means that the health policy in prison is the integral part of the health care of the general population (14).

A. Typical blind alleys

The prison context (like other contexts) is under the influence of various interests. These interests are producing specific approaches which can frame the health policy in prisons in a way which is undermining the required health care. Two rather frequent approaches are the typical examples.

1. Within the first approach the health care is not the principal issue. This approach is based on the relation of power, embodied in the principle of punishment. As such, that approach is typical for the countries in which the prison health care is under the control of ministries of police or justice. Within that setting every prison inmate asking for the medical care is, first of all, the prisoner, and not the patient (15). The dominant attitude of the staff (and of the medical personnel as well) is that prison inmates are in the prison because of the punishment, and not because of the health care. That is why the principle of control is always more important than the principle of human rights, the rights of a person with ill-health including. That principle is blocking the access to health care in prisons and it actually serves as the additional punishment. In that way, often (and in the case of the «new penology» systematically)¹, (16), the health care is directly included in the system of the control of prison inmates. So, it happens that even necessary medical interventions are delayed, and sometimes denied (17).
2. The second typical way of planning which is compromising optimal health care in prisons is the technicistic approach. The technicistic approach is originating from two opposite technical interests.
 - a) Under the influence of the first technical interest (the interest of medical professionals clinging to the concept of biomedicine) the central focus is put on the disease (18). That is why the main emphasis is put on the efficacy and on the strict professional criteria regarding both diagnosis and treatment. This is the classical biomedical attitude within which medical professionals respond to the complaints of sick prison inmates. That approach does lead to the alleviation, and sometimes to the successful treatment of many health problems, however it has an important shortcoming (especially within the prison context!) - it is partial. Namely, within this approach, medical professionals are just reacting to the demands of prison inmates while completely neglecting the permanent and massive production of suffering and ill-health in prison conditions.
 - b) Within the second technical interest (the interest connected with the preventive medical bureaucracy) the central focus is put on the risk factors. According to the basic argument of this approach the prison inmates are belonging mostly to the marginalized social groups, so they are coming to prison with established risky life styles (19). That is why the prison is visualized as the ideal corrective environment, the one which is offering excellent possibilities for the control and supervision, as well as the possibilities for the guided primary health care intervention in a way which is not possible in circumstances outside the prison walls (20).

The health intervention, in that way becomes specific kind of a social engineering within which medical professionals are on the one side, in the role of the behavioral manipulators, and the prison inmates, as patients, are on the other side, as the object of the expert manipulation. That approach is praised with the argument that, in this way, it is possible to make the maximal use of the efforts aimed to improve health of prison inmates while at the same time unwanted effects are kept on minimum (21).

The problem with this approach is its positivist nature, and that indicates its superficiality. Namely, the focus on the risk factors is interrupting connections between life and the human suffering. The point is that risk factors are usually defined as separate entities, which have

¹ The new penology is a movement and theory within which the main emphasis is put on the control of prison inmates. There, even a punishment and sometimes intentional hurting of prison inmates is used to achieve their complete obedience.

appeared from nowhere, like the expression of a personal voluntarism. Almost no one cares to ask why the particular person have chosen the particular life style, no one cares to ask which motives or interests have formed the life of that person and determined his/her allegedly personal choices (22). And these motives and interests are very real, and tend to influence strongly life choices. Life in prison, as the source of chronic stress, is a typical example (23). The average prison inmate is yearning for something which could relieve his anxiety. He is yearning for something which could make easier his problem of time structuring. He is yearning for something which could make him feel stronger, braver and more resilient. He is yearning for something which could change the routine, which could provide the escape from reality. He is yearning for something which could provide the sense of security, most of all by belonging to a small community. If at least some of these, even for a short time, could be provided (and it often can!) by drugs or cigarettes, by unsafe sex or self injuring, by rebellious or antisocial behavior, then the prison inmates, through personal reflection, will not classify them among »things« that they should be deprived of. In spite of doctors' advices and explanations they will, generally, conceptualize the medical procedures directed against their way of relief as:

- The attempt to deprive them of one of rare pleasures (in the prison environment deprived of stimulants);
- The attempt to deprive them of rare personal expressions over which they have control;
- The attempt to abolish some of important factors belonging to their Strategy of survival.

The consequence is that the promoters of programs against risk factors are being transformed – from rescuers to persecutors.

B. Priorities

In order to avoid blind alleys, i.e. in order to avoid the trap of tehnicistic interests, any planning, especially planning of the prison health policy, have to be based on the establishing of priorities.

According to that, four groups of priorities should be kept on mind of the health policy in prison planner. These are:

- professional priority (which is based on the best knowledge and estimates of medical professionals);
- contextual priority (which is based on the connection of meanings of both the whole and its part which is the focus of planning);
- developmental priority (which means that the chosen policy must be in accordance with the developmental needs, i. e. that it does not promote stagnation or leads into regression);
- economic priority (which means the applying of the principle of sustainability).

1. Professional priority

The first professional priority in planning the health policy in prisons is primordial prevention. Primordial prevention is a social health engagement which is dealing with specific population or specific groups. On the priority list it is higher in regard to the primary prevention because it is preventing the very penetration of risk factors in the specific psycho social environment (24). In planning the health policy in prisons the primordial prevention

should be introduced to prevent the grounding of risk factors among prison inmates. The key element of that prevention is the change of psycho - social and environmental conditions breeding risk factors typical for prison setting (25). That is why the primordial prevention is the way to deal with the vulnerability of the prison population. At the same time, primordial prevention is influencing the inequality of distribution of protective health factors. It is also influencing the distribution of exposure to harmful factors typical for prison environment. Primordial prevention is also important for the health of the prison staff and it could relate to various conditions of their life and work.

2. Contextual priority

Successful planning of prison health policy is demanding a careful consideration of dominant contexts, especially the dominant values and meanings as well as tendencies of a prison social dynamics. Namely, the values and meanings, as well as the social dynamics should determine the health policy at the micro and the macro level. That is why, while planning the health policy in prisons, two kinds of meanings and values should be considered:

- the values and meanings which are dominant at the present time;
- the values and meaning which should be stimulated in accordance with the optimal developmental tendencies of social dynamics (26).

Paying attention to the context is especially important in environments which are, like prisons, known as the total institutions, because in total institutions the health is far from being the priority issue (27)? Namely, without taking care about the context, with emphasis on dominant meanings and the basic social dynamics, the health policy can not be developed in an optimal manner.

3. Developmental priority

There is no successful health policy without promotion of development. Namely, all living systems (individuals as well as social groups formed by them) are dissipative structures (28). Development is therefore the main prerequisite of health. Development is, actually, the continuous succession of transitions. Each transitional phase has two segments: the static one and the dynamic one. The static segment is responsible for increasing of the complexity of the developing system. The dynamic segment has three steps: differentiation (which means the conscious comprehension that the present level of development is not satisfactory any more and that some kind of change is necessary), identification (which means the conscious comprehension that the new level of development is the one which is satisfactory) and the integration (which means that the developing system had achieved «piece» with his/her/its former intentionality, behavior, values and structures), (29). Without development, i.e. without constant increase of complexity as its prerequisite, stagnation and regression are evolving as the direct signs of degradation, degeneration and disease. Health policy, therefore, has to be in the function of all phases of transition, on macro and micro level. Otherwise it would be in the contradiction with its proclaimed purpose.

4. Economic priority

Medicine is a typical extensive activity both in scope and in costs. That is why the key priority of health policy has to be the introducing of the principle of sustainability.

In health policy the principle of sustainability is being introduced on three levels:

- level of medical technologies based on sustainable development (30);

- level of management based on the resource productivity instead on the increase of labor productivity (31);
- level of evaluation which has to follow –
 - a) the maintenance of achieved health benefits;
 - b) the institutionalization of introduced changes;
 - c) The ability of the community to engage in health improvement (32).

Without these principles, most often, there would be a tendency to establish some kind of forceful equilibrium of assets and liabilities of the prison health care, at the expense of health of both staff and prison inmates (33).

C. The case study Serbia

The planning of the health policy starts with the analysis of the existent conditions. Of course, the analysis is also influenced by various interests. That is why it should be based on fundamental principles and priorities, i.e. Holism and human rights, as well as professionalism, context, development, and sustainability.

Professional approach

Primordial prevention (as the prerequisite of the professional approach to prison health) requires the analysis of prison milieu at the first place. Namely, the prison milieu is by itself inducing the chronic stress both in prison inmates and in members of the prison staff (34). The level of stress effects is rising in both populations if the order and safety of prison inmates are not secured and it is manifested by an array of risk factors (35, 36, 37).

- a) In the study of prisons in Serbia (2004-2005) after interviews of 701 of prison inmates in 29 prisons, it was found out that the significant number of interviewed prison inmates reported that:
 - the Prison rules are not applied to all prisoners equally;
 - members of the prison staff do not respect Prison rules;
 - members of the prison staff are corrupted;
 - exemplary behavior of prison inmates is not stimulated;
 - prison inmates are maltreating other prison inmates and that the prison staff is not reacting properly;
 - there is no justice in prison everyday life (1).

All that indicates that prisons observed in the study were not institutions in the full meaning, i. e., that the environment of the observed prisons was building up the sense of insecurity and injustice among prison inmates, and the sense of insecurity among members of the prison staff.

In the same study it was found out that the personal security of prison inmates is additionally violated by fear of prison staff and fear of other prison inmates, by threats and violence performed by both staff and other prison inmates, by permanent violation of human dignity as well as by direct humiliation of prison inmates. It was also found out that the basic survival strategies of prison inmates were the use of physical force and various kinds of corruptive practices (1).

- b) At the same study 615 members of the prison staff were interviewed as well. It was found out that, by their own estimates, their health was not satisfactory. In addition 90% of interviewed declared that they were living under the stress. Accordingly, 56% of interweaved staff members were smoking, 54% were drinking various alcohol

beverages, 11, 5% were regularly taking sedatives, 3, 5% other psycho stimulants, and 85% were having cholesterol rich diet. More than half of interviewed members of staff (52%) reported that they do not have adequate working space. Significant majority of the prison staff members also answered (89%) that in the last year they have not got any information regarding healthy life styles. Members of the prison staff have also shown neglect toward improvement of their health. Their passive attitude they were explaining most often by lack of time and energy (60%), (1).

Context

The study of prisons in Serbia has also indicated the high level of violence, as well as the high level of various kinds of manipulation and exploitation (1). Namely, more than 51% of interviewed prison inmates reported that other prison inmates are violating their personal dignity; also, 54% reported that their personal dignity was being violated by members of the prison staff. According to the interviewed prison inmates the best protective strategy in the prison environment was the physical force. The physical force was reported as particularly important in the case of a long term imprisonment (1 year and more). In this case it was bringing equal protection as the Prison rules (42, 1% physical force and 42, 2% Prison rules). However, under the so called strict prison regimen, the physical force is more important protective strategy than the Prison rules (44, 6% physical force and 38, 8% physical force), (dva puta se ponavlja physical force) (1). These data are leading to the conclusion that in the observed prison environment there was a constant production and affirmation of egocentric and violent level of psycho-social existence (26). That is the level in which one lives:

- from day to day;
- with intensive feeling of insecurity,;
- in conditions of a jungle law;
- in the midst of arbitrary and poorly restricted violence of all kinds.

That means that the context produced by prison is the context of insecurity, of humiliation and of constant hurt, and that kind of context is creating the chronic stress. Within that context it is logical that prison inmates, yearning for respite and relief, constantly try to find some outlet, no matter how much harm it could bring them in the near or distant future.

It is also logical that in that context prison inmates are prone to violent behavior in relations with the members of the prison staff. And that explains the high level of stress among them.

It is important to have in mind as well that the prison context is not separated from the contexts ruling out of the prison walls. In the case of Serbia, the general dominant context was the identical to the one in prisons (38).

Development

The development is the key element of health. That is why the development should be stimulated in all social segments both on the micro and on the macro level. The development becomes especially important at the third level of the psycho-social existence, because at that level the prison, as institution, gets additional importance. Namely, the third level of psychosocial existence (which is the level of egocentrism, violence and manipulation) should enter into a transition to the fourth level of psycho-social existence (which is the level of order and justice). That transition would not be possible without the institution of punishment which should also be based on the principles of order and justice. The prison context which is

producing insecurity, humiliation and hurt among prison inmates is producing stagnation and regression, and not the development. As the result of that situation the punishment becomes arbitrary, and that means that the development toward psychosocial existence based on order and justice is severely undermined. That means also that the health (both among prison inmates and the prison staff, in a prison and in the outer environment) is constantly being undermined as well. So, the careful work on the increasing of complexity of life in prison, and then the work on the gradual development of stages of the dynamic segment of transition are of utmost importance for any professionally designed prison health policy.

The reports of the interviewed members of the staff (high level of stress, compensatory practices, passive attitude toward personal health) are showing that they are also stuck, and in need for change regarding development, in order to achieve better health.

Sustainability

According to the study of prisons in Serbia, there is a significant disproportion between the health needs of prison inmates and the «manifested» capacity of the prison health system. This disproportion was managed by specific mixture in which was combined:

- low priority of primary health care
- restricted distribution of medicaments, and
- Restricted accessibility to health services.

Namely, only 13, 4% of prison inmates reported that they have seen some leaflets with health promoting information in prison. Also, 64.5% of prison inmates were complaining that their families had to provide medicaments prescribed to them by prison physician. One third of all interweaved prison inmates, and 49, 6% of those with long term imprisonment, were complaining that they had difficulties to contact prison physician in the case of need (1).

In that way, the prison health care system was maintaining the specific «sustainability», the one which was harmful for prisoner's health.

D. Suggestions

1. Primordial prevention

Primordial prevention should be the first priority of the health policy in prisons. In a typical prison context the primordial prevention would mean engagement devoted to the establishment of prison as the institution. That means existence of the strict Prison Code and the strict implementation of that Code. The typical prison should progress from the egocentric level of the psychosocial existence to the level characterized by order and justice so the Prison Code should be based on the three elements:

- the human rights of prison inmates, having on mind that the additional punishment should not be added to the punishment imposed by court;
- the human rights of persons who have suffered or who had damages because of the deeds for which the prison inmates were sentenced
- the rights of the institutionalized community which is responsible to punish its members who are not respecting democratically passed laws, and who are by that disrespect hampering the development of the community.

2. The meaning

The second priority of the health policy in prisons should deal with meanings. Namely, it should impose the meaning that the prison is the institution in the service of the community

development. The prison can exercise that task if it is providing context and conditions within which the prison inmates will serve their sentence under the clearly defined and strictly imposed rules, with no exceptions. Nat (do you mean Net) is an important factor of the primordial prevention within prison. However, this is also important factor of the primordial prevention in the wider community. Namely, the principle of the just punishment is the inescapable element in the psycho-social transition from the psycho-social level dominated by principle of force to the psycho-social level dominated by principle of order and justice. The force which is violating accepted laws and regulations must be institutionally punished. Without that punishment there is no transition, and without transition there is no promotion of health.

3. Development

The third priority of the health policy in prisons is the facilitation of development. In the prison health policy the development has two important aspects. The first one is the stimulation of the socio-centric orientation of both prison inmates and the members of the prison staff. The socio-centric orientation is characterized by:

- conventional moral attitudes, i.e. attitudes needing the approval of others (39);
- the level of development within which the need of belonging is taking over the need of security (40);
- the position in which the conformist self-sense is replacing the impulsive self-sense, the one which is dominated by the urge of self defense (41).

Sociocentric orientation is important as the basic position of the level of psychosocial existence characterized by order and justice.

The second aspect which should be chosen as the developmental priority is dealing with the pent up energy of prison inmates. Namely, structural conditions should be established in order to secure this energy to externalize constructively.

4. Sustainability

The annual median cost of incarcerating a prisoner in a secure custody in 2003-4 was about \$28 000 per state prisoner in the United States, \$45 000 in Australia, and \$53 000 in United Kingdom. (US state prisoners' annual healthcare costs averaged 12% of total costs, around \$3350) (42). With rising rates of incarceration, greater needs among inmates for health care, and limited budgets, prison health care is becoming harder to fund adequately. Therefore, the achieving of sustainability becomes an important issue of a prison health policy. In efforts to achieve sustainable prison health care, the important asset could be implementation of integrated health care in prisons. The integrated health care means cooperation between medical doctors and practitioners of alternative medicine (43). The key contribution to the sustainability of health care for both prison inmates and members of staff could be provided by alternative therapies which are efficient, low cost, and leave no harmful effects. These contributions of alternative therapies were confirmed in several studies. (44, 45, 46).

E. Together

The suggested approach to the prison health policy might seem difficult to realize. It is.

However, medical professionals determined to take it would not be alone. During our study of prisons in Serbia we have found out that there were quite a few of other professionals

employed in prisons, or being engaged there who were working along the similar directions. We have registered that these professionals were contributing to the welfare of the prison inmates, as well as to the welfare of the prison staff in three domains: «to HAVE», «to BEE», and «to LOVE» (46). Within the domain of «to HAVE», they have been engaged to improve the «hardware» of the prison, from the improving of ventilation to the engagement of the chef to cook for the prison inmates. Within the domain of «to BEE» they have been engaged to provide possibilities for meaningful engagement of prison inmates either in creative, or in educational activities. In the domain of «to LOVE» they have been engaged in establishing relations: between prison and the community, between specialized prison staff and families of prison inmates, between prison inmates and the members of the prison staff (1).

There are records of countless of other similar engagements recorded in the literature. So, why should not we join?

Conclusion

The prison health care is, globally, in rather poor and neglected conditions. The global acceptance of the principle of human rights, including right to health, has made this conditions unacceptable. In these circumstances there was a tendency to apply «quick fix» solutions. So far, the two such solutions appeared most attractive. The first one was the biomedical concept of health care reduced to the very simple transaction: demand of a patient - response of a physician. The other was the confrontation of risky behaviour including the use of prison mechanisms of surveillance and control..

Both of these approaches, especially in the prison context, are not professionally adequate. Namely, they are not confronting typical conditions of the prison environment which are producing the chronic stress and through that various health problems of prison inmates. The starting point of the health policy in prisons should be the primordial prevention. This is the professional answer to both health needs and human rights of prison inmates. The health policy is one of indicators that human rights and health are closely connected.

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Chapter

3

**DISEASE
PREVENTION**

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Human Health, Course of Disease and Health Promotion
Module: 3.1	ECTS: 0.5
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Key words	Health, health explanatory models, disease, natural course of the disease, pathogenesis, salutogenesis.
Learning objectives	<p>After completing this module students should:</p> <ul style="list-style-type: none"> • increase knowledge about different approaches (explanatory models) to health; • especially they should understand and differentiate between the biopsychosocial and biomedical models of health; • increase knowledge about contemporary definition/definitions of health; • understand the natural course of the disease; • understand and differentiate between the concepts of pathogenesis and salutogenesis; • understand the importance of the salutogenetic concept in health promotion.

Abstract	<p>Health is one of most important elements and attributes in a life of a human being, a prerequisite for daily activities performance and happy life in general. Basically, human health is a reflection of the quality of relationship of human beings one with another, since health as the positive expression of human being wellbeing is tightly connected to the quality of sharing and caring in relationships.</p> <p>There exist several explanatory models of health. The concept of equilibrium (dynamic equilibrium) and the concept of adaptation to the environmental requirements and changes are contained in several of them.</p> <p>In tight connection with the phenomenon of health, it is the phenomenon of the disease. According to concept of dynamic equilibrium, the disease is the disturbance of the equilibrium expressed.</p> <p>In last decades, it has gradually become clear that the biomedical model of health and disease is outdated and inadequate. Health and disease can no longer be considered distinct entities where one exists only in the absence of the other. As well, the total environment needs to be considered in this context. Models, which focus on promoting salutogenic resources and promote the self esteem and coping abilities of individuals and communities, came to the fore.</p>
Teaching methods	Teaching methods include introductory lectures, self learning, and extensive discussion on different health models, natural course of the disease, and concepts of pathogenesis, and salutogenesis.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• training materials: recommended readings are mainly available in the internet;• target audience: master degree students according to Bologna scheme.
Assessment of Students	The final mark is derived from assessment of the theoretical knowledge (oral exam).

HUMAN HEALTH, COURSE OF DISEASE AND HEALTH PROMOTION

Doncho Donev, Gordana Pavlekovic, Lijana Zaletel Kragelj

Health

Health is one of our life's most important elements and attributes, a prerequisite for daily activities performance and happy life in general. It sounds easy, but when we want to answer the question "What we mean by health", the answer is rather difficult and very diverse (1).

Basically, human health is a reflection of the quality of relationship of human beings one with another, since health as the positive expression of our wellbeing is tightly connected to the quality of sharing and caring in relationships. Thus, in these relationships the total environment is comprised what reflects also in the term "health". Namely, the term "health" derives from an old English word "hael" and is as such tightly connected with other contemporary term "whole" (1).

However, there have been several approaches (explanatory models) of health (1-3).

Health approaches

Historical overview

The ideas about health development completely follow the development of the medical scientific idea. From ancient times up to date many efforts have been made for more thorough description and definition of health. Chinese in the 26 B.C. believed that disease occurred if people disturbed the natural order of the matters in the universe, and the health is the state of their equilibrium. The health as equilibrium concept, rooted in ancient times, and is most often linked to Hippocrates. However, a group of doctors before Hippocrates believed that the disequilibrium among the four liquids of life: blood, yellow yolk, black yolk and mucus, provoked the disease. It was believed that these liquids continually renewed themselves through food. Later, the basic postulate of the Hippocrates' art of the medicine was based on the principle that the nature continually strived to maintain the equilibrium state and with its won forces adapt and readapt its own elements in order to keep the balance between them. When the balance was established the man was healthy and when different influences disturbed the balance the disease occurred. Thus, the doctor's duty was to help the nature with the medications he prescribed to re-establish the equilibrium. Factors that disturbed the equilibrium are environmental factors (wind, heat, water, food) and personal lifestyle (nutrition, drinks, sex life, work, recreation). The external equilibrium between the man and his surrounding determined the internal equilibrium, the one between the humoral liquids.

The concept of health as equilibrium between the man and his surroundings, unity of body and soul, and natural origin of the disease created the essence of the antique idea about health (2). Indian medicine shared similar ideas.

Pindar (500 B.C.) defined health as "harmonic organ functioning", which even today has its meaning as a prerequisite for health prosperity. This is a narrow medical concept about health which considers the disease as disturbance of such harmony caused by pathological agents in the environment. Therefore, the health preceded the disease or replaced it after the doctor eliminated the harmful agent. Thus, the health was in doctor's hands and the therapy he prescribed.

In his dialogues Plato talked about health as internal harmony, achievement of the highest moral behaviour and philosophical meaning. Democritus linked health to the human behaviour saying that people prayed to God for health, which actually was under their own control.

During the industrial revolution, health was considered as economic category that should provide good condition and work ability and decrease the number of days of work absence due to sickness. Therefore, the health valued as much as the economic profit it made.

According to other definition health was the ability of a person to adjust to the requirements – environmental influences to the level that he/she could bear. At the point where the adjustment process stopped as a natural consequence, the disease occurred. This approach was limited to the biological mechanisms and did not consider the factors that determined these requirements or environmental influences, the environment the person should adjust to and the necessary costs.

The philosophical and mental-hygienic concept considered health as individual's maximal capacity for self-realization and self-achievement. It also considered the human internal strength and capacities as well as the sense of satisfaction or dissatisfaction with his/her interactions with the environment.

The occurrence of the ecological era in the science emphasized the position that the human health could be complete only if the humans fight for it by not disturbing the health of their surrounding and broader environment.

Contemporary understanding of human health

The social-medical approach at its beginnings pointed out that health should not be observed as a health of the individuals but as a health of groups and the community, which resulted from the individual's interaction with the social environment.

World Health Organization (WHO) formalized the modern understanding of health. In 1948 the WHO added in its Constitution (4, 5) the definition proposed by Andrija Štampar, a distinguished scholar in the field of social medicine, and one of the “fathers” of World Health Organization, born in Croatia, that completely changed the idea about health. This definition states that (4, 6):

“Health is a state of complete physical, psychological and social welfare not just absence of disease and disability.”

This definition for the first time on international level in the modern era, in addition to the physical and mental health, included social welfare as an integral part of the total health, which is intimately linked to the social environment and the living and working conditions. Thus, biopsychosocial model of health was officially introduced and a long period of struggle between this approach and biomedical approach started.

In spite of the importance of this definition, it was exposed to many authors' critics, mainly because of its generalization, limitations for quantitative measurements and inability to be used as a base for formulation of concrete goals of the health policy. One of the most known critic/reviewer was Aaron Antonovsky, the “father” of the concept of the salutogenesis (7-10), whose main criticism was that the WHO's definition of health:

- is static, since it treats health as a state and not as a dynamic process;

- is specifying an idealistic model that is impossible to attain, and that
- health, defined in this way is not measurable.

As a response to this criticism, WHO at the end of the nineties accepted more dynamic concept of health (11).

The re-orientation of the public-health policy from the one directed towards disease's problem solving to the one that will be dominantly directed towards health is a complex and difficult process in which theoretical conceptualization of health and its determining factors' identification is only the beginning phase of the process itself.

The polemics over the health definition probably still exist even though in the first article of the Declaration adopted at the International Conference on Primary Health Care (1978, Alma Ata) the health is reaffirmed as "a state of complete physical, psychical and social welfare not just absence of disease and disability." The WHO Constitution's health definition should be embraced as an "ideal goal" to strive to with no time limitations for its accomplishment.

Many health researches and theorists, respecting this definition as a global concept, pledged for adopting work and operative definitions. Adopting the global strategy "Health for All by the year 2000" in 1977 (12), WHO indirectly accepted the pragmatic position considering the health as "ability for leading economically and socially productive life", which is the fundament of this strategy. The attempts to define the health in operative and working sense in order to gain possibility for measurements were fruitful and went far beyond the widely accepted idea about health as simple absence of disease.

The transition from a general to an operative definition is very complex and includes a number of theoretical assumptions and their elaboration. Miller's study about life systems elaborates one of those assumptions highly significant for clarification and understanding of the term health and its operationalization.

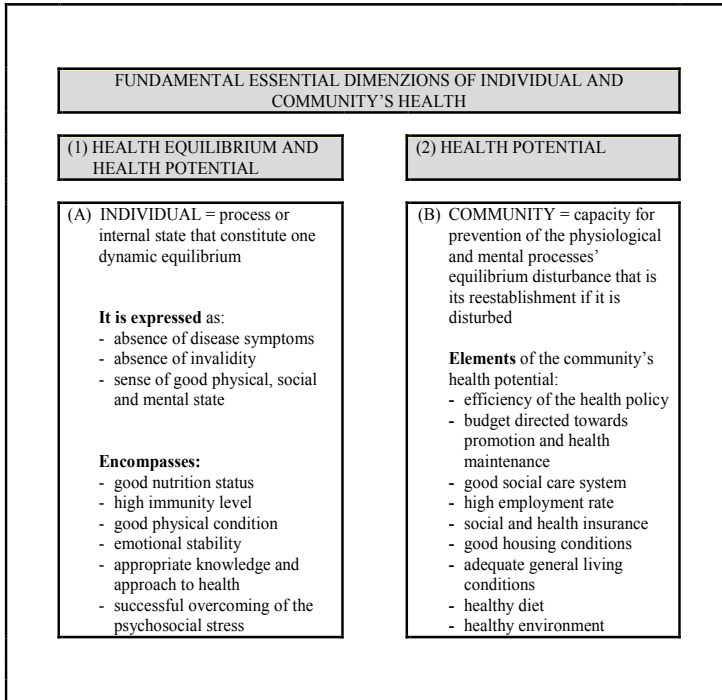
According to Miller's theory of life systems' hierarchy (2,13) the individual by himself is a complex system and is an integral part of a more complex higher systems, such as family, local community and wider, the global social and ecological system. In the individual's complex system there are internal smaller components and natural sub-systems (molecular, cellular and similar, which constitute tissues and organs and they constitute more complex systems – locomotion, cardiovascular, reproductive, nervous etc.) as well as cognitive, affective subsystems etc. Each of these sub-systems has its own function and all together in a mutual interaction define the individual as a whole. The health requires a process that maintains the dynamic equilibrium in each of the above mentioned sub-systems and at every functional level, a process that maintains the equilibrium between the physiological events in the human organism as well as within the social groups – the family, wider community and the entire population.

In recent times the holistic concept of health contained in the term "whole" is more and more accepted. According to this concept the human health should be observed in sense of:

- complexity and multidimensionality,
- as absence of disease and invalidity symptoms,
- as internal equilibrium and equilibrium with the environment, and
- as positively valorised psychological feeling and experience.

Based on these kinds of assumptions nowadays, when the health is discussed two its' dimensions (Figure 1), important for both the individual and the community, are defined: health equilibrium, and health potential (14).

Figure 1. Fundamental essential dimensions of individual and community health.



Source: H. Noack. *Concept of Health and Health Promotion* (14).

1. *Health equilibrium.*

Health equilibrium means maintenance of the physical, mental and social equilibrium. The individual experiences this condition as absence of disease and disability symptoms that is as a sense of good health. The doctors on the other side define the health equilibrium in sense of physiological, psychological and behavioural parameters that vary in determined scale of tolerance.

The health equilibrium at community level is also a dynamic equilibrium of epidemiological and other characteristics of different groups (for example, stability of the mortality rate in certain period of time, correlation between the birth-rate and the mortality, health care requests and health services usage etc.);

2. *Health potential.*

Health potential is a capacity, or special type of interaction between the individual and his/her surrounding, needed for equilibrium maintenance or its reestablishment if the same was disturbed. The health potential on individual level means good nutritive status, immunologic resistance to infectious agents, good physical condition (fitness),

emotional stability, certain knowledge and approach to health, healthy personal habits, positive social interaction with successful overcoming of the psycho-social stress etc. There is a possibility for psycho-physiological, psychological and sociological measurement of more of these variables.

The health potential at community level is expressed in regard to the activities needed for maintenance of the dynamic equilibrium that is for its reestablishment when it is disturbed. Important elements of the community's health potential are the efficiency of the health policy and administration, proportionality of the resources intended for health promotion, social care, employment, appropriate living conditions, nutrition, housing conditions and environmental quality, as well as the access to health, educational and other public services, health behaviour, recreational, social and cultural activities and services.

Number of different factors has influence on the health equilibrium. Some of them support it (the health resources) and some threaten it (the health risks) (Figure 2).

Figure 2. Health resources and health risks scheme.

SYSTEMS	Health resources	Health risks
PERSON		
Biological system	- good nutritional status, immunity	- malnutrition
Cognitive system	- self identity, positive health behaviour and knowledge	- susceptibility to infections
The complete person	- emotional stability, physical condition (fitness)	- inadequate health positions and behaviour and misinformation
		- general sensitivity
Health behaviour		
Habits	- healthy personal habits	- smoking, excessive eating and drinking, insufficient physical activity
Work	- satisfaction without stressful situations, recreation	- excessive and stressful work and work at dangerous places
Recreation	- enough sleeping, recreation	- not enough physical activity and sleeping
Socio-structural systems		
Health culture and practice	- positive position towards the health, moderation, lifestyle, religion	- ignoring the health and false believes, unhealthy lifestyle,
Social support	- social integration, social relations	- social isolation and lack of social support
Work organization and work system	- secure work (employment), positive working atmosphere, self-satisfaction with the job position	- unemployment, stressful situations at work, discontent
Health service	- adequate and accessible health service, social services, health education	- deficient and irregular recourses allocation
Physically-biological environment		
Physical resources	- adequate good food supply	- insufficient and low quality food, easy access to cigarettes, alcohol and drugs
Micro-environment	- appropriate housing, healthy drinking water and correct waste materials disposal, secure transportation	- inappropriate housing, water-supply and waste disposal problems, poor transportation conditions
Macro-environment	- healthy climate, preserved nature	- pollution of the environment, exploitation of the nature

The health promotion activities for strengthening the health potential could be directed either towards health resources enhancement or towards health risks reduction for the individual, group or the whole community benefit.

Various models focus on promoting salutogenic resources which promote the self esteem and coping abilities of individuals and communities, eventually leading to less dependency on professional services.

Much of the evidence available to policy makers to inform decisions about the most effective approaches to promoting health and to tackling health inequities is based on a *deficit model* and this may disproportionately lead to policies and practices which dis-empower the populations and communities who are supposed to benefit from them. An assets approach to health and development embraces a “salutogenic” notion of health creation and in doing so encourages the full participation of local communities in the health development process.

The *asset model* aims to revitalise how policy makers, researchers and practitioners think and act to promote a more resourceful approach to tackling health inequities. The model outlines a systematic approach to asset based public health which can provide scientific evidence and best practice on how to maximise the stock of key assets necessary for promoting health.

The Ottawa Charter established that “*health is created in the context of everyday life: where people live, love, work and play*” and introduced a very active and interactive understanding of health. The Charter consisted of the interface between five essential areas of public health action: healthy public policies, supportive environments, personal skills, community action and reorientation of health services (11). The aim of health promotion was to combine a social determinants approach (the old public health) with a commitment to individual and community empowerment (the new public health).

The WHO European Office for Investment for Health Development based in Venice, Italy, is using the term “health assets” to mean the resources that individuals and communities have at their disposal, which protect against negative health outcomes and/or promote health status. These assets can be social, financial, physical, environmental or human resources (e.g. education, employment skills, supportive social networks, natural resources, etc.), (15).

As such, a “health asset” can be defined as any factor (or resource), which enhances the ability of individuals, groups, communities, populations, social systems and /or institutions to maintain and sustain health and well-being and to help to reduce health inequities. These assets can operate at the level of the individual, group, community, and /or population as protective (or promoting) factors to buffer against life’s stresses. It is possible to identify health promoting / protecting assets from across all the domains of health determinants including our genetic endowments, social circumstances, environmental conditions, behavioural choices and health services. An inventory of health and development assets would, as a minimum, include:

- at the *individual level*: social competence, resistance skills, commitment to learning, positive values, self esteem and a sense of purpose. For example, with respect to young people an asset approach to health and development could involve prevention activities which focus on protective factors that build resilience to inhibit high-risk behaviours such as substance abuse, violence, and dropping out of school;
- at the *community level*: family and friendship (supportive) networks, intergenerational solidarity, community cohesion, affinity groups (e.g. mutual aid), religious tolerance and harmony. For example, the cohesiveness of a community measured by a set

of strong and positive interlocking networks may be seen as a health asset. In this instance, the asset has the potential to be health promoting irrespective of the levels of disadvantage in that community;

- at the *organisational or institutional level*: environmental resources necessary for promoting physical, mental and social health, employment security and opportunities for voluntary service, safe and pleasant housing, political democracy and participation opportunities, social justice and enhancing equity. For example, health systems across Europe are under utilised instruments for social and economic development. In an asset model, planners would ask how health services can make the best use of their resources (and maximise their assets) to help reduce health inequities by impacting on the wider determinants of health, to build stronger local economies, safeguard the environment and to develop more cohesive communities.

Developing the assets model

Working together, assets based approaches add value to the deficit model by:

- identifying the range of protective and health promoting factors that act together to support health and well being and the policy options required to build and sustain these factors;
- promoting the population as a co-producer of health rather than simply a consumer of health care services, thus reducing the demand on scarce resources;
- strengthening the capacity of individuals and communities to realise their potential for contributing to health development;
- contributing to more equitable and sustainable social and economic development and hence the goals of other sectors.

In reality, both models are important; however, more work needs to be done to redress the balance between the more dominant deficit model and the less well-known (and understood) assets model. The asset model presented here promotes a more systematic approach to understanding the science and practice of an asset approach to health and development. In doing so, it has the potential to create a more robust evidence base that demonstrates why investing in the assets of individuals, communities and organisations can help to reduce the health gap between those most disadvantaged in society and those who achieve best health.

The asset model draws on a number of current and resurgent ideas found in the literature. The first of these is already mentioned concept of salutogenesis (7, 8). This concept focuses attention on the genesis of health, in comparison to the concept of pathogenesis, which focuses on the genesis of the disease. Salutogenesis asks, “What causes some people to prosper and others to fail or become ill in similar situations?” It emphasizes the success and not the failure of the individual and it searches for the foundations of positive patterns of health rather the foundation of negative outcomes.

The asset model also incorporates the idea of asset mapping as a way of promoting effective implementation of equity focused policies by taking a positive approach to measuring and diagnosing community capacity to engage in health development activities. Kretzmann & McKnight (16) describe asset mapping as a process of building an inventory of the strengths and gifts of the people who make up a community prior to intervening. Asset mapping reveals the assets of the entire community and highlights the interconnections among them, which in turn reveals how to access those assets. McKnight (17) claims that asset mapping is necessary if local people are to find the way toward empowerment and renewal.

The asset model also promotes a multidisciplinary approach to the evaluation of complex interventions, deriving a new set of “salutogenic” indicators useful for measuring the effectiveness of these interventions in different contexts.

The asset model can be utilised to:

- generate a “salutogenic” evidence base that identifies the most important health promoting and /or protective factors for health and the actions that need to be taken to create the necessary conditions for health;
- assess how most effectively to implement the actions required to create these conditions for health;
- develop the most appropriate measures and evaluation frameworks to assess the effectiveness of these actions.

Using salutogenesis to build an evidence base for health

Evidence-based public health is now well established and forms an integral part of the decision making process for health development. Much work has already been done to create the scientific base for action (18-20), and a range of methodologies developed to evaluate these actions.

The asset model seeks to complement these achievements by building a more systematic approach to collecting and synthesising evidence based on the theory of salutogenesis.

The “salutogenic” perspective or ‘the origin of health’ allows us to identify those factors which keep individuals from moving toward the disease end of the health and illness spectrum (10). It can help us to identify the combination of ‘health assets’ that are most likely to lead to higher levels of overall health, well-being and achievement. Specifically, the concept embraces the need to focus on people’s resources and capacity to create health. It argues that the more individuals understand the world they live in, which is manageable and has meaning, the more they can utilise their own resources and those around them to maintain their own health. Lindstrom (10) argues that the concept can be applied at an individual, group and societal level.

A “salutogenic” approach to building an evidence base for public health would include the need to identify those health promoting or protective factors (assets) that are most important in creating health and to understand the implications for action.

At its core, salutogenesis asks:

- Which external factors contribute to health and development;
- Which factors make us more resilient more able to cope in times of stress);
- What opens us to more fully experience life, and
- What produces overall levels of well-being.

Applying this concept in searching evidence on the determinants of health and evidence of the most effective actions has the potential to explain further what is required to tackle inequities in health. It also encourages the discipline of modern epidemiology to move towards finding answers to what creates health, rather than its traditional focus of generating evidence about the causes and distribution of disease and early death. The asset model therefore calls for a rethinking of the theoretical basis on which the public health evidence base is built. The key questions for an epidemiology of health would include:

- Which are key assets for health and development at each of the key life stages;
- What are the links between these assets and a range of health outcomes;

- How do these assets work in combination to bring about the best health and well being outcomes, and
- How may of these factors should be used to contribute to reductions in health inequities.

Of course, there are many examples where this approach to research is already being taken. The assets model aims to encourage a more systematic way of collecting and synthesising this research to ensure that it features in the ongoing practice of evidence-based public health, which is still dominated by a positivist biomedical approach to understanding ‘what works.’

The concept of resilience has been identified as an example of an important health asset to support the healthy development of young people, particularly those who are growing up in difficult circumstances.

Resilient young people possess problem solving skills, social competence and a sense of purpose, which can be utilised as an asset that can help them rebound from setbacks, thrive in the face of poor circumstances, avoid risk-taking behaviour and generally continue on a productive life.

The Search Institute has developed 40 essential developmental assets for young people, particularly during adolescent years, which foster resilience capabilities and support growing up as healthy, caring and responsible people (21). Many of the factors associated with resilience in young people relate to the social context within which they live.

Disease

The concept of dynamic equilibrium

The concept of equilibrium (dynamic equilibrium) and the concept of adaptation to the environmental requirements and changes are contained in several explanatory models of health. The disease according to this idea is the equilibrium disturbance expressed on different levels that is in different parts of the system or the organism (cellular, organic, on the behaviour, socialization and communication, etc.). The disturbance manifests itself differently depending on the level at which occurs.

Occurrence of disease

Occurrence/onset of the disease is closely linked to the existence of different factors of “outer” and “inner” environment of a human being.

Environmental factors

The environmental factors – causes are so called natural agents present in the physical and biological environment, the inheritance, and the causes resulted from the individual’s lifestyle and behaviour, that is, agents produced by the humans:

1. The physical environment.

The physical environment consists of the still life surrounding the people: soil, water, air, sunlight, winds, radiation and the like, as well as the physical environment produced by the humans like new materials, objects, machines, roads, etc.. Humans with their activities disturb and pollute the environment, soil, water and air, creating additional challenges for their health disturbance.

2. The biological environment

The animal and vegetable world in the people’s surrounding consist the biological environment. It is a source of number of challenges as potential causes of disease:

protozoa, bacteria, viruses, fungi, rickets etc. Humans cause changes in biological environment with their activities and they present new challenges for their health disturbance.

3. The social environment

The social environment is a typical human characteristics and it is created by the people and their narrower and wider communities where people live and interact. The humans within the social environment through the process of social evolution developed all those specific characteristics that converted them from natural to social creatures. And, instead of obeying to the laws of the nature they build their own social laws that determine their further evolution and behaviour. The fundamental characteristics of the social environment are:

- *work* through which people assure their own and their families' existence and change and build the world collaborating, communicating, associating and acting together with other people;
- *creating certain groups and communities* (family, work collectives, colonies etc.) within which greater interaction and communication between people is achieved;
- *culture* is a complex entirety that includes knowledge, believes, art, customs, moral, laws and habits acquired through the life course and transferred to the younger generations. It also considers the people's attitude towards themselves and other people, their position towards their own health and the health of their surrounding, the lifestyle, the housing, the dressing code, the nutrition etc.;
- *socially-economic and production relations*;
- *living standard (social and personal)*;
- *science and technology*;
- *industrialization and urbanization*;
- *different activities and institutions, including health institutions.*

Each component of the social environment is a significant factor for human health promotion and prevention, but also a challenge for its disturbance. These challenges could be:

- alienated job position (without interest and enthusiasm, only for existence);
- deviant communication among people when instead of collaboration arises aggressiveness, violence, limitation of human liberties and rights;
- low level of socially-economic development and life standard (despite the significant scientific and technological progress there are still parts of the world where people face hunger and diseases and struggle for survival);
- sudden and intense changes in certain environments, such as industrialization and urbanization, migration from rural to urban communities when people fail to adapt to the newly emerged conditions which results in occurrence of various diseases as neurosis, hypertension, alcoholism, injuries at work, ulcer, etc.;
- low level of general and health culture;
- bad habits and lifestyle (smoking, alcohol, bad diet, physical inactivity etc.);
- lifestyle in wider sense of the word (housing, water-supply, waste materials disposition, population density, traffic and relations etc.).

Hereditary factors and biological-psychosocial characteristics of the human beings

Hereditary factors could be challenges that arise from the individual's internal structure as an inherited susceptibility to certain conditions and diseases. The heredity carriers are the genes contained in the chromosomes of the cell's nucleus. Each one of the different cells in one individual's body has the same genotype and the same potential written in the identical DNA packages in their nucleuses/nuclei. After the fertilization follows the process of differentiation when the newly formed cells, even though they have the same potential, gain distinct roles and form different tissues. The little zygote grows into an adult human being, at first in the mother's body and after the birth in the external environment where it receives the material needed for the new cells. Thus, the individual's features do not completely result from the inherited genotype. Nevertheless, the environment influences the individual's characteristics as well. For example, if two identical twins (meaning born with identical genes) are separated and grow in different environments, later they will differ in many characteristics including their physical appearance. It means that despite the identical genetic composition (genotype) that influences both the physical appearance and the characteristics, the complete appearance – the phenotype – results from the interaction between the environment and the inheritance.

The environment has influence on people during their entire life as well as before their birth. Some diseases affecting the mother (rubella), various physical influences during pregnancy (radiation exposure), taking medicaments with teratogenic activity, genetic mutations and similar could harm the foetus. Later, the development of individual's psycho-physical potentials depends on the environment where he/she lives. It means that the person's achievements depend on the environment and the possibilities he/she has to use his/her genetic potentials and the potentials of the environment. Thus, the individual becomes "product" of the environment and its integral specific part. People with their activities change the environment; adjust it to their needs and they adjust themselves to it. This dynamic equilibrium determines the health and the entire human psychosomatic development. The environmental factors and the human internal factors are intimately linked so the changes in the external environment trigger changes in the internal environment and vice versa.

Considering the inheritance and the diseases, the diseases could be conditionally divided in three groups:

- diseases in which genetic factors predominate while environmental influence is minimal (haemophilia, phenylketonuria etc.);
- diseases in which the influence of genetic factors and environment has approximately same impact (diabetes, hypertension, congenital anomalies etc.);
- diseases in which the genetic factors influence is negligible and the environmental influences dominate (contagious diseases, injuries etc.).

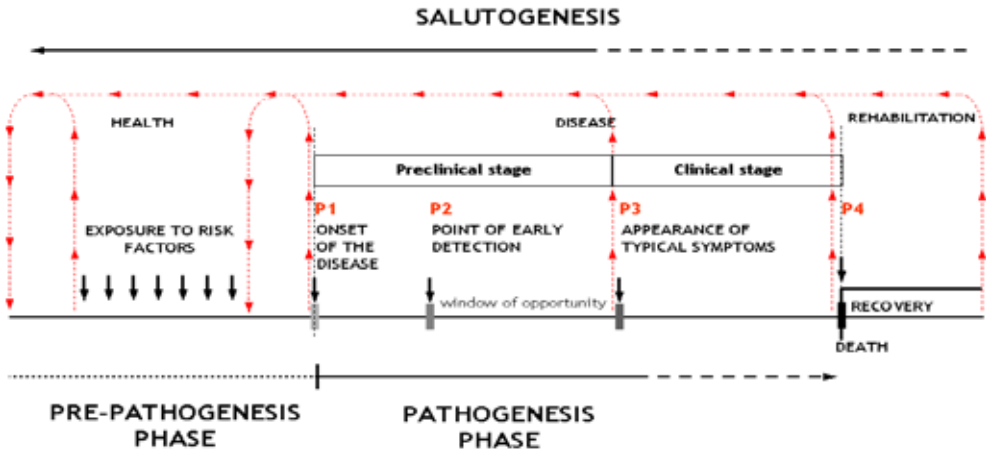
Thus, the disease occurrence is usually restricted by combination of several challenges that lead to adjustment and dynamic equilibrium disturbance. The dynamic equilibrium depends on the individual's capacity to interact with the nature and the social and cultural environment through various communication and information exchange skills.

Therefore, the health is a dynamic characteristic of the individual enabling him/her to adapt to the environment even when it imposes unusual risks or requests (health disturbers or disease stimulators) to certain intensity level or when they are short lasting and could be tolerated and controlled.

Natural course of the disease

The disease course has several phases. The term “natural course (or history) of the disease” designate a course of the disease from the onset to restitution of integrity of a human being (22, 23) (Figure 3). The stages/phases of natural course of the disease are:

Figure 3. Natural course of the disease.



1. Phase of pre-pathogenesis.

The phase in which the individual is healthy and with the help of the adjustment mechanisms and the defence capacity maintains the internal dynamic equilibrium, despite the disease causes and stimulators.

If the health is a process of continued reciprocal interaction and dynamic equilibrium between the biological and psychosocial characteristics of the individual and the ecological and social characteristics of the environment, and a process of continual adjustment to the changes, then the disease is a failure in the adjustment process, restriction of the adjustment’s mechanisms or even an inadequate adjustment. Some factors may have a long-term activity exhausting the adjustment mechanisms. These are the so called “risk factors”, which sooner or later could provoke a disease unless they are eliminated. Other group of challenges could be sufficiently strong and sudden and could immediately disturb the equilibrium, resulting in the onset of diseases since adjustment to this kind of factors is not possible.

2. Onset of the disease.

3. Phase of pathogenesis.

Phase of pathogenesis is the next phase of the natural course of the disease. In this phase the dynamic equilibrium is disturbed and certain disease occurs, due to greater alterations in the environment or internal changes above the tolerance level that cannot be controlled by the adjustment’s mechanisms and the immune system. In the phase of pathogenesis there are two stages:

- *preclinical, latent or asymptomatic stage* of the disease, and
- *clinical stage of manifested disease*.

In certain diseases, the so called window of opportunity exists in the preclinical stage. In this window early detection of a disease is possible, as well as intervention, which can alter the disease course. This is typical for cardiovascular diseases and cancer.

Health approaches and health promotion

In last decades, it has gradually become clear that the biomedical model of health and disease is outdated and inadequate. Health and disease can no longer be considered distinct entities where one exists only in the absence of the other. A physiological condition that prompts one person to seek medical treatment may be perfectly acceptable to another person. Therefore, despite the importance of biological phenomena with respect to the aetiology of diseases, thorough evaluation of a disease cannot be based solely on biological factors. Indeed, psychological and social factors must also be considered, such that the question of what is healthy and what is not becomes very subjective, and is more properly explained by the concept of illness. Whereas the biomedical model restricts itself to searching for a specific underlying cause of disease, the biopsychosocial model explores all aspects of a disease, and is thus a more valuable diagnostic tool for the modern health care.

Approach to the health and disease understanding, described above has opened an opportunity for its further elaboration done in the concept “health promotion”. This approach is also a base for a series of public-health interventions and strategies, most important of which is the WHO’s “Health for All”.

Health promotion is defined as a process of training people to undertake the control over their health in sense of its prevention and promotion and not only in sense of prevention of disease occurrence.

Here, along with the concept of health promotion we have to mention again the concept of salutogenesis; the concept that focuses on factors that support human health and well-being rather than factors that cause disease; the concept that today represents an integral part of the theoretical foundations of health promotion.

Exercise

Task 1:

Carefully read the content of this module and the papers:

Antonovsky A. The salutogenic model as a theory to guide health promotion. *Health Promotion International* 1996;11:11-8. Available from: <http://heapro.oxfordjournals.org/cgi/content/abstract/11/1/11> (Accessed: August 19, 2007).

and

Lindström B, Eriksson M. Salutogenesis. *J Epidemiol Community Health* 2005;59:440-2. Available from: <http://jech.bmj.com/cgi/content/reprint/59/6/440n> (Accessed: September 9, 2007).

Task 2:

Discuss with other students different explanatory models of health, and critically evaluate their strengths and limitations.

Task 3:

Identify the characteristics of the concept of salutogenesis and confront it to the concept of pathogenesis.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title: 3.1.1	Contemporary Concept and Definition of Health Care
Module: 3.1.1	ECTS: 0.5
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Key words	Health care, levels of prevention, health promotion, disease prevention, screening, early treatment, rehabilitation, palliative care, social support
Learning objectives	After completing this module students and public health professionals should be able to: <ul style="list-style-type: none"> • understand the contemporary concept of health care; • the idea of health intervention and the levels of prevention in terms of natural history of disease; • locate the position of prevention in the system of health care; • understand and adopt the definitions of terms: health promotion, health maintenance, disease prevention, early treatment, rehabilitation and palliative care; • value the specific (particular) measures for health promotion and disease prevention in terms of their acceptability, effectiveness and efficiency; • estimate the possibility of the implementation of particular measures on individual level, the level of community as well as the society as whole.

<p>Abstract</p>	<p>Paper gives a historical and theoretical overview of understanding and contemporary concept of health care and various levels of prevention (primary, secondary and tertiary prevention) in terms of the natural course/ history of disease. Special emphasize is given to the primary prevention and preventive medicine, what is disease, how to prevent it, to cure it, and to make its consequences less harmful. Specific examples and practices are presented for the specific measures for prevention of disease, control of risk factors, prevention of mental disorders in susceptible individuals or populations, protective procedures for communicable diseases control, as well as monitoring and regulation of environmental pollutants. Primary prevention is to be distinguished from secondary prevention, which is the prevention of complications or after-effects of a drug or surgical procedure, and tertiary prevention, the amelioration of the after-effects of a disease.</p>
<p>Teaching methods</p>	<p>Lecture 1 hour, seminar 3 hours (Seminar is using the experience of students as the result of the implementation of “interventional questionnaire” and pre-practice.)</p> <p><i>Task:</i></p> <p>1-3-students are interviewing one adult person each according to their choice (health workers, very old persons /70+ years), and adolescents excluded), using the given questionnaire. Each student is reporting on:</p> <ol style="list-style-type: none"> a) his/her own reaction after studying the questionnaire (particularly related to expected patient’s understanding, reactions to questions, acceptability of particular question, etc.); b) the procedure and result of the interview, the reactions of the respondent and his/her decisions regarding his/her health behaviour in the future; c) how informed is respondent and what is he/she doing for his own health; d) student’s opinion relating the effects of the interview done and suggestions for improvements.
<p>Specific recommendations for teachers</p>	<p>Teaching methods include introductory lectures, self learning, and extensive discussion on different levels of prevention in terms of the natural course of the disease and the concept of pathogenesis.</p>
<p>Assessment of students</p>	<p>Seminar paper and case problem presentation – preventive programme design</p>

CONTEMPORARY CONCEPT AND DEFINITION OF HEALTH CARE

Zvonko Susic, Doncho Donev

Historical overview

The history of the idea about medicine and its objectives comprises two different concepts. According to the first one, the main objective of medicine is health promotion that is strengthening and promotion of health, and prevention and protection from diseases. According to the other concept, the main objective of the medical science and health care is treatment of disturbed health status.

The antagonism between these two concepts is rooted in the traditional Greek myth about the God of healing Asclepius (known as Salus in the Roman mythology) and his daughter Hygieia, Goddess of health whose attribute – a serpent drinking from a flat pot – became a symbol of the medical profession. Asclepius's followers pointed out that the main role of the doctor was to cure the disease, renew the disturbed health regardless of the fact whether it came with the birth or was developed in the course of life. On the other side, the Hygieia's followers considered the health as positive attribute of every man that led a wise life. According to them the medicine should reveal and learn the natural laws that provide people with healthy mind and body and enable them to maintain total health (1).

The oscillations between these two concepts have maintained through centuries. Nevertheless, Asclepius' treatment concept was more dominant and achieved notably higher development.

The scientific and technical development in the last 100 years, especially in the field of the medical science, enabled notable recognition of many diseases, their description in details, their classification, and explanation of the leading mechanisms of their development. This was followed by strong development of the health care system. The health care system, which until the Middle Age, mainly consisted of isolated general practitioners and church-monastery hospitals, grew into an intricate system with complex health institutions that primarily deal with diseases. The positive health study advanced little slower. In comparison to the abundant literature about diseases, the literature about health seemed very poor.

Nowadays despite the modern scientific and technical achievements worldwide, in the undeveloped world more than 10 million children per year die from hunger and bad living conditions. Due to the weak economy these countries cannot apply modern world medicine. On the other hand, the developed countries firstly faced an increase in the "new types of deaths" caused by cardiovascular diseases, cancer, injuries, chronic respiratory and other systems diseases etc. Further health problems in the developed world manifested in increase of the behavioural and lifestyle caused diseases, mental diseases and diverse pathology in the elderly population. The unemployment has also shown its health consequences, as well as the changed and polluted environment. The health care system responses to these problems were specializations and sub-specializations, new and advanced high technologies and increased use of medications. The results were dissatisfactory and the health care costs were too high even for the most developed countries. This augmented the discontent in "all interested parties": population, health workers, financiers (Health Insurance Funds) and politicians. The opinions for need of reorientation in the understanding of the role of the medicine and health care, which should not deal only with disease, but also with their prevention and modes for health maintenance and promotion, became louder.

The definition of health care is of importance for the theorists and researchers in order to identify the research problem, create tools for carrying out the research and select appropriate variables. On the other hand, for the public health sciences the definition also provides an operationalization important for measuring, comparison, planning and acting in the field of health care. This imposes the need to define and explain the health more thoroughly and to emphasize all the factors that enable its maintenance and promotion. In addition, besides the active approach of the individual that seeks for answers and help from the institutions responsible to provide health care, the collective approach to the population level gains on significance through institutions responsible for groups and communities health care. In wider sense, the social community is obliged to provide equal right to health for all its members (citizens), and not only by the health service activities, but by active participation of all social sectors in undertaking measures for health prevention and promotion and healthy living and working conditions creation. This is the fundament of the WHO strategy “Health for All” for the European region, where dominates the position that “the health is not a merchandise that could be bought in the health service”, but it is a part of the continuous responsibility of the community and the individuals to prevent and promote their own health.

During the 20th century a significant increase of life expectancy was achieved, especially in the developed countries. First of all, this was result of a successful contagious disease control and decreasing of the general mortality rate, especially the newborns and infants, and small children mortality rate. However, despite the strives for further life expectancy increase, nowadays health care development objectives more and more emphasize the better life quality providing. In the European Region WHO “Health for All” strategy’s goals this is declared as “adding years to the life” and “adding life to the years”. It means that the goal is not only to increase the life expectancy, but also to provide a better quality life, that is to build up the capacity for leading economically and socially productive life. Following the logic, the life quality studies are dominantly directed towards identifying the treatment, rehabilitation and other health care measures, including the prevention, that influence the capacity for work and daily life function completion. For this purpose measures that include physical, mental and social state are used. All these is linked to the medicine and health care new goals – its measures to influence not only on the protection and life expectancy increase, but especially, on the life quality improvement.

Therefore, in recent times, the population’s health and health conditions measuring, in addition to the classic mortality and morbidity indicators and other negative health indices, includes some new indicators. These new indicators are complex and some of them are QALY – Quality Adjusted Life Years as well as DALY – Disability Adjusted Life Years, which result from the health service’s work, and in which the life expectancy and life quality improvements resulted from the undertaken health interventions and programmes.

Definitions of Public Health and Health Care

Different terms and definitions for the health care have been used. In 1920 Winslow , from the University of Yale, defined the term *Public Health*, in our terms also known as *people’s health*, as follows: “Public health is a science and art of disease prevention, prolonging life, and promoting health and well-being through organized community efforts for sanitation of the environment, control of communicable infections, organization of medical and nursing services for early diagnosis and prevention of disease, education of the individuals about personal health and the development of social machinery to assure everyone a standard of

living adequate for the maintenance or improvement of health” (2).

The WHO Constitution includes precise definition of health, but the health care is not defined. In different countries there were and still are different definition of the term “Public Health”. In many countries the real “public health” and “health care” exist as two different sectors. However, the need for joint work of these two sectors is evident. In its fundamentals the public health is health of the people. Thus, it includes organization of the personnel, the facilities and the requirements for health care services that provide health promotion, diseases prevention, diagnosis and treatment of the ill, as well as medical, social and professional rehabilitation.

Hence, *health care* is an entirety of measures and activities conveyed by the community and especially its integral part – the health i.e. the health service, as well as each individual measures and activities for prevention and promotion of his/her own health and health of the other people.

Definition of Prevention

Actions aimed at eradicating, eliminating, or minimizing the impact of disease and disability. The concept of prevention is best defined in the context of levels, traditionally called primary, secondary, and tertiary prevention” (3).

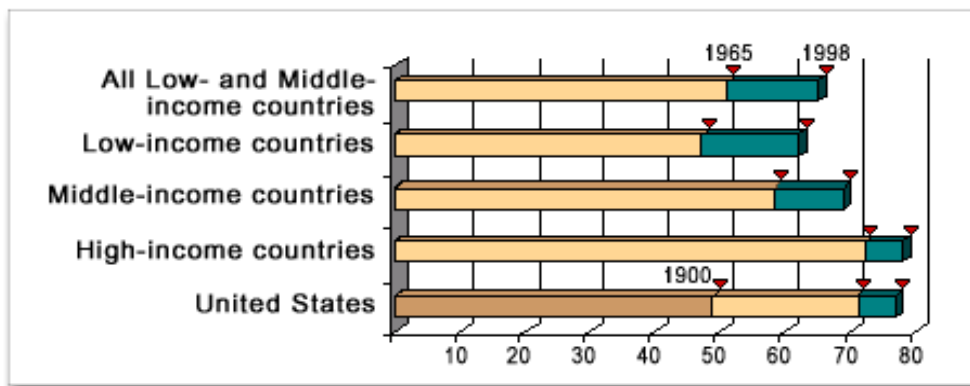
The practices of public sanitation and personal hygiene have dramatically reduced the incidence of certain infectious diseases. The control of many infectious illnesses has occurred as societies themselves have become more advanced. Many of the protections are now in place such as vaccination, water and sewage treatment, and safe food-handling and distribution practices have vastly improved our ability to control infectious disease outbreaks.

Why should one practice prevention?

The world is healthier than it has ever been, with a 30 year global increase in the past 100 years. The dramatic increase in life expectancy that was observed in the past century in both developing and developed world (Figure 1) can be attributed primarily to improved preventive practices, not to advances in clinical medicine. It has been estimated that the majority of the increase in life expectancy was due to prevention.

Disease prevention and hygiene practices have a very long history. Hygienic practices are inherent in all the major religions such as Islam, but also including Christianity, Judaism, and Hinduism. The best scientific information can be approached via the Internet to the major religions. This prevention information can then be carried on the existing information sharing systems in the local communities, including religion, school friends, colleagues, social groups, etc.

Figure 1. Life expectancy at birth in different countries, 1965 and 1998



Source: *The World Bank Group, 2001*

Epidemiologic transition and Health

Today, it is widely assumed that with increasing economic growth, the developing countries will follow the same path as Europe and North America and experience what has become known as the “epidemiologic transition.” This term describes the changing patterns of disease that accompanied overall improvements in health in the late 19th and early 20th Century. As mortality rates declined and life expectancy rose, these populations experienced a shift in the pattern of disease, from one dominated by infectious diseases to one dominated by chronic disorders such as heart disease and cancer. The shift to chronic diseases can be partly explained by the fact that many more people were living to the age when chronic diseases strike. Even so, this transition represented not just a simple substitution of one set of problems for another but an overall improvement in health. Elements of this epidemiologic transition are in fact occurring now, to varying degrees, throughout much of the developing world. In some of the middle-income countries of Latin America and Asia, for instance, chronic diseases now take as great or an even greater toll than infectious diseases (1). But this transition is by no means complete. Many countries, especially the poorest, still have a huge burden of infectious diseases along with a growing problem of chronic diseases. These populations have not traded one set of problems for another; instead, they are suffering from both, in what is known as the “double burden” of disease (4). Nor is the transition inevitable. As the history of the Sanitary Revolution illustrates, concerted policies and investments are necessary to improve both environmental quality and public health.

Lifestyle Factors

In the first half of the last century people were too busy trying to survive to worry about health as much we do today, much less about how we might practice healthier habits in order to prevent disease. Progress that did occur was brought about through the organization of unions in the workplace, legislatures, and public health ordinances. Toward the end of the century, in 1990, the *Healthy People 2000* report made a call to work toward a culture that actively promotes responsible behaviour and the “adoption of life-styles that are maximally

conducive to good health. Since that time, there is more and more concrete evidence indicating that practicing healthy habits can significantly decrease our chances of developing chronic disease. Therefore, of all the health determinants that we have discussed, lifestyle factors are among the most controllable and influential factors influencing our health.

According to Susser, our knowledge on how to prevent diseases is developing through 4 phases:

1. phase he calls the phase of sanitary statistics (first half of 19th century) characterized by theoretical consideration of miasma i.e. poisoning by foul emanations from soil, air, and water with analytical approach demonstrating clustering of morbidity and mortality, and preventive interventions such as introducing drainage, sewage, sanitation
2. phase - infectious disease epidemiology (latter half of 19th century) dominated by germ theory: single agent relate one to one specific disease, and efforts in laboratory isolation and culture from disease sites, experimental transmission and reproduction of lesions. Preventive measures were mainly to interrupt transmission (vaccines, isolation of the affected through quarantine and fever hospitals, and ultimately antibiotics)
3. phase - chronic disease epidemiology (latter half of 20th century) with “black box” type of understanding of aetiology: exposure related to outcome, without necessity for intervening factors or pathogenesis. Analytic approach was preoccupied with calculation of risk ratio of exposure to outcome at individual level in populations, and preventive strategy was focused on control risk factors by modifying lifestyle (diet, exercise, etc), agent (guns, food etc), or environment (pollution, passive smoking, etc)

The phase - eco-epidemiology is just emerging, and instead of “black box” will hopefully understand Chinese boxes: relation within and between localized structures organized in a hierarchy of levels, and be able to analyze determinants and outcomes at different levels of organization: within and across contexts (using new information systems) and in depth (using new biomedical techniques). Prevention will then apply both information and biomedical technology to find leverage at efficacious levels, from contextual to molecular.

Components (levels of prevention) of the contemporary concept of health care

Even though all health prevention measures are an integral whole they still can be divided in several groups according to the stadium of the natural course of the considered disease and the levels at which the health care is provided. Regarding the phase of the natural course of the disease in which we act, there are primary, secondary and tertiary intervention, that is prevention (Scheme 1).

Scheme 1. Levels of disease prevention in the natural course of the disease with responsible sectors/institutions (1)

	100% HEALTH	WHO CONVEYS THEM?
<p>PREPATHOGENESIS</p> <p>HEALTH</p>	<p>I. PRIMARY PREVENTION</p> <ol style="list-style-type: none"> Measures for promotion and prevention of the health – health promotion Measures for health prevention – specific care 	<ul style="list-style-type: none"> Social community with the non-health sectors Individuals and the population through self-care The health service through the primary health care (PHC) and the specialized preventive medical care
<p>PATHOGENESIS</p> <p>Preclinical asymptomatic stadium</p> <p>Clinical manifested stadium</p> <p>DISEASE</p> <p>Stadium of convalescence</p>	<p>II. SECONDARY PREVENTION</p> <ol style="list-style-type: none"> Measures for early detection of the diseases Measures for prompt treatment and restriction of the disability <p>III. TERTIARY PREVENTION</p> <ol style="list-style-type: none"> Measures for rehabilitation Measures for support <p>DEATH</p>	<ul style="list-style-type: none"> The health care through: <ul style="list-style-type: none"> primary health care secondary health care tertiary health care <p>=> The health service and the rehabilitation service => Social, humanitarian and educational institutions and services and NGOs</p>

Primary, secondary, and tertiary prevention is important part of the broad-based knowledge base needed for practice of public health worker. Primary, secondary, and tertiary prevention activities, or promoting health, early disease detection and treatment of established disease, are crucial parts of the role of public health. A sound understanding of these concepts is important to being successful in your professional activities.

Primary prevention

Primary prevention (intervention) is prevention and promotion of the general health condition – that is *health promotion*, and neutralization of the causes and risk factors in order to prevent disease development – that is *specific prevention*. The U.S. Preventive Services Task Force (5) defines primary prevention measures as “those provided to individuals provided to prevent the onset of a target condition.” Primary prevention measures include activities that help avoid a given health care problem. Examples include passive and active immunization against disease as well as health protecting education and counselling promoting the use of automobile passenger restraints and bicycle helmets. Since successful primary prevention helps avoid the suffering, cost and burden associated with disease, it is typically considered the most cost-effective form of health care. The primary prevention is more effective and more economic than all other therapeutic measures for disease control and treatment. Nevertheless, many doctors in their practice still does not apply enough health education, advising and other primary prevention measures regarding the causes and risk factors in order to prevent the preventable conditions and diseases development in their practice. In this first prevention level the intervention is directed towards the healthy individuals. There are two groups of measures:

1. Measures for health promotion

The community as a whole, with all its social sectors, including the health sector that is the health services, convey these measures as well as measures for training people to take control over their health and to promote it. In order to achieve complete physical, mental and social health, individuals and groups must be able to identify and fulfil their aspirations, satisfy their needs and change and control the environment in positive sense. Health promotion goal is to achieve and maintain the balance between the individual and the environment combining the individual choice with the social responsibility. These measures should make more favourable hygienic, economic, social and other conditions with positive influence on the people's health, such as:

- environment promotion and pollution control through adequate water-supply, disposition of waste materials, sufficient hygienically correct, accessible to the people, food, prevention of air pollution, prevention of noise pollution, adequate urban development and housing, traffic safety and neutralization/diminishment of the industrialization, urbanization and technological development's side effects etc.;
- working (enterprises) and education (schools) conditions improvement and the like;
- improvement of the life economy, nutrition and the living standard in general, as well as community's general social problems (rights, solidarity, equity etc.) solving;
- promotion of the individual and group's behaviour, providing adequate conditions for rest and recreation, increasing the population educational level in general and health culture, health education activities for training each individual and the population as a whole, in health prevention and promotion through changing the harmful habits and risky behaviour for healthy lifestyles and appropriate usage of the health, social and other services;
- analysis of the health behaviour, lifestyle and habits, introduction and application of special programmes (preventive and health-educational programmes, healing-target programmes, etc.), work on development and promotion of the health services (infrastructure, personnel, equipment).

2. Measures for diseases prevention and control – specific prevention

These measures for diseases prevention and control are also called measures for specific prevention (of prophylaxis) because they are directed towards diminishment of risk factors for specific diseases and susceptibility of the organism to agents in order to prevent occurrence of certain contagious and other diseases. These types of measures are:

- vaccinations/immunization (compulsory and facultative) – vaccines (live or dead bacterial and viral vaccines) provoke a creation of active immunity against certain infectious diseases agents;
- serum-prophylaxis is protection by bringing into the body passive immunity in healthy individuals exposed at risk or threatened by some contagious diseases through administration of serum with antibodies against that infectious disease;
- chemo-prophylaxis is protection of healthy individuals from infectious diseases with use of medicaments (tablets quinine for protection from malaria);
- identification and control of germs-carriers in order to protect the healthy population from spreading and epidemics of infectious diseases;
- epidemic monitoring, isolation and quarantine of diseased and suspected individuals

- in order to prevent the epidemic of certain contagious or quarantine disease;
- disinfection, extermination of insects and rodents, environment cleaning up for eradication of the vectors (insects, rodents, wild and domestic animals) transmitted infectious diseases;
- fluoride-prophylaxis – using fluoride compounds on individual level or fluoridation of the drinking water for caries prevention of the population;
- vitamins-prophylaxis – with vitamin preparations on individual level (A+D drops and pearls, multivitamin syrups and similar) for rachitic and other vitamin deficiencies in children, and vitamin enrichment of food products, especially for children nutrition, for prevention of vitamin deficiencies at the population level;
- fight against the risk factors, first of all against smoking and other carcinogens and risk factors for cancer, cardiovascular and other chronic and degenerative diseases .

Secondary prevention

Secondary prevention (intervention) is strictly within the health care services domain and consists of identification of the “individuals with pathological conditions” or in the early stadiums of the diseases, when the patient is still not aware of the disease and has no symptoms. The U.S. Preventive Services Task Force (3) describes secondary prevention measures as those that “identify and treat asymptomatic persons who have already developed risk factors or preclinical disease but in whom the condition is not clinically apparent.” These activities are focused on early case finding of asymptomatic disease that occurs commonly and has significant risk for negative outcome without treatment. Screening tests are examples of secondary prevention activities, as these are done on those without clinical presentation of disease that has a significant latency period such as hyperlipidemia, hypertension, cervical, breast and prostate cancer. With early case finding, the natural history of disease, or how the course of an illness unfolds over time without treatment, can often be altered to maximize well-being and minimize suffering.

The early diagnosis enables prompt intervention and treatment that prevents development of manifested disease and its spreading in the environment (in the cases of infectious diseases) or prevents the disease from advancing and complications, chronicity and recidivism, disability and invalidity. It also contributes to lowering the treatment and rehabilitation costs, and in some diseases prevents rapid and premature dead. Thus, secondary prevention also includes two groups of measures: measures for early diagnosis and measures for prompt treatment.

1. Early diagnosis of diseases

Early diagnosis of diseases is most usually done through daily routine work of the health service, systematic and periodical check-ups, as well as through targeted screening check-ups of the population or certain risk groups – *method of tracking or screening*. This method uses special specific procedures and tests for early diagnosis of certain diseases so called screening tests. Actually, the tracking means searching – sifting the population or its groups with specific tests and procedures in order to select potential ill persons in the earliest pre-clinical asymptomatic stadium of the diseases from the apparently healthy population. The aim of the applied tests is to point out a suspicion for certain disease or pathological process, to show that “something is going on” in the people with positive test results, in order to subject those people to further monitoring and testing

for making diagnosis. Classic examples of tracking are the fluorography of the lungs for early detection and treatment of TBC and the blood pressure measuring for detection and treatment of hypertension. Other measures include: Papanicolaou (Pap) tests for early diagnosis of uterine cancer in women, various laboratory biochemical tests for measuring the blood and urine sugar levels for early detection of diabetes, mammography for early detection of the breast cancer, monitoring the eye pressure for early detection of glaucoma etc.

There is a *mass screening* for the whole population or *selective (group) screening* for part of the population or population groups at risk for certain disease occurrence. There is also a *multiple screening* when a serial of tests for early detection of two or more diseases (test battery) are performed, as well as *multi-step or multi-phase screening* when in the disease diagnosis several phases, several experts and several level of the health care system are included. In this group of measures, in addition to the early diagnosis measures, measures for detecting the risk are included, that is, identification of the cases under suspicion. In order to be widely applicable, the screening test should possess many of the following features: to be fast (in order to save time), cheap (to save money), simple to perform (by nurse or technician and not only by doctor or doctor specialist), to be flexible in order to be performed (applicable) on field, painless, harmless and non invasive, sensitive (to give no false negative results) and to be credible and reliable (to give no false positive results).

2. Measures for prompt treatment

Treatment has always been the most attractive and most trustworthy protection measure. It is a curative – therapeutic part of the health care intended to hold back and stop the pathological process, to prevent further clinical development of the disease, to limit the disability and to prevent complications and consequences.

Regarding the place where it is performed the treatment could be conducted: at home, in outpatient departments (policlinics), in hospitals (general and specialized), in other specialized institutions and at other places.

Regarding the mode of action the treatment could be causal and symptomatic.

Regarding the mode of performance that is the therapeutic method: with medicaments, surgical intervention, psychotherapy and physical therapy.

Regarding the success cured disease, improvement, maintaining the condition, worsening the disease and fatal outcome.

Tertiary prevention

These measures include identification and taking care of those conditions that could not be cured or leave consequences despite the treatment. They are attempts to prevent, diminish and eliminate the diseases and injuries' consequences. The aim is to maintain the quality of life where due to the unfavourable course of disease, lack of effective medical technology or inadequate treatment it has been impossible to promptly and successfully eradicate the disease. Tertiary prevention activities involve the case of established disease, with attempts made to restore to highest function, minimize the negative effects of disease, and prevent disease-related complications.

The third level of prevention comprises also two groups of measures: measures for rehabilitation and measures for support and palliative care.

1. Measures for rehabilitation

Rehabilitation means more than just impeding the disease process, because it also presents prevention of complete disability after more or less stabilized condition of anatomic and physiological changes, with the aim of maximal usage of the remaining capacity of such individuals. Thus, the rehabilitation has physical, mental and social components. Rehabilitation could take place during the disease itself or after the cure.

The aim of the rehabilitation is to impede or diminish the sequels, to shorten the disability period, to prevent the invalidity, to prevent premature death and to decrease the health care costs.

Regarding the performer and its aim the rehabilitation could be: medical (physical), psychical, professional and social.

2. Measures for support and palliative care

Measures for support and palliative care are given to individuals where the disease, despite the conveyed treatment and rehabilitation, has left permanent consequences as invalidity and work disability, dependence on other people's help and care of end-of-life stage diseases etc. These measures could be governmental, conveyed by the state (legislative, budget's interventions, etc.), then institutional, conveyed by specialized institutions, familial – by the family, or measures for support given by different voluntary charitable organizations (donations, foundations, sponsorships).

Exercises

Exercise 1.

Consider the following situations.

Ms. Milić is a 72 year-old woman with chronic bronchitis who is former cigarette smoker. Her medications include ipratropium bromide (Atrovent) and albuterol. Her primary prevention needs include:

- A. Reviewing appropriate use of her medications
- B. Receiving an annual influenza immunization
- C. Obtaining spirometry measurement
- D. Periodic sigmoidoscopy
- E. In the example of Ms. Milić correct response is B. Primary prevention measures are those provided to individuals provided to prevent the onset of a target condition. Receiving an annual influenza immunization will prevent M. Milić to develop influenza by inducing production of specific antibodies.

Ms. Danev is a 68 year-old woman with hypertension who resides alone in a private home. Her secondary prevention needs include:

- A. Administration of pneumococcal vaccine
- B. Annual mammography¹
- C. Discussion of home safety to minimize fall risks
- D. Assessment of the presence of S4 heart sound

The correct response in Ms. Danev's scenario is B. Secondary prevention activities are aimed at early disease detection; mammography is an example. Pneumococcal vaccine is an example of primary prevention as is education to minimize falls. The presence of S4 heard sound, indicative of diastolic dysfunction and frequently found in the presence of protracted blood pressure elevation, is part of the ongoing evaluation of the person with established hypertension. The goal of treating a person with hypertension is not only to achieve normotensive status. Rather, tertiary prevention measures for Ms. Danev include avoiding or minimizing damage in the target organs of hypertensive; brain, eye, cardiovascular system and kidney.

When primary prevention techniques are totally effective, there is no need to consider secondary prevention; likewise, when secondary prevention techniques are totally effective, tertiary prevention is unnecessary.

Exercise 2:

The top 20 list of preventive health measures by Frank Greve:

The top rank goes to taking aspirin daily to prevent heart attacks and strokes in men over 40 and women over 50, according to a study reported Wednesday on the Web site of an alliance of health insurers, state health departments, academics, and trade groups.

Immunizing children and discouraging people from smoking follow closely behind, the Washington-based Partnership for Prevention found. Former Surgeon General David Satcher led the effort, which entailed a review of more than 8,000 preventive-medicine studies. The rankings are intended as a checklist for patients, doctors and insurers.

Analysts quantified the health gains in terms of longer life and better quality of life for each preventive measure. They also compared the cost-effectiveness of each preventive intervention. Finally, they combined the two rankings into one score that measures bang-for-the-buck for the top preventive-care options.

To read the study, which ranks 25 preventive measures, and to learn more about prevention-based strategies to improve US health, go to www.prevent.org/content/view/46/96/.

Below are the top 20 preventive measures in rank order. Mark primary preventive measures wit «A», secondary preventive measures wit «B»,and terciary preventive measures wit «C»,.

¹ John Last is a legendary figure in the area of prevention, known by many people as the “father of prevention” John Last has held academic positions with the British Medical Research Council in London, at the Universities of Sydney, Vermont (USA), and Edinburgh and has been professor of epidemiology and community medicine at the University of Ottawa since 1969. He was the editor of the 11th 12th and 13th editions of *Public Health and Preventive Medicine* and editor emeritus of the 14th edition (“Maxcy-Rosenau-Last”); editor of the 1st, 2nd , 3rd and 4th editions of the *Dictionary of Epidemiology*, and author of the 1st and 2nd editions of *Public Health and Human Ecology*.

1. Daily aspirin to prevent heart attacks and stroke in men over 40 and women over 50.
2. Childhood immunizations for diphtheria, tetanus, whooping cough, measles, mumps, rubella, polio, hepatitis B, etc.
3. Tobacco-use screening and brief counseling by doctors.
4. Routine colorectal-cancer screening for adults 50 and older by any recognized method.
5. Hypertension screening via routine blood-pressure tests and medication if necessary.
6. Annual flu shots for adults 50 and older.
7. Immunization of adults 65 and older against bacteria that cause pneumonia and related diseases.
8. Screening and brief counseling of problem drinkers by their physicians.
9. Vision screening for adults 65 and older.
10. Cervical cancer screening for sexually active women and women over 21.
11. Cholesterol screening for men 35 and older and women 45 and older.
12. Routine breast-cancer screening for women 50 and older and discussion with women ages 40 to 49 to set an age to begin screening.
13. Routine chlamydia screening for sexually active women under 25.
14. Calcium-supplement counseling for adolescent girls and women.
15. Vision screening for children under 5.
16. Routine counsel for women of childbearing age on the use of folic acid supplements to prevent birth defects.
17. Obesity screening for adults and high-intensity diet and exercise counseling for the obese.
18. Depression screening for adults.
19. Hearing-impairment screening for adults 65 and over.
20. Promotion of child-safety measures such as car seats, pool fences, bicycle helmets, poison control, and curbs on scalding-water burns.

Exact answers:

- | | |
|-------|--------|
| 1.- A | 8.- B |
| 2.- A | 9.- B |
| 3.- B | 10.- B |
| 4.- B | 11.-B |
| 5.- B | 12.- B |
| 6.- A | 13.- B |
| 7.- A | 14.- A |

- 15.- B
16.- A
17.- B
18.- B
19.- B
20.- A

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Recommended reading

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Preventive Health Care and Disease Prevention
Module: 3.1.2	ECTS: 0,25
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Key words	Preventive medicine, disease prevention, health promotion, strategies, evaluation
Learning objectives	After completing this module students and public health professionals should be able to: <ul style="list-style-type: none">• Understand the framework of preventive health care;• Understand the prevention and control of disease to promote the health of population.• Improve knowledge about the types and activities of preventive health care and disease prevention ;• Differentiate between disease prevention and health promotion;• Increase knowledge about the strategies of disease prevention;• Evaluate the possibilities for disease prevention.
Abstract	In the last decades it was evident that the health problems worldwide could not be solved only by spending money for disease treatment but by creating and application of disease prevention strategies. The aim of this paper is to give a common understanding about the major tasks of the prevention medicine, about the types and activities of the prevention. It describes the differences between disease prevention and health promotion. The levels of the diseases prevention are presented. The strategies of preventive medicine, their advantages, disadvantages and interaction are explained. The paper gives information how the evaluation of possibilities for diseases prevention could be done. At the end, the reader will learn about the necessary premises for a successful preventive strategy in the policy of preventive medicine.

Teaching methods	Teaching methods could include lectures, exercises, individual work, interactive methods such as small group discussions, seminars etc. Describe in brief the teaching process. <ul style="list-style-type: none">• introductory lectures related to disease prevention concept and its understanding;• distribution and discussion of differences between prevention and health promotion and its evaluation ;• guided discussion on health prevention strategies;• small group evaluation of the possibilities for diseases prevention.
Specific recommendations for teachers	Specific recommendations: <ul style="list-style-type: none">• ½ lectures; ½ discussions;• no special facilities or equipment are required;• target audience- medical and public health specialists, social workers, psychologists, economists, lawyers, health care managers and politicians.
Assessment of students	Assessment of students: <ul style="list-style-type: none">• multiple choice questionnaire for theoretical aspect• presentation of evaluation papers

PREVENTIVE HEALTH CARE AND DISEASE PREVENTION

Elena Shipkovenska, Karolina Lyubomirova

Introduction

Community health and diseases prevention- in the scope of the European politics

First decade of the new XXI century has proved that the community problems could not be solved by the separate countries and nations, but need global efforts. That is why the nature of the challenges to the health care systems has been changed.

International comparisons in the fields of health care and medicine give possibilities not only for critical assessment, but for trend determinations of the health care and diseases prevention in huge areas of the world. These comparisons show that nowadays people spend a lot of money to solve health problems which already exist. It is much easier for the government to spend money for a certain situation, for an event which has occurred, i.e. the sources are distributed mostly not according to the health priorities, but due to passing necessities(1).

A new diseases preventive method offered by the World Health Organization opposes to the policy of the pharmaceutical companies and medical associations which rely on and insist mainly on the clinical model of health care. This new method is based on the good understanding of the health necessities of people by an assessment of: the heaviness of the diseases and the risk factors. Health risk assessment and the application of adequate preventive measures form the basis of the WHO health plan proposed through the strategies: "Health for all in XXI century" (1998) (2), "Primary health care" (1978), and "Health promotion" (1986) (3). These strategies stress that *health is the main determinant of the adequacy of the global development policy of a country.*

What is the meaning of a good health? If life is a constant fight with the overweight, family problems, career full of battles, joyless life and conflicts it cannot be defined as healthy. Obviously, health cannot be achieved only by healthful food and physical activity, but requires good balance between body, mind and spirit. The core of the preventive medicine and disease prevention philosophy is the consciousness of the fact that our body, mind and spirit interact constantly and they determine our attitude to the diseases (despair or full-value participation for survival) or *how to live*. Health laws (physical, psychological and social health) are valid only when they work together. Health and its determinants, either of a single person or the society as a whole, are increasing their importance *as a social-economic factor, as a personal and public value, right and responsibility of everyone and everybody*. Health with its numerous aspects is a key point in solving problems as lifespan and quality of life, working capacity, raising a health offspring, etc. These are the reasons why the questions related to health are in the focus of the leading international organizations- European Council (EC), World Health Organization (WHO), etc.

WHO puts two main tasks in the activities of the countries participating in the programs in order to achieve the aims of the strategy "Health for all in 21st century":

1. Health should be acknowledged as a center of the human development as it is a source and goal in the whole development of the society.
2. Health care systems should respond to the health and social necessities of people through their whole life. This can be achieved by systems, which guarantee fair access to quality health care, disease prevention and control, legislation measures for health promotion.

These strategies are supported by the personal expectations of the people since the ancient

times. What people want is: “To live longer, to be healthy and not to grow older”. These expectations could be realized if new models are built up. These models should be based on the healthy behavior and the participation of everyone in the activities for health and clean environment, in which one is born, work and live. The public health could be influenced only by public healthy behavior and conviction of many people, i.e. achievement of a better health by investment in it. This is the essence of the preventive care and disease prevention.

Preventive health care and disease prevention

Since the primary goal of the public health is to improve the health of the community, a preventive focus is also a key element in the definition of the role. One of the major tasks of the preventive medicine is to give people a positive sense of health. This is not only a matter of improving lifestyles and reducing premature deaths but also the concern for more well-being and quality of life, by ensuring the full development and use of people’s integral or residual physical and mental capacities to derive full benefit from and to cope with their life in a healthy way(4).

Preventive health care includes all activities aimed at promoting health, preventing illness, prolonging life, and improving the functioning of individuals. These activities can be divided into primary, secondary, and tertiary preventive care depending on the stage of the disease process (Table 1), (5,6).

Table 1. Preventive health care activities

Health promotion	Pre-primary prevention	Primary prevention	Secondary prevention - early diagnostics - efficiency treatment	Tertiary prevention -post treatment and care - rehabilitation

Primary prevention takes place before the disease process occurs. It is directed to prevention of the interaction between the risk factors and the susceptible individual in the early phase before the risk factors has triggered the disease process.

Primary prevention aims at prevention of the triggering of the disease by elimination of the risk factors or by lessening their level in the community and among the different groups of the population. It mainly contributes to the decline in the morbidity rate in the society.

Primary prevention includes:

General Health Promotion. The focus is on promoting individual and group well-being since a healthy host or population is one that is generally less susceptible to illness. For example, provision of condition at home, health education, good standard of nutrition adjusted to developmental phases of life, marriage counselling and sex education, genetics, are based on general health promotion as a part of primary prevention. In the instance of general health promotion, the focus is on promoting individual and group well-being since a healthy host or population is one that is generally less susceptible to illness.

Specific Protection. Specific protection consists of measures applied to a particular disease entity or group of diseases in order to literally intercept the known causes of disease before they affect people. Examples include immunization, environmental sanitation, protection against occupational hazards, protection from accidents, use of specific nutrients, protection from carcinogens, avoidance of allergens, genetic counselling, stimulation of proper personal hygiene and control of disease vectors lice mosquitoes, and even the use of suppressive

drugs. The whole idea behind primary prevention strategies is to alter the host, the agent or environment in such a way that disease is averted.

Secondary prevention takes place early in the disease process. It is aimed at early diagnosis and treatment to prevent death or limit disability. The objects of secondary prevention are formally healthy individuals whose disease process is so far asymptomatic or the disease is at the sub-clinical asymptomatic stage. It's realization is possible if there exist reliable and discriminating screening methods for early diagnostics, as well as if there exist an effective and safe treatment, which, when applied early, will influence favourably the course and the prognosis of the disease. For example: early identification of breast cancer, early identification of hypertension, prevention of rheumatic fever and other complications from streptococcal infections. From epidemiological point of view the secondary prevention should reduce the morbidity rate too.

Tertiary prevention usually occurs when the disease process is clearly present. Tertiary prevention is not so much an effort to slow the disease process as it is an attempt to prevent complete or unnecessary disability after anatomic and physiologic changes have more or less stabilized. The therapeutic and rehabilitation measures (social, psychological and physical rehabilitation) applied in the management of chronic diseases help the patient to achieve longer periods of remission and to adapt to a new style of life. With the help of tertiary prevention some more years are added to the life expectancy for the patient as well as it adds "some life" to these years.

The provision of hospital and social facilities for the training and education of the disabled patients will help to achieve optimal usage of the remaining capacities, as well as the work therapy in the hospitals or in the sheltered colonies. Each intervention which might stop the progression of the disease to handicap and might improve the remaining functions in the face of already present disability is determined as tertiary prevention.

Is there any difference between prevention and promotion?

Nowadays there are new pretentions to the traditional classification of prevention. Most authors consider it to be directed mainly to the disease process itself and not to the health and differentiate it from promotion, which they consider as a process giving possibilities to individuals and communities to increase their control over factors determining health and thus to improve their own health. Some of the differences between prevention and promotion are presented on the following Table 2 (7):

Table 2. Differences between Prevention and Health Promotion

Promotion of Health	Prevention of Disease
HEALTH = positive, multifactorial conception of it	HEALTH = absence of disease
This model of health relies on patients compliance	Medical model
This model is directed to the whole society and its environment	It is mainly directed to high risk groups of the population
Concerns broad variety of problems	Concerns specific pathology
Proposes stimulating measures to the population	Realizes in practice direct measures
Seaks changes in humans health and the environment	Concentrates on special individuals and groups
Use mainly not medical organizations and civil groups	Use medical specialists from different specialties

Source: Stachenko S & Jenicek, Differences Between Prevention and Health Promotion & Research Implicator for Community Health Progress, Can.J.Publ.Health,81,1990

In spite of the above mentioned differences the two models of health care cannot be strictly separated. The difference is rather in the “accent” on the care - whether it aims at positive health care and improvement of the health or the goal is prevention of disease process and the “fight” is against the negative risk factors (8).

The worldwide practice in the development of these models has shown that both of them help each other and comprise a common model of health care. It is already obvious that the possibilities of the “pure” prevention of diseases are limited if there are no additional social activities. On the other hand the upholders of the promotion also understood that the health education and the social measures only without good medical care can not do much good either and are not the most effective solution of the problems in the field of health care.

Another matter of dispute is the fact that at each level of prevention might be used drug treatment. This gives credit to some authors to presume that all the physicians do for the patients could be considered as “prevention” too. In connection with this problem G Rose (9) states that it is more correct to accept four focuses (levels) of prevention:

1. Prevention in the beginning (at the onset) of the pathological process or of some other phenomenon by reduction of the risk.
2. Prevention of progression of the disease process by early diagnosis (screening).
3. Prevention of complications of the already existing disease or another undesirable condition.
4. Prevention of disease or another undesirable condition.

In spite of the differences in the classifications of prevention what is important is that prevention takes a leading role in the practices of many different health specialists and this tendency will continue in the next decades too.

Strategies of prevention

Preventive activities might be directed to the population as a whole or may be concentrated on some individuals exposed to high risk of disease. Because of that we distinguish two kinds of prevention activities:

1. *Individual*, addressed to high risk patients
2. *Mass*, population

Which of the two should be preferred and why?

The high risk strategy is suitable for ill patients or for carriers of multiple risk factors and it is the natural preventive model in the clinical practice.

It is more natural for physicians to be responsible for individuals who are potential patients than those who are healthy and perhaps will remain healthy for a long period of time. In that case the two groups of participants in the activity - the medical workers (the physicians) and the patients are well motivated to participate. This strategy proposes good balance of the ratio expenditure-benefit and benefit-risk for it allows optimal usage of the restricted funds and time to be directed to those who mostly need them and where the expected benefit will be maximum for the individual. The weak aspects of this strategy are the necessity of a screening trial, because the problem will be solved not by elimination of the causing agent but by protection of the high risk individual, which will not lead to a distinct change in the morbidity rate and death rate among the population.

According to G Rose the majority of the avertable cases of diseases appear not in small groups of high risk individuals but in the big groups with relatively low risk and because of that population prevention strategy may lead to significant change in the basic health indices - morbidity and death rate, in contrast to the high risk group.

The population strategy aims to reduce the mean risk of the population by converting the whole distribution of the risk factors among this population to the low values of the risk. It tries to change the behavioural standards and habits in the society (10). Therefore the physicians could influence the attitude of the population to the health problems through their contacts with the patients not only of their patient's families but also of the whole society.

From economic point of view the more available model of prevention is the population one which might involve broad participation of public organizations, mass media, the industry and last but not least a consistent health strategy. Whether this model will be successful depends to a certain extent on the "maturity" of health care system and the adequate and good health culture of the population.

Models and theories in the field of preventive care and disease prevention :

- Theories focused on the individuals, explaining the health behavior and its changes;
- Models related to the changes in the society (common mobilization, social planning, distribution of innovations);
- Models supporting high quality health practices (organizational changes including quality standards and patient training in primary and hospital care).

Evaluation of the possibilities for disease prevention

Not all diseases allow adequate health activities in order to change from tertiary to secondary or to primary level of prevention. Some parameters and criteria are used to determine whether such change is possible, for which diseases and to which groups of the population it should be directed. These general criteria are proclaimed as principles of WHO since 1968 as follows:

1. Is the disease a significant health problem? Is it important for the quality of life and for the lifespan? What is the disease rate in the special population group?
2. Is there any adequate treatment of the disease?
3. What are the possibilities for a correct diagnosis?
4. Does the disease have a latent, subclinical stage?
5. Is there any proper screening test?
6. Is the screening test acceptable for the patient and the society?
7. Are the screening tests economically well motivated?

Necessary premises for successful preventive strategy:

1. Key government role.
2. Focus on individual, family, different risk groups or the whole population.
3. Population and patient education (skills, knowledge, information materials, systems).
4. Partnership approaches (11).
5. Health funds or other resources.
6. Maturity of the health care system and sufficient level of health culture of the society.

Exercise:

Task 1:

Explain the importance of the preventive medicine in public health.

Task 2:

Explain the differences between disease prevention and health promotion.

Task 3:

List the major criteria for evaluation of the possibilities for disease prevention.

Task 4:

Give examples of individual and mass strategies of disease prevention.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Patronage Nurses: The Outreach Nursing System - a Milestone of Health Promotion
Module: 3.2	ECTS: 0.5
Author(s), degrees, institution(s)	<p>Marija Kisman, MD, MSc, Teaching Assistant Institute/ Chair of Social Medicine, Institutes Medical Faculty, Ss Cyril and Methodius University in Skopje, Macedonia</p> <p>Doncho Donev, MD, PhD, Professor Institute of Social Medicine, Institutes Medical Faculty, Ss Cyril and Methodius University in Skopje, Macedonia</p>
Address for correspondence	<p>Marija Kisman, MD, MSc, Teaching Assistant Institute/ Chair of Social Medicine, Institutes Medical Faculty 50 Divizija 6, 1000 Skopje, Macedonia E-mail: mkisman@yahoo.com</p>
Key words	Nursing, health promotion, community/patronage health nursing
Learning objectives	<p>After completing this module students and public health professionals should:</p> <ul style="list-style-type: none"> • be aware of concept of community outreach nurse/patronage services; • recognise role of patronage outreach nurses in addressing the needs of the family within the context of the community. • increase knowledge of community team work on health education and health promotion; • understand the principles of outreach patronage service; • identified the specificities of nurse undertaking community health needs assessment.
Abstract	<p>In the health systems of countries of South-East Europe, the public health services have maybe suffered the most during the last fifteen years, with depreciated infrastructure and in some cases outmoded public health interventions. Recent positive trend has been visible in rehabilitation and reinforcement of population based public health interventions. Health staff profile likely best to accomplish function of the community based health education and health promotion are nurses. The patronage outreach nurses have received comprehensive training on methodology and techniques of adult-learning. They have knowledge of epidemiology, community assessment, programme planning and evaluation, biostatistics, research, nursing theory, public health administration and history and politics. They are the milestone in achieving the main principles of community health with its' participatory process to improve population health and the health promotion empowerment process to reduce social inequalities in health. Additionally, their scope of work helps in readdressing the injustice in health, identifies a complex and mutually interrelated problems that involves individuals, family and community and link them with the local culture, wider policy decisions, economic and socio-cultural forces.</p>

Teaching methods	Interactive lectures, exercises, individual and group work.
Specific recommendations for teachers	3 hours lecture, 5 hours supervised work on groups presentation and discussion. Working groups of students will have no more than 6 students. Copies of the WHO. Community Health Needs Assessment - An Introductory Guide for the Family Health Nurse in Europe. World Health Organization Regional Office for Europe, Copenhagen; 2001. should be made available to students before the module.
Assessment of students	<i>Individual assignment</i> Students take home essay (up to 2000 words) on country organization, functions and education of patronage/community health nurse. Selection of country based on student choice.

PATRONAGE NURSES - THE OUTREACH NURSING SYSTEM A MILESTONE OF HEALTH PROMOTION

Marija Kisman, Doncho Donev

Introduction

The last decade of the 20th century has been marked with major health care reforms commencing across Europe, particularly in countries of South-East Europe. Most of the societies in those countries are experiencing a prolonged complex transition from planned toward market economy, while recognizing and facing the poverty, unemployment, marginalization of vulnerable population groups, consequences of inter-ethnic wars and conflicts.

In this setting, the health systems of the countries of South-East Europe strives to cope with amplified pressures on public expenditures (usually owing to conditions imposed on structural adjustment loans), increasing cost of newly developed medical devices and medicines (as a result of rigorous international property rights rules), bulky health care settings (remains of the previous systems) that suffers from long period of underinvestment, increased awareness and population demand for high quality health care services, donor focused vertical health programmes, decreased investments in health research and trained medical professionals brain-drain.

The public health services in those countries maybe have suffered the most during the last 15 years. With depreciated infrastructure and in some cases outmoded public health interventions. The essence of those public health interventions in the former communistic systems were deeply rooted in the philosophy of that political system and its' social policy which refuses to recognize the poverty and income related marginalization and consecutively eliminating one of the key determinant of ill health. Owing to the essence of public health – to promote health and prevent disease and disability focusing on the health of entire populations - the principles of those interventions has lately gone through profound change and new understanding of population based public health interventions.

From another side, the length of the patient's stay in hospital is shortening; early discharge leads to more acutely ill people requiring care in their own homes, and primary health care services are becoming more and more in focus of the governments' reform interventions. As a result, there is notable, but still gradual shift of health care financial resources towards community care with less emphasis on acute care in hospitals.

There is one prominent concept of outreached health care services in the countries of South-East Europe, especially well developed in the countries of Former Yugoslavia, which encompasses the health education and health promotion, home health care delivery and community based interventions. Those services has been known under different names such as patronage nurses services, home visiting nurse services, community outreach nurse/ patronage services, etc., which we will try latter in the text to terminologically and conceptually describe. Those services have been widespread with well trained personnel and clear hierarchical links of reporting. After a period of stagnation in those services, the countries of South-East Europe are raising their efforts this 'heritage' of the previous health system to rehabilitate and empower with modern approaches to public health counting on those services rational use of recourses and achieved input.

As the largest group of health care providers, nursing professionals play an integral role in the management and delivery of health services.

WHO has repeatedly stressed the key contribution of nurses to public health and primary health care, mainly in the community either in patients' homes or in primary health care centres. However, in most WHO European Region Member States, nurses – the important human resource of nursing – have been educated and trained to work almost exclusively in hospitals. There is therefore an urgent need to prepare those skilled nurses to work in a totally different environment, i.e. the community and patients' own homes, and to work in a more independent and autonomous capacity than is required in hospitals (1).

The Second WHO European Ministerial Conference on Nursing and Midwifery, held in Munich, 15–17 June 2000, has addressed the unique roles and contributions of Europe's six million nurses and midwives in health development and health service delivery. At this Conference the Ministers has adopted a so called "*Munich Declaration: Nurses and midwives: A Force for Health, 2000*". Special focus in the Declaration has been given to establishment of family-focused community nursing and midwifery programmes and services as well as to enhancing the roles of nurses and midwives in public health, health promotion and community development. Those are the two key issues that patronage/outreach nursing service needs to accomplish (2).

The public health nursing has been developing along with the public health movement in Europe for the last 100 years under the auspices of national, regional and/or local government public health departments. Although the range and scope of this development varies greatly between Member States, the main reasons worldwide for the development of public health nursing have been crushing poverty, inequity, lack of basic health services, environmental pollution and infectious diseases (3).

The involvement of nurses in community work dates more than 100 years. As an illustration Ms. Florence Nightingale, one of the establishers of modern nursing in Europe, in one of her letters to *The Times* (4), states:

A district nurse must first nurse. She must be of a yet higher class and yet of a fuller training than that of a hospital nurse because she has no hospital appliances at hand at all and because she has to take notes of the case for the doctor who has no one but her to report to him. She is his staff of clinical clerks, dressers and nurses.

Terminology

There has been a wide variety of terms in literature and practice defining activities of nurses performed in the community and which have health promotion and health education aspects.

Countries in Europe with a public health nursing workforce that use either the title "public health nurse" or "health visitor" include Croatia, Denmark, Finland, France, Ireland, Israel, Norway, Sweden and the United Kingdom. The role of the feldshers in the Russian Federation, reviewed by WHO in 1990 and 1998, is described as having a role similar to that of an advanced nurse practitioner. The authors of both reviews are of the view that feldshers play an important part in delivering aspects of public health programmes in those countries where they practice (3).

With aim to define the term of patronage nursing system, as a form of specialized nursing care that includes series of public health functions, terms as patronage nurses services, home visiting nurse services or community outreach/patronage nursing services has been used.

The patronage health nurse has been defined in the countries of Former Yugoslavia as a unique primary health care service dealing with preventive activities in broader scope,

preparing the individuals, the families and the community for rational use of health care services and more efficient acceptance and implementation of preventive measures (5).

Furthermore, following description of patronage nursing system has been found. Patronage health service is defined as an integral part of the health system which uses specific methods of work focusing on health education. Its' main purpose is outreach health care, active tracing of individuals in need of health and social protection, empowering and supporting individuals, families and other groups and their training independently to apply measures of their health protection. Depending on the number of health problems that patronage nurse covers the patronage service could be monovalent, bivalent and polyvalent (5, 6).

At the last decade, the WHO has been introducing a new concept of so called family health nurse.

The *family health nurse* as having a role along the whole continuum of care, including health promotion, disease prevention, rehabilitation and providing care for those who are ill or in the final stages of life. While the title "Family Health Nurse" suggests that the focus of the nurse is only on people who live within families, as this concept is generally understood, the role embraces much more than that and includes all people in the community, whether they are living with others or alone, whether they have a home or are homeless and/or marginalized in some way, and it also includes the community itself. The family health nurse will also have important roles to play, in empowering communities and working in partnership with them to foster their own resources and potential, and to find their own solutions to issues of concern (7).

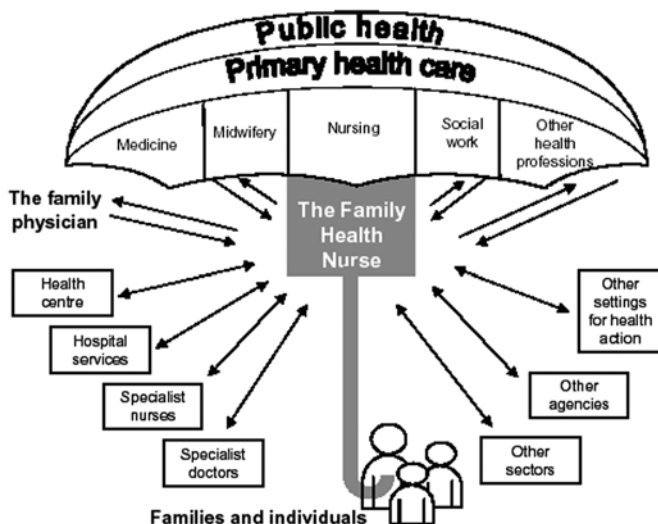
The multidimensional functions and interlinks with other health and non-health sectors of the family health nurse has been illustratively presented on the figure 1, prepared by WHO (7).

A WHO survey conducted in Europe about the extent and type of their community nursing services, 60% of countries (responses received from 31 countries) has identified two models of community nursing practice: the generalist model and the specialist community nursing model. The specialist community nurse was found to be described under 23 different titles, including public health nurse, district nurse, family nurse, health visitor, patronage nurse and mental health nurse (1).

Nevertheless, whatever terms have been used to name those types of outreach patronage nurses four main functions can be defined:

- Public health nurses: primarily involved in health promotion/illness prevention activities within the community. Many public health nurses dealt with issues of child protection, included health visitors and school nurses;
- District nurses: provide nursing care and treatment interventions in a non-hospital setting;
- Community midwives: provide support to women and their families during pregnancy, delivery and puerperium;
- Community psychiatric nurses: provide care and treatment to those with mental health problems and learning disabilities in their home environment, including crisis intervention measures (8).

Figure 1. Multidimensional functions and interlinks of the family health nurse within and outside the health sector (7)



Qualifications and curriculum of outreach patronage nurses

In general, training of outreach patronage nurses should aim both to increase theoretical knowledge, as well as to develop practical skills. This usually demands ample time for dialogue and personal feedback during trainings. Self-training/group exercises and techniques for problem solving are to be the most efficient in enhancing the learning effect.

The entry requirements for a patronage/community nurse training, for example in UK, USA and EU countries, most often are nurses who have successfully completed a recognized training programme and have had a minimum of two years of nursing experience. Training usually minimum lasts a year. However, this requirement has not been usually a rule in countries of South-East Europe. Majority of those nurses are either an experienced nurse with four years general nursing education (an example could be the countries of Former Yugoslavia where the secondary school and the nursing vocation school have been merged) or nurses with advanced training of additional two to maximum three years education where rarely a specialization as such has been offered. Anyhow, situation started with changing from the beginning of 1990's and in particular for countries with aspirations for EU accession who equilibrate their education programmes with EU Directives, including the education for outreach community nurses.

Competencies of the patronage nurse/community nurse should cover the following broad range of tasks and activities (1):

- work as a member of the primary health care team and/or independently, in caring for patients in their own homes;
- promote health in the family and the community;
- participate in disease prevention;
- assess, plan, implement and evaluate nursing and health care for people within their own homes or communities according to their physical, mental and spiritual needs, and throughout the age span;

- make decisions about care in health and illness, based wherever possible on available evidence and founded on cultural values and ethical principles;
- provide rehabilitative nursing care;
- act as the patient's, client's or family's advocate for health;
- set health priorities together with the patient or community;
- utilize epidemiological and statistical data to prioritize needs for health care;
- mobilize appropriate community resources to optimize care of the patient/family in the community;
- using objective health-related data, participate in and seek to influence in a politically aware manner, the social and health issues within the community;
- be active in health-supporting projects;
- maintain professional relationships with other members of the community nursing team;
- seek to empower the community, the family and the individual patient; and
- accept authority and responsibility for her actions and decisions.

Special emphasis in the WHO Regional Office for Europe proposed curriculum for the community health nurse has been given to health promotion. The didactic themes for the community nurse and health promotion encompasses the following (1):

- Defining health – primary, secondary, tertiary prevention
- Epidemiology
- Social medicine (public health/environmental health)
- Health screening – disease prevention
- Community profiling – working with local communities, using a health needs assessment approach
- Immunization/vaccination
- Family planning and women's health
- Child/maternal health
- Health in the kindergarten/school
- Occupational health
- Nutrition
- Substance abuse (alcohol, drugs, nicotine)

An emphasis should be given to psychology of individuals, groups and community as being important aspect of training and expected mastered skills for patronage nurse to apply in their every day work. Particularly, regarding knowledge of developmental psychology, the influence of family relationship's on the child's development, family dynamics, child abuse and neglect (to recognize the signs of it, to assess the risk, to know how to follow up, when to refer to others, and to whom), as well as presence of abuse and violence towards other family members. Effects of drug and alcohol abuse, unemployment and other social stressors on the health status of individuals and families, should be well elaborate in the training programmes. The problem-solving strategies and developing, supporting coping skills are also relevant topics of the training. Communication, is a very important issue, including both communication skills and ethical issues such as confidentiality, should be among the core topics addressed in the training. All those broad aspects of psychology are with aim to give both understanding and a tool to patronage nurses to help people and to enhance their quality of care giving relationships.

The determinants of health and how to streamline the knowledge of coping with them into patronage nurse health promotion practice, is of particular importance. The broad issues of environmental determinants are prominent. In addition, it is illustrative to point out that the appearance of the first outreach nursing activities coincided with so called ‘*the age of environment (1875-1930)*’ in development of public health.

It is estimated that over 30% of the global burden of disease in children can be attributed to environmental factors. Children have different susceptibilities during different life stages, due to their dynamic growth and developmental processes. Some examples of health effects resulting from developmental exposures prenatally and at birth include miscarriage, still birth, low birth weight and birth defects; in young children, infant mortality, asthma, neurobehavioral and immune impairment; and in adolescents, precocious or delayed puberty. Emerging evidence suggests that an increased risk of certain diseases in adults such as cancer and heart disease can result in part from exposures to certain environmental chemicals during childhood (9).

The outreach/patronage nurse should have knowledge and awareness of causal links between environment risk factors causing or enhancing diseases and understanding of the interactions between exposure, biological susceptibility, and socioeconomic and nutritional factors at the lifespan. This will help them in accurate assessment of health education and health promotions needs of the population that cover, better plan and instigate population based or individual interventions. For example, a number of factors should be regularly monitored and assessed by the outreach/patronage nurse, namely:

- *Pollution.* Pollution of air and water causes disease and death and this is evident throughout the world, whether it is lead in petrol or a chemical spill from a factory, or drinking-water contaminated by sewage;
- *Sanitation.* Good sanitation eliminates some diseases such as cholera and dysentery completely, and where this break down gastrointestinal illnesses are quickly evident. In communities lacking basic sanitation, threats to health will arise from the contamination of water supplies by human excrement;
- *Housing.* The lack of a home affects all aspects of health – shelter from the weather, an environment to sustain a family, a place to feel safe. The availability and type of housing will reflect local history, culture, the economy and political climate, with a wide range of housing existing across Europe such as tents in the Negev desert, tower blocks in cities, new housing estates, private housing, refugee camps and hostels. The type, quality and suitability of housing will have an important affect on health. It is essential to look for factors such as overcrowding, dampness and poor heating, as these are significant factors affecting health. Also should be considered how far homes are from work, pharmacies, schools and shops;
- *Transport.* Transport systems are important to monitor, as they can influence people’s access to services, social support networks and employment. Transport may also have an impact on health through accidents, noise and air pollution (10).

The role and importance of the outreach nursing system/patronage nurse in emergencies situations are well documented, commencing from Crimean war (Florence Nightingale activities) to recent Balkan wars, earthquakes and floods.

Natural and man-made disasters frequently cause major problems which affect a population’s health and hinder a nation’s socioeconomic development by draining its scarce

financial resources in an effort to repair damages. Often, those damages are so great that neither the efforts of the stricken country nor international cooperation suffice for complete reconstruction and rehabilitation. The effects disasters have on the health field cover a broad range of implications stemming not only from the demand for the immediate care of victims, but also from the medium- and long-term effects of the intermittent suspension of basic sanitation services, food shortages, and the interruption of disease surveillance and control programs; these aspects require coordinated efforts and the efficient use of knowledge and resources (11).

The outreach nursing system/the patronage nurse is best placed with its' knowledge of health, demographic and socioeconomic status of the population as well as the catchments area housing patterns, which significantly contribute to preparation of the disaster management and response health plans, and disaster mitigation activities. Its' position provides excellent opportunity to timely and accurately prepare, advise and educate the population under authority.

Drills including simulation exercises of the disaster management and response health plan should regularly be carried out aiming to assess the efficacy of the plan, management and modes of patient evacuation, triage, referral system and means of communication.

Specific function of the outreach nursing system should be seen when disaster hits communities in rural areas, seriously injuring the residents that usually have only small health posts with limited equipment, basic staff, and serious communication problems. It is possible that the area will remain isolated for several days. This hampers transfer and external support systems and leads to a breakdown in the service supply/demand ratio, adding one more problem to the disaster. The impact and its consequences are generally more than can normally be handled, and a careful study of all the alternatives for making maximum use of the scarce resources available should be undertaken. The patronage nurse role perhaps should most importantly be to teach and train the community itself in cooperation with the health staff and other relevant parts of the public system, to organize first aid, rescue of casualties, transportation of the injured, mutual aid, census-taking and the search for the missing, camps for the victims, the organization of brigades, and post-disaster rehabilitation activities (11).

The work of patronage/community nurse in taking care of patients with chronic illnesses, both communicable and noncommunicable, such as TB, AIDS, hypertension, diabetes, Parkinson's disease, cancer, depression, asthma etc., with health education, health promotion, as well as curative approaches, palliative care and social support to patients and their families, has been of significant effect. Community patronage nurses are likely to ask more questions and offer more information and choices. They also tend to spend slightly longer with their patients than the doctors. Studies indicate patients appreciate the nurse practitioners' communication skills and the extra time spent; in one study, 99% of patients in the nurse practitioner group said they would see a nurse practitioner again for a similar problem (12).

Experiences on the field has shown very positive results with the responsibility of patronage/outreach nursing system enrolled in the TB dispensaries that enable them to visit TB patients and their families. During and after hospitalization the TB patient they continue with their DOT treatment from home setting. The patronage nurses visit these patients at home to ensure that they are taking the drugs regularly, to reinforce the importance of completing treatment and to encourage family members to get tested for TB. This monitoring and reinforcing patient treatment is decreasing the number of defaulters, thus stemming the

development and spread of multi-drug resistant TB. Moreover, initiating contact tracing increases the early detection of TB. A significant issue in this regard is the goal of providing health education to TB patients; to educate them about the disease, their treatment, and give them an understanding of their responsibility as patients. In addition, key health education messages focused on increasing TB knowledge among both patients and the general population, regarding early recognition of TB symptoms, treatment regimens, the availability of free drugs, preventive measures, and stigma are tasks assigned to patronage monovalent nurse, they as a nurses directly involved in caring for TB patients served as key implementers of the education component.

Conclusions

The patronage outreach nurses that have receive specific training on methodology and techniques of adult-learning, have knowledge of epidemiology, community assessment, programme planning and evaluation, biostatistics, research, nursing theory, public health administration and history and politics are to the milestone in archiving the main principles of community health with its' participatory process to improve population health and the health promotion empowerment process to reduce social inequalities in health. Additionally, their scope of work helps in readdressing the unfairness in health, identifies a complex and mutually interrelated problems that involves individuals, family and community and link them with the local culture, wider policy decisions, economic and socio-cultural forces.

Immense value of this profile of nurses as part of interdisciplinary community outreach team represents an interface between other nursing, health and social care services.

Nevertheless, much investment in education and in-service training is needed patronage nurses to fully apply their incomparable advantages in community care and health promotion.

Exercise 1.

Exercise to be assigned at the end of the first lecture.

Students should be divided in three groups.

Each group should perform a *health promotion needs assessment* for following virtual or real (according to their preference) model settlements:

- Urban;
- Rural;
- Settlement with vulnerable population group (i.e. Roma population).

Each settlement with maximum 5000 population.

Each group should prepare a bullets point one page text covering the following:

- Demographic trends;
- Religion, language and literacy;
- Mortality/morbidity indicators;
- Water and sanitation status;
- Living conditions specificities;
- Cultural and socioeconomic characteristics;
- Health care provision and its' accessibility;
- Key health promotion and health education needs.

Presentation of the findings should be made by each group at the beginning of the second lecture. 5 minutes per group for presentation followed with 5 minutes discussion.

Exercise 2.

Exercise to be assigned at the end of the second lecture.

The three groups remain the same as for the Exercise 1. Using the *health promotion needs assessment* prepared from the previous exercise, students should develop a health promotion and education plan by using the scopes and range of authorities of patronage / family nurse functions.

Plans should not exceed one bullet point page having the following structure:

- Short, medium and long term interventions;
- Main points of entry;
- Referral system (both to health and social services).

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Preventive Programs in Family Medicine Services: Case Study Croatia
Module: 3.3	ECTS: 1
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Key words	Prevention, Family medicine, preventive measures in family medicine
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none">• recognise the role of family physician in preventive medicine;• increase knowledge about principles of preventive medicine in family medicine practice;• understand specific tasks and measures in various preventive programs;• differentiate specific procedures of primary, secondary and tertiary prevention in family medicine practice;• identify risk groups and suitable preventive activities;• improve the skill of planning and providing preventive activities.

Abstract	<p>Many of contacts between the physician and the patient enable primary, secondary and tertiary prevention. The majority of preventive programs provided in family medicine are focused on cardiovascular and malignant diseases. In order to improve prevention in family medicine, a concept of pro-active prevention has been developed. Therefore, a patient-oriented approach is recommended in which a physician encourages preventive actions and provides preventive procedures during consultations made for different reasons. The program elements to be determined in advance include target group definition; frequency and method of a target group coverage, recording target group response, risk factor(s) measurement and follow up of patients with positive screening results. The preventive programs in family medicine should be developed and implemented on evidence-based guidelines.</p> <p>The paper describes organization of Family Medicine Services in Croatia and Preventive activities in the Family Medicine Services. The Health Care Measure Plan and Programme is included in the Contract between the Croatian Institute for Health Insurance and each GP. GPs in Croatia are obliged to provide all preventive activities but, however, there are no mechanisms for monitoring and evaluation. The contracted GPs realize the biggest part of income from capitation fees. In fact, there is a lack of financial and professional incentives for GPs to provide preventive activities in the routine daily work.</p>
Teaching methods	The module will comprise: Interactive lectures (4 hours), seminars (6 hours), field practice and visits in primary care settings (8 hours), small group discussion (4 hours), and individual work (reading and writing the seminar paper -14 hours).
Specific recommendations for teachers	Work under teacher supervision: 0.5 ECTS Individual students' work: 0,5 ECTS. Facilities: Library equipped with access to International scientific data banks, computer equipment and training materials, primary care settings. Proposals for target audience: MD
Assessment of Students	Seminar paper, case problem presentations

PREVENTIVE PROGRAMS IN FAMILY MEDICINE: CASE STUDY CROATIA

Milica Katic

Introduction

A family physician is privileged in implementation of preventive actions since he/she is in permanent contact with a patient and well informed about the patient's condition, socio-economic position and family situation. Many of contacts between the physician and the patient enable primary prevention such as: healthy life style awareness raising, vaccination and counseling about reproductive health, and secondary prevention by screening and early detection of disease. The family physician also plays an important role in tertiary prevention –adequate treatment of disease, prevention of complications decline in disability, preventing early deaths and improved quality of life. The majority of preventive programs provided in family medicine are focused on cardiovascular and malignant diseases. In order to improve prevention in family medicine, a concept of pro-active prevention has been developed. Therefore, a patient-oriented approach is recommended in which a physician encourages preventive actions and provides preventive procedures during consultations made for different reasons. The program elements to be determined in advance include target group definition; frequency and method of target group coverage, recording target group response, risk factor(s) measurement and follow up of patients with positive screening results. The preventive programs in family medicine should be developed and implemented on evidence-based guidelines.

Organization of Family Medicine Service in Croatia

Before 1997, the state owned Health Centers were the institutions responsible for organizing and providing primary care through various primary care services for all citizens living in a given local community. In the present system, the majority of health care on the primary level is provided by Family Medicine Service. In 2005 it employed 2347 teams consisting of doctor and nurse who provided care for 3 905 606 persons registered on the doctors' lists (87% of the total Croatian population). More than 80% of doctors working in the Family Medicine services were individually contracted with the Croatian Institute for Health Insurance and responsible and paid only for patients registered on their own lists. Prevention is one of the basic tasks of family medicine doctors/general practitioners (GPs). These doctors are in a privileged position to implement preventive activities because they are in permanent contact with patients. Studies show that 90% of registered patients visit their GP at least once in three years.

The doctor/patient contacts offer a variety of opportunities for preventive activities, such as counseling, education about healthy lifestyles, reduction of invalidism, prevention of premature death, and improvement in the quality of life.

A GP's position as a gatekeeper to the health system makes these functions easier because he or she is the doctor of first contact for all health problems.

Preventive activities in the Family Medicine Service

The Health Care Measure Plan and Program created by the Croatian Ministry of Health and Social Welfare comprised a broad spectrum of various preventive measures at

the national level. The Health Care Measure Plan and Program is included in the Contract between the Croatian Institute for Health Insurance and each GP. By the same token, GPs in Croatia are obliged to provide all preventive activities defined in the Health Care Measure Plan and Program. However, there are no agreed mechanisms for monitoring and evaluation of all of these preventive activities. This problem is multidimensional and reflects financial, organizational, educational and individual factors. The contracted GPs realize the biggest part of their income from capitation fees of their registered patients adjusted to the age of patient. In fact, the capitation fee is mentioned to be sufficient for covering almost all services provided for a particular person. In the Family Medicine service there is a lack of financial and professional incentives for GPs to provide preventive activities in the routine daily work. The GPs work is mainly oriented towards curative medicine. The education of GPs in a field of preventive medicine is not sufficient in spite of the existence of preventive medicine in the curriculum of graduate and postgraduate study. The lack of proper monitoring and evaluation of providing the programs included in the Health Care Measure Plan and Program are the biggest obstacles for providing the whole spectrum of the preventive activities. According to data of Croatian Institute of Public Health, in 2005 in the Family Medicine Service, there were 27345460 encounters (6,3 per registered person per year), of which only 76037 were preventive check-ups to adults (0.02 per registered person per year).

The list of Preventive measures provided by family medicine doctors/general practitioners in Croatia:

Preventive care for preschool children

20% of all preschool children are registered on the Family physician /GP list. The preventive program for this segment of population comprises promotion of breast feeding, prevention of iron deficiency, screening for developmental problems, and early detection of chronic diseases, childhood immunizations (Tuberculosis, Hepatitis B, Haemophylus influenza, Diphtheria, Tetanus, and Poliomyelitis. Measles, Rubella, Parotitis)

Preventive check-ups for persons older than 18 years

- Preventive check-ups for adult population in general have been planned in the Health Care Measure Plan and Program but the age when these check-ups should occur, or which preventive measures should be included, have not been strictly defined.
- Preventive check-ups for persons older than 50 years comprise the following preventive activities: family and personal medical history, data on smoking and alcohol use, data on Pap smear and mammography which had been done in the previous three years (for women), body weight and height, blood pressure measurement, physical examination, digit rectal examination and laboratory tests: sedimentation rate, hemoglobin, blood glucose level, fecal occult blood test).

Immunizations of older population

- Immunization against tetanus is obligatory for people of 60 years of age.
- Immunization against influenza is recommended and free of charge for persons older than 65 years and patients suffering from chronic diseases such as chronic bronchitis, diabetes etc. In 2005, there were around 500000 persons older than 65 vaccinated against influenza.
- Immunization against pneumonia is recommended and free of charge for older persons situated in nursing homes or for patients in whom splenectomy was performed.

Early detection and other preventive programs

GPs are partly included in the national program of prevention and early detection of cancer. This programme comprises activities on the early detection of breast, colorectal, prostate and cervical cancer. GPs are also included in various other preventive programmes at the local or national level.

Conclusion

In order to improve preventive work in Family Medicine Service concerted action of all participants in the decision making process is needed. The ultimate goal is to optimize preventive work in family medicine service, assuming that improving the delivery of preventive activities results in a higher patient participation and thus contributes to a decrease in morbidity and mortality of Croatian population.

Exercise:

Task 1: Identification of risk factors for cardiovascular diseases

Task 2: Screening methods for breast, colorectal, cervical and prostate cancer

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2. Katic M, Juresa V, Bergman-Markovic B. Cardiovascular diseases - Preventive programs in Family Medicine. Manual [in Croatian]. Zagreb: Medicinski fakultet Sveucilista u Zagrebu, Društvo nastavnika opće/obiteljske medicine. Profil, 2003.
3. The Canadian Guide to Clinical Preventive Health Care. The Canadian Task Force on the Periodic Health Examination. Minister of Public Works and Government Services Canada 1998.
4. Roland M. Linking Physicians' Pay to the Quality of Care-A Major Experiment in the United Kingdom. *NEJM* 2004; 351: 1448-54.
5. Sankila R, Demaret E, Hakama M, Lyng E, Schouten LJ, Parkin DM (eds): Evaluation and monitoring of screening programmes. European Commission, Europe Against Cancer Program. Brussels-Luxemburg:2000.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Disease Prevention in Pre-School Children
Module: 3.4	ECTS: 0.5
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Key words	disease prevention, child, pre-school age, systematic preventive examinations, purposed preventive examinations
Learning objectives	After completing this module students should: <ul style="list-style-type: none">• recognise the importance of disease prevention in pre-school age children;• increase knowledge about methods of disease prevention in pre-school age children; and• differentiate between systematic and purposed preventive examinations.
Abstract	One of the most important tasks of health care systems all over the world is to keep watch over health of the youngest population groups. Preventing various diseases by taking preventive measures in this population group saved millions of lives in the past. The paper presents the rough overview of the concept of disease prevention in preschool- and school-age children. The organisational scheme in Slovenia is used as an example. The consultation rooms in Slovenia are intended for healthy babies and children. They are not intended only for child's care, but also for giving practical advice to children's parents. Consultations are not limited only on child's care. Parents are also advised about various determinants of children's health e.g. appropriate diet as well. All the childrens frequent diseases are fought against according to the common doctrine as well. Several preventive systematic health examination and preventive measures are performed.

Teaching methods	Teaching methods include introductory lecture, visit to the dispensary room and attendance of preventive examination, and discussion with mentor after visit. Students after introductory lectures first carefully read the list of preventive activities and their description. Afterwards they visit the dispensary room and attend the course of systematic and/or purposed preventive examinations in practice. At the end, they discuss the lesson learned with their mentors and prepare a report.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a dispensary room or other disease-prevention unit;• equipment: no special equipment needed;• training materials: list of preventive activities and their description;• target audience: students of medicine, preferably at the end of the curriculum.
Assessment of students	Assessment is based on written report on visits at the dispensary room.

DISEASE PREVENTION IN PRE-SCHOOL CHILDREN

Martin Bigec, Lijana Zaletel Kragelj

The right of all rights, is the right of being alive,
Of being a child born to be happy,
Of having parents by,
And of being able to hug them for goodbye.
/Tone Pavček, Slovene Poet/

Theoretical background

Definition of disease prevention

Disease prevention is defined as actions aimed at eradicating, eliminating, or minimizing the impact of disease and disability, and if none of these is feasible, retarding the progress of disease and disability. It covers measures not only to prevent the occurrence of disease, such as risk factor reduction, but also to arrest its progress and reduce its consequences once established (1, 2).

Levels of disease prevention

Traditionally, we distinguish between three levels of disease prevention, called primary, secondary, and tertiary. A fourth level, called primordial, was added later (2). The boundaries between these levels are not always perfectly and clearly demarcated. Each of these levels is related to different goal:

- primordial level of prevention is concerned with enhancing health by non-specific measures, health promotion being one of them, e.g. health promotion in kindergartens (3) and schools (4);
- primary level of prevention aims at keeping a disease from ever beginning or a trauma from ever occurring. Examples include immunization, reducing household hazards, motivating abstinence from illegal drugs, and reducing risk factors for heart disease. Primary prevention programmes aim to reach the widest possible population group who is or might become at risk for a given health problem;
- secondary level of prevention involves the early detection and early intervention against disease before it develops fully. Screening programs are prime examples of secondary prevention efforts, providing that persons who screen positive for a disease or condition receive prompt and effective intervention;
- tertiary prevention takes place after a disease or injury has occurred. It seeks not only to prevent deterioration and complications from a disease or injury, but also to rehabilitate and return the patient to as full physical, mental, and social function as possible.

All levels are important in controlling of health problems of children, but for preserving and enhancing their health, especially primordial, primary and secondary levels.

Disease prevention in children and its significance

To keep watch over health of the youngest population groups is (or should be) one of the most important tasks of health care systems all over the world. Preventing various diseases by taking preventive measures in this population group saved millions of lives so far among which especially vaccinations against communicable diseases were important (5).

We know that it is always better to prevent a disease or an external trauma than to treat it after it happens - prevention saves individuals, and their families, from pain, suffering, and loss of function, prolonged disability, or premature death.

Prevention programs, especially prevention programmes in childhood, also save money, although maybe this is not visible directly:

- health-promoting prenatal care, can deliver healthier babies, and preventive medicine in infancy and childhood will produce healthier children who can grow to their full potential and learn a full array of cognitive and motor skills;
- effective programs to protect children and youth from injury and violence also will generate a healthier work force and lower the frequency of disabled persons needing health care;
- introducing healthy lifestyle habits early in childhood, and reinforcing them through young adulthood, will prevent much of the current morbidity and mortality rates due to cardiovascular and respiratory diseases and cancers, which attack adults.

There exist more or less similar systems for disease prevention in children all over the world. The system for disease prevention in children in Slovenia is used as an example of such a system.

Case study – the disease prevention system for pre-school children in Slovenia

Basic aspects of disease prevention system for children and youth in Slovenia

The health care system for children and youth is in Slovenia extremely well organized. Its main characteristic is that it is comprehensive and integrative.

As such, it is regulated by several legal documents. The most important legal regulation that regulates the implementation and schedule of preventive activities for children in Slovenia is a special regulation »Navodilo za izvajanje preventivnega zdravstvenega varstva na primarni ravni« (in English: »Instructions for the implementation of preventive health protection at the primary level«) (Instructions) (6). It was adopted in 1998, on the basis of Health Care and Health Insurance Act (in Slovene »Zakon o zdravstvenem varstvu in zdravstvenem zavarovanju) (7).

The purpose of the examinations is getting to know child's medical state (on an individual and on a group level), active medical supervision, finding medical problems and consulting parents and children. It includes a measurement of physical growth and development, an estimation of physical and mental health, discovering negative social factors and unhealthy life habits of the family environment.

According to the Instructions regulation (6), a preventive medical care on a primary level includes systematic health examinations for population groups from birth up to the end of high education (Table 1).

Table 1. The list of systematic preventive examinations for children and youth according to Instructions for the implementation of preventive health protection at the primary level in Slovenia (6).

Age group	Systematic examination
Pre-school children (age: birth-5 years):	<ul style="list-style-type: none">• a systematic examination of a child in the age of one month,• a systematic examination of a child in the age of three months,• a systematic examination of a child in the age of nine months,• a systematic examination of a child in the age of twelve months,• a systematic examination of a child in the age of eighteen months,• a systematic examination of a child in the age of three years,• a systematic examination of a child in the age of five years
School children (age: up to 19 years):	<ul style="list-style-type: none">• a systematic examination of a child at entry to the school,• a systematic examination of a child in the 1st class of the primary school,• a systematic examination of a child in the 3rd class of the primary school,• a systematic examination of a child in the 5th class of the primary school,• a systematic examination of a child in the 7th class of the primary school,• a systematic examination of a child in the 1st grade of the secondary school,• a systematic examination of a child in the 3rd grade of the secondary school,
Students	<ul style="list-style-type: none">• a systematic examination of a student in the 1st grade of the university study,• a systematic examination of a student in the last grade of the university study

In continuation, systematic and purposed examinations in pre-school children are presented with detailed description of activities (8). These activities are carried out at special health care units, known as Dispensaries for Children. Administratively, these units are special units of Community Health Centres.

Dispensaries for Children

Definition

Dispensaries for Children are special units aimed at organizing and implementing comprehensive health care programmes for children. They are defined as:

- the highest organisational form of pediatric out-hospital comprehensive and sustainable treatment of newborns, babies, and pre-school children; it is not only preventive unit, and it is not only curative unit (9);
- the specific unit of a community health centre, which in a defined territory, in collaboration with general primary health care, directly performs the primary health care of children from birth to the age of 6 years (8).

Short history

Community health centres are the institutions, which bear traditions from the ideas of Andrija Štampar, a distinguished scholar in the field of social medicine, and one of the “fathers” of World Health Organization, born in Croatia. The first community health centre in Slovenia was established in 1926 (10, 11). The original idea was to deliver primary health care to the population at the level of the local communities, and to provide various

types of care in an integrated approach, especially to endangered population groups. For this purpose community health centres had special units, called dispensaries (10, 11). Dispensaries for children were one of the most important of them, and every community health centre had such a unit.

The role of Dispensaries for Children

A Dispensary for Children is obliged to organize a consulting network and to provide everything needed for work, like the material, the experts, etc.

For healthy babies and children in the age from 0 to 18 months, at the Dispensaries for Children there exist special Consultation rooms for children and parents.

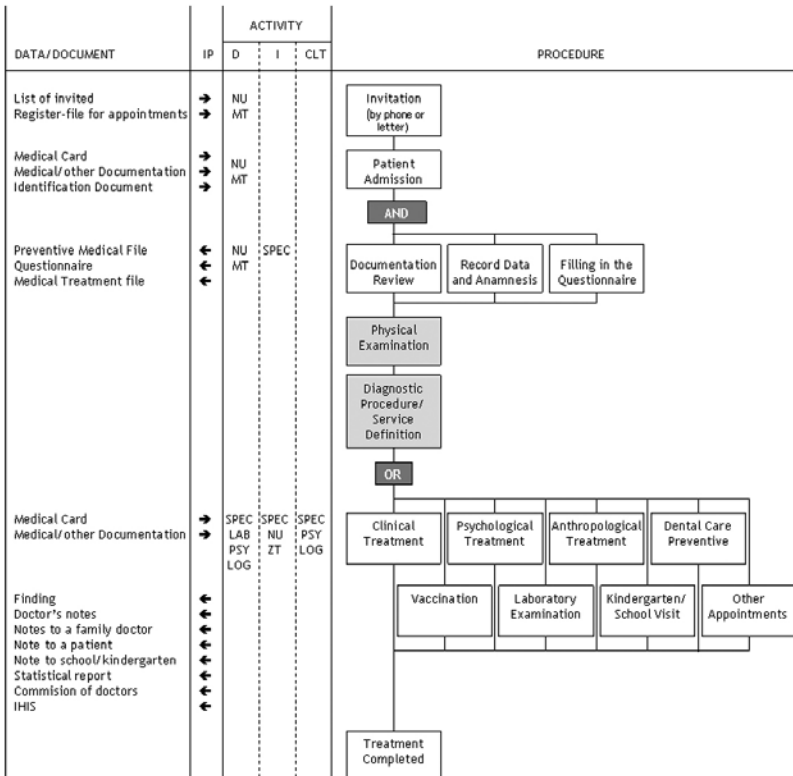
The Dispensary also has to set the minimum of what a medical examination should involve with each child according to the requirements specified in Instructions (6).

- child's growth and development is observed globally in Dispensaries for Children. The results are registered in files. At each visit, a child is weighed and his head is measured. Special attention is paid to the motive functions, to psycho-physical functions, and to the size and growth of the set of teeth. In case of any deviations, an individual consulting and directing a child to another institution or arranging for the following examination, has to be provided. At the next examination we check whether the measurements have been taken or not;
- health personnel advise parents about appropriate nutrition according to up-to-date doctrine. The great emphasis is put on the breastfeeding as an exclusive nutrition up to six months of age. A fact that an each child an individual being is, has to be considered, therefore comestible schemata only mean directions for consulting;
- a doctor and a nurse consult about adequate nutrition;
- the consultation rooms are intended for child's care, for giving practical advice, which is not limited only on child's care also parents are advised about day time management, about needs for sleep, clothes, hygiene, about needs of being active on fresh air, about arranging their homes, beds, microclimate, washing linen and the use of washing detergents and modern domestic devices. A nurse in the home care service plays an important role in an examination of a child's moving space and a social environment. She is a part of a team of experts and she reports to the doctor about the state of conditions of the child's environment at the time of her visit;
- in the consulting rooms, all the children's frequent diseases are fought against according to the common doctrine. The most frequently appearing diseases with children are rickets, caries and an inborn hips deformation. In compliance with the pre-mentioned, parents are given the instructions and the prescribed vitamin preparations, iron and minerals; and the children are directed to the required examinations (e.g. ultrasound examination of hips, lab, etc.). We carry out required measurements and practical demonstrations e.g. broad swaddling which is supervised and registered in files;
- a continual vaccination according to the prescribed immunization programme or a calendar of the vaccination is carried out in the consultation rooms;
- highly responsible task of the consultation rooms is carrying out screenings, which help us find even the smallest suspicion of the deviation in growth which leads to directing a child to an appropriate expert or to another institution;
- if a paediatrician establishes an disease, he/she prescribes a suitable therapy and refers a patient to his selected paediatrician-family doctor;

- of the utmost importance for the medical doctor is the knowledge about child's social environment. This knowledge improves expert work since he/she is familiar with positive and negative factors that influence a child and what he/she is going to be exposed to. Nurses in the home care service working in the team are the most suitable for this task. Further education and better qualifications are required to establish health in comparison to disease. For that reason, a team in the consulting rooms includes at least a doctor – in Slovenia a specialised paediatrician - and a registered nurse from the Dispensary for Children. In the case of specific problem, other medical experts are asked for cooperation.

Figure 1 shows roughly the organisation of work during the preventive examination according to an organisational regulation, which determines a person responsible for each activity during the course of the examination.

Figure 1. Preventive examination procedure for pre-school and school children in Slovenia. LEGEND: IP – information pathway, D – documentation, I – information, CLT – clinical treatment, NU – nurse, MT – medical technician, SPEC – physician specialist (paediatrician, school specialist, pedontologist), LAB – laboratory, PSY – clinical psychologist, LOG – expert skilled in logopedia, IHIS – Institute of Health Insurance of Slovenia.



Systematic preventive examinations for pre-school children

A systematic examination of a child in the age of one month

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. A maternity hospital or a nurse in the home care service directs a child to an examination. She introduces child's health care to his parents from the time of his birth until the time of starting school. The examination is carried out by a preschool doctor's team. It includes:

- review of a medical documentation:
 - a maternal book,
 - a letter of dismissal from a maternity hospital;
- child's personal history and social development:
 - health status starting from the time of birth on,
 - child's temper,
 - child's individualities,
 - taking up his/her role in a family;
- family history:
 - hereditary diseases,
 - health problems,
 - chronic diseases and disabilities of family members,
 - family life style,
 - awareness of importance of healthy lifestyle,
 - addiction diseases of family members;
- social history:
 - family economic status,
 - dwelling standard,
 - parents' level of education,
 - type of a family community;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination;
- health education - individual consulting about:
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing of a baby,
 - swaddling,
 - sleeping, and
 - mental development of a child;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment and ultrasound examination (US) of the hips, and

- eventual note to a personal paediatrician;
- vaccination according to the national immunization programme, and registration of information on performed vaccination in the medical file and personal document.

A systematic examination of a child in the age of three months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - a discussion about problem occurring about child's feelings within the family,
 - a discussion about problems occurring;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination,
 - US of the hips;
- health education - individual consulting about
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing of a baby,
 - swaddling, and sleeping, and
 - mental and physical development of a child;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed health examination and vaccination,
 - eventual note to a personal paediatrician;
- vaccination according to the national immunization programme.

A systematic examination of a child in the age of nine months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - discussion about problem occurring about child's feelings within the family,
 - discussion about problems occurring;

- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination,
 - US of the hips;
- health education - individual consulting about
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing,
 - swaddling,
 - sleeping,
 - mental and physical development:
- conclusion of the examination:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed health examination,
 - evaluation of the side effects after vaccination,
 - eventual vaccination according to the national immunization programme,
 - eventual note to a personal paediatrician;

A systematic examination of a child in the age of twelve months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - discussion about child's feelings within the family,
 - discussion about child's development,
 - discussion about problems occurring,
 - discussion about conquering fear of separation from mother/parents before admission to the kindergarten,
 - discussion about getting used to a chamber pot,
 - discussion about caries prevention;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,

- laboratory examination as for indications,
- estimation of contraindications for vaccination,
- US of the hips;
- health education - individual consulting about:
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing,
 - swaddling,
 - sleeping,
 - mental and physical development;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed examination,
 - estimation of the side effects after vaccination,
 - eventual note to a personal paediatrician;
- vaccination according to the national immunization programme.

A systematic examination of a child in the age of eighteen months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - discussion about child's feelings within the family,
 - discussion about child's development,
 - discussion about problems occurring,
 - discussion about asserting child's will,
 - discussion about conquering fear of separation from mother/parents before/after admission to the kindergarten,
 - discussion about getting used to a chamber pot,
 - discussion about caries prevention;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination,
 - US of the hips;
- health education - individual consulting about:
 - nutrition,

- preventing a deficiency diseases and caries,
- nursing,
- swaddling,
- sleeping,
- mental and physical development;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed examination,
 - estimation of the side effects after vaccination,
 - eventual note to a personal paediatrician;
- vaccination according to the national immunization programme.

Each systematic examination in the age from 0 to 18 months has to include Denver II development screening test. It has to be carried out according to principles of the doctrine. In case when a child does not pass the examination partly or entirely, he is again invited to testing, following the instruction for DENVER II. In case when a child does not pass the test entirely or partly more than once or repeatedly, he has to be directed to a proper specialist or to a developmental dispensary. DENVER II findings are registered in the child's medical file.

It takes 15 minutes to carry out the DENVER II. It is carried out by a specially trained doctor or a nurse or a medical technician. In the case, that it is carried out by a nurse or a medical technician, positive and negative findings are transferred in knowledge to a doctor.

A systematic examination of a child in the age of three years

The examination is performed in the presence of one or both parents or guardians at the health centre or in private consulting rooms. They are invited in writing with a card, which contains pictures of the objects and animals that are on the vision testing chart. At home the child names the pictures, so that vision testing is not doubtful because of incorrect naming of the picture. The test is performed by the preschool doctor's team and the psychologist's team from the mental health department.

First part of the systematic examination at the age of three years is systematic psychological examination (SPE) is a comprehensive procedure for assessment of children's difficulties in character and psychomotor development. The aim of this examination is the detection of causative factors in the family and the child's wider surroundings. The SPP-3 method is used, which comprises:

- questionnaire for parents-1,
- questionnaire for parents-2,
- test trials,
- list for summarizing data on the child,
- discussion with parents and eventual counselling.

Second part of the systematic examination comprises:

- review of a medical documentation;
- personal history:
 - discussion of the child's general feeling in the family,
 - discussion of the child's development,
 - discussion about problems occurring,
 - discussion about asserting child's will,
 - discussion of how the child feels in kindergarten or with peers,
 - discussion on appetite, bedwetting, defecation;
- physical examination:
 - screening tests: body weight, height, head circumference, chest circumference, Denver developmental screening test, general neurological status, testing of vision (chart with pictures of objects and animals), Adam's forward-bend test, measurement of blood pressure, blood film (haemogram: E, Hb, Ht), assessment of urinary tract function (urine: spec. gravity, protein, sediment), stool for parasites,
 - comprehensive physical status,
 - laboratory examination as for indications;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - consultation with psychologist,
 - eventual note to a personal paediatrician;
- vaccination according to national immunization programme.

A systematic examination of a child in the age of five years

The examination is performed in the presence of one or both parents or guardians at the health centre or in private consulting rooms. They are invited in writing with a card, which contains pictures of the objects and animals that are on the vision testing chart. At home, the child names the pictures, so that vision testing is not doubtful because of incorrect naming of the picture. The test is performed by the preschool doctor's team, and the speech therapist from the mental health department.

The preventive speech therapy assessment in the 5-year-old child detects speech, language and communication disturbances. The systematic speech therapy assessment comprises:

- diagnostic procedures for assessing speech and language abilities and communication: examination of articulation, grammar, syntax and semantics, and
- assessment of communication.

The systematic medical examination comprises:

- review of a medical documentation;
- personal history:
 - discussion of the child's general feeling in the family,
 - discussion of the child's development,
 - discussion of how the child feels in kindergarten or with peers,
 - discussion on lifestyle of a family;

- physical examination:
 - screening tests: body weight, height, head circumference, chest circumference, Denver developmental screening test, general neurological status, Adam's forward-bend test, testing of vision (chart with pictures), testing of hearing (ADG) according to indications, measurement of blood pressure, blood film (haemogram: E, Hb, Ht), assessment of urinary tract function (urine: spec. gravity, protein, sediment), blood cholesterol level,
 - comprehensive physical status,
 - laboratory examination as for indications;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - consultation with speech therapist and psychologist,
 - eventual note to a personal paediatrician;
- vaccination according to national immunization programme.

Special purpose preventive examinations

Special purpose examination for babies in the age of two months

The examination is carried out by nurse or a medical technician in the Dispensary for Children. In case of problems in child's development, a child is directed to an examination by a paediatrician.

Special purpose examination for children after a systematic examination

The purpose of the examination is to follow the growth and development of children, in whom deviation from normal is found on regular systematic examination. Although this still cannot be defined as a disease state, it requires more frequent examinations than the normal intervals between the prescribed systematic examinations.

Special purpose examination before admission to the kindergarten

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. Parents make an appointment for their child before they start attending kindergarten. In case of starting the kindergarten at the same time simultaneous with the systematic examination at the age of 9, 12 or 18 months, only the missing part of the purposed examination is carried out. Before starting a kindergarten a child has to be vaccinated according to republic programme of prophylaxis and chemoprophylaxis. The examination is carried out by a team of a preschool children's doctor.

The purpose of this examination is to encourage breastfeeding, which is at this checking point highly endangered activity, and prevent consequences of developmental dystrophies. It includes:

- measuring body weight and height (increase in a month), eventual supervision of the breastfeeding;
- review of a medical documentation;
- personal history;
- physical examination:

- screening tests: body weight, height, head's dimensions, chest's dimensions,
- comprehensive physical status,
- laboratory examination as for indications (haemogram: E, Hb; urine, albumen, sediment; excrement for parasites and germs),
- review of vaccination data,
- eventual vaccination;
- health education about conquering fear of separation before attending kindergarten;
- health examination conclusions:
 - evaluation of findings,
 - eventual note to the kindergarten.

Special purpose examination of children before attendance at organized health camp

The specific purpose examination is performed before attendance at an organized health camp, chiefly to detect infectious diseases, which could also threaten other healthy participants. It is important to establish whether the child at present has such a state of health that he could decrease the rehabilitative effect of the camp. The doctor gives written instructions and prescribes the necessary medication for the duration of the camp. The examination is normally performed at the health centre or in private consulting rooms. The test is performed by the doctor and nurse. The examination comprises:

- examination of medical records,
- recommendation to the committee for referral for treatment at a health resort;
- notification to the camp paediatrician.

Special purpose examination of children before treatment at a health resort

The purpose of this examination is to check the state of the child's disease, for which he/she is being sent to the health resort, exclude infectious diseases before departure, notify the doctor about the child's disease and possibly other chronic diseases, food allergies, drug allergies and regular treatment. The examination comprises:

- examination of medical records, including immunization records;
- immunization if indicated;
- recommendation to the committee for referral for treatment at a health resort;
- notification to the resort paediatrician.

Special purpose examination of children to prevent the spread of infectious diseases – those not fully immunized

Special purpose examination of children before immunizations in the 4th, 5th and 13th to 15th month and in children with temporary contraindications and those not fully immunized for age according to the republic immunization programme, otherwise immunization is linked to the systematic examination. The examination comprises:

- exclusion of clinical signs of infection,
- epidemiological situation at home, at preschool and in the child's wider environment,
- examination of the medical records for contraindications for immunization,
- assessment of contraindications, and
- vaccination.

Special purpose examination of children at the outbreak of epidemics of infectious diseases

This special purpose examination is compulsory under the law on infectious diseases because of the particular social interest and timely protection of the healthy population, early detection of patients, immediate treatment of the sick and various preventive activities (isolation, hygienic measures, drug prophylaxis, specific health education etc.) and prevention of complications and consequences of diseases. The contents of and magnitude of the service depends on the epidemiological situation.

Programmed health education for pre-school children

For these activities the public health centre and private doctor must annually prepare a plan, on the basis of analysis from the previous year, from which the specific needs of the particular health region are evident.

The purpose of health education is to inform and motivate individuals to actively care for their own health. Health education programmes enable the individual to gain knowledge, form points of view and behavioural patterns for a healthy lifestyle. Targeted groups for health education by the preschool doctor's team are: parents, teachers and children.

Health education can be implemented in the health centre or consulting rooms (in the counselling room, areas used for preventive activities etc.) or in preschools. The programme is implemented by a paediatrician and nursing sister, who both have training in health education.

Programmed health education takes place in the following forms:

- health education in counselling rooms for parents and children
- health education for tutors, parents and children (lectures, teaching workshops, work in small groups)
- consultation with parents, tutors and social workers over the health and behavioural problem of children.

Consultation and treatment are aimed at solving specific problems of children connected with their bio-psycho-social development, health problems, behavioural problems etc. Parents, tutors and guidance workers must be included in the management. The consultation is not advice given at a visit to the consulting rooms, nor work in the guidance room or team management. The work takes place in the preschool dispensary.

- preventive work of the paediatrician's team in nurseries, preschools and centres (where there is no paediatrician permanently employed)

The purpose of this work is to remove or decrease harmful influences on the health of children that arise from their living environment and comprises:

- continued cooperation with principal and guidance staff;
- analysis of the state of health of children and report on this to the director and guidance staff at the preschool;
- preparation of programme for health education in the preschool for the current school year;
- participation in two teachers' conferences (lecture with one programmed theme and one theme of own choice);
- counselling on nutrition, menu preparation and diets;
- counselling on preparation of activities from the viewpoint of improving healthy lifestyle;

- counselling on safety in the room;
- judgement and assessment of children's work area from the point of view of ergonomics and suitability of furniture;
- counselling on the basis of findings on hygienic conditions in the preschool in cooperation with the health inspector and specialist hygiene doctor from the regional institute.

Disease prevention programme limitations and deficiency

From the Instructions document, which is publicly available, it is clear, that an important segment of preventive paediatric preventive activities for pre-school children has been omitted, and that is the care of the unborn child and newborn.

The Instructions need urgently to be supplemented with contents of preventive examinations aimed at the care of the foetus and healthy pregnancy and the newborn. It is necessary to emphasize the significance of breastfeeding before the child's birth, and also in the clinic for women and at preventive examinations of pregnant women, at classes for parents and at visits from the home nursing service. It is especially important to emphasize breastfeeding in the maternity hospital and in the first months of life. Breastfeeding is unfortunately not precisely defined anywhere, although it is indirectly at each systematic examination under healthy nutrition in the framework of health education.

The specific purpose examination at the age of 2 months is aimed mainly at supervision of the child's progress and feeding. At this examination and the systematic examination of the baby in the first month of life, and at neonatal home visits from the home nursing sister, it is extremely important to advise on the meaning of and correct breastfeeding, as it is known that the majority of breastfeeding mothers stop breastfeeding when the child is about 6–8 weeks of age.

Exercise

Task 1:

Carefully read the instructions for the implementation of preventive health protection at the primary level in your country, e.g.:

Instructions for the implementation of preventive health protection at the primary level. Official Gazette of the Republic of Slovenia, 1998; 19: 1253-1282.

and

Bigec M. Preventive programmes in the children's dispensary (in Slovene). *Slov Pediatr* 2000;7(Suppl 1):23-31.

Task 2:

Visit one of children's dispensaries (choose your destination from the list of appointed dispensaries and potential mentors) and be present at least three times (preferably three working days) at systematic/purposed preventive examinations.

Task 3:

Discuss your experience with the mentor.

Task 4:

Write a report on your visit, including your opinion on importance of this kind of medical activities.

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Recommended readings

1. Instructions for the implementation of preventive health protection at the primary level. Official Gazette of the Republic of Slovenia, 1998; 19: 1253-1282.

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Preventive Programmes in School Health Care Services
Module: 3.5	ECTS: 1.0
Author(s), degrees, institution(s)	Vesna Juresa , MD, MSc, PhD, Associate Professor Andrija Stampar School of Public Health, Medical School, University of Zagreb, Croatia
Address for Correspondence	Vesna Juresa Andrija Stampar School of Public Health Rockefellerova 4 10000 Zagreb, Croatia Tel: +38514590103 Fax: +38516552644 E-mail: vjuresa@snz.hr
Key words	Prevention, school medicine, school health, schoolchildren
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none"> • be aware of preventive medicine for improvement of school children health; • recognise the role of school physician in preventive medicine; • increase knowledge of principles and implementation of preventive medicine; • understand specific tasks and measures in different preventive programmes (for different health problems and different group of school children); • differentiate procedures of primary, secondary and tertiary prevention; • identified the risk groups and suitable preventive activities (check ups, screenings, specific control check); • improve the skill of planning and providing a preventive activities. • organize collaboration with other co-workers in outside of health system and to organize interventions in the community.
Abstract	School health services are the most appropriate settings for primary prevention, early detection and secondary prevention of diseases. School health services in collaboration with school setting guarantees easy access to population of school children. The schools are also important environments for preventive actions directed to the group in this setting and population-oriented approach. The regular medical check-ups, as a part of the school health programme, are ideal opportunities to detect majority of health problems of school children in early stage as: growth and developmental problems, risky behaviour (smoking, drinking, drug use), unhealthy eating habits, psychosocial problems, reproductive health status (sexual behaviour, contraception.), school achievement, speech and learning disabilities, visual and hearing problems, cardiovascular risk factors (obesity, overweight, physical activity, blood pressure).

Teaching methods	The module will comprise: Interactive lectures 4 hours, seminars 6 hours, field practice in primary care settings (School health services) 8 hours, small group discussions 4 hours, individual work (reading and writing the seminar paper) 14 hours.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual student's work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases.
Assessment of Students	Assessment: seminar paper, case problem presentations.

PREVENTIVE PROGRAMMES IN SCHOOL HEALTH CARE SERVICES

Vesna Juresa

Theoretical background

Health and social needs of Schoolchildren and Adolescents

Specific health care of schoolchildren and adolescent is of a great importance for several reasons: health care and promotion of this population is a basis of health in adulthood, adopting healthy life habits is essential for avoiding major chronic no communicable diseases risk factors, mental health care and risky behaviour prevention provide better and more creative life.

Schoolchildren and adolescents are often described as a healthiest part of population regarding their specific mortality and current morbidity. Analyzing the health problems of this population the facts slightly differ.

Leading health problems of schoolchildren and adolescents are:

1. Problems regarding reproductive health: sexual behaviour, contraception, adolescent pregnancies and adolescent mothers, abortions, sexually transmitted infections.
2. Addictions: tobacco, alcohol, psychoactive drugs.
3. Health care and education of children with developmental and learning disabilities. (1,4,5, 6, 8, 9, 10,13)

School Health Services – organizational context in different countries

Models of school health services regarding organisation

There are two basic models of school health services:

1. School health service in charge of school.
School health service is independent service which provides preventive and curative health care in:
 - public health services organized and financed from the state (Finland, Sweden);
 - private services – preventive health care as a played school programme, curative health care paid as a head fee (England);
 - public health services for preventive health care and private services for curative health care (Belgium, Norway, Croatia).
2. School health services in charge of every student.
 - comprehensive health care (preventive and curative) from one doctor as a individual procedure for every child according to preventive programme (Germany);
 - preventive health care on local basis as a public health service and curative health care in private sector (Norway, Netherlands).

Models of school health services regarding comprehensivity

Regarding the health care comprehensivity there are also two basic models:

1. Comprehensive or integrated school health care.
Advantages of this model or approach are:
 - better insight of child's health;
 - easier to implement health care measures;
 - frequent contact with students;
 - better acceptation from parents, students and children;

- better acceptance from physicians.

Disadvantages of this model or approach are:

- hard to achieve for secondary school students – place of schooling and living are not the same;
- separate head fees for preventive and curative health care.

2. Preventive school health care.

Advantages of this model or approach are:

- better planning and implement of specific and preventive health care measures;
- more time for implementation of specific and preventive health care measures;
- safer implementation of preventive health care measures;
- recognized specific and preventive health care;
- in charge of student's population and school.

Disadvantages of this model or approach are:

- two medical doctors in charge for one child;
- unclear areas of work of school medicine specialist and personal family doctor (which are predominantly curative oriented) for parents, teachers and children;
- colleges and other health professionals are not recognizing the profession;
- school medicine specialists as a preventive professionals can lose interest in permanent education and improving. (2, 16)

Case study – Preventive programmes for schoolchildren in Croatia

Organization of school health services in Croatia

Until 1998, school health services were responsible for comprehensive (curative and preventive) health care for children and youth. Since a reform in 1998, school health services in Croatia are disintegrated and allowed to act exclusively as preventive health care settings. School health services in Croatia have remained a separate service for children in primary and secondary school, and also for students in higher education (professional or university study).

Schoolchildren and youth in Croatia have two physicians:

- family doctor or paediatrician takes care of curative aspect of health care, whilst
- school medicine specialists, in charge of specific schools and universities, takes care of preventive measurements, specific health care and health education.

In 2005, 154 school medicine teams, school medicine specialist and nurse working in each team, were in 21 School health services. School medicine services (as the hygienic and epidemiological services) are under the jurisdiction of county institutes of public health (20 County Institutes of Public Health and Public Health Institute City of Zagreb). Mainly of School health services are located in primary health care centres and coordinate activities with them.

Areas of work are covering wide range of preventive measures according to an annual programme which is developed and enacted at the national level in Ministry of Health and Social Welfare of Croatia, according to the Health Care Measure Plan and Programme (14,15).

Health Care Measure Plan and Programme

Approved health care Programme of preventive, specific and health care education procedures for school children, youth and students is consisted of three main parts:

1. Preventive health care programmes (short review):
 - check-ups (generally) obligatory before entering in the elementary school (at the age of 6 or 7), in the 5th and 8th grade, first grade in high school, and on first year of university;
 - control check-up and according to medical indication after general and specific check-ups;
 - specific check-ups (with specific conditions in school), and
 - screening programmes.
2. Specific health care programmes:
 - reproductive health protection:
 - mental health protection:
 - prevention of addiction (tobacco, alcohol, psychoactive drugs):
 - school's sport clubs, recreation sports and sports in school:
 - children and youth with psychophysical development disorder:
 - education of the children and youth with special needs:
 - school and vocational guidance:
 - nutrition in the schools:
3. Other specific-preventive activities:
 - counselling work with children, parents, teachers and others With special emphasize on work with children with special needs (problems with psychophysical development), learning difficulties, health risks, chronic health disorders, risk behaviours etc.;
 - health education (with children, parents and teachers);
 - general topics in health education: personal hygiene, adequate diet, growth and development, puberty, sexually transmitted infections-STI including HIV/AIDS, reproductive health and family planning, chronic illness, development risk factors, self-protection and caring for personal health, healthy lifestyle promotion.

Main activities of the Programme

Main activities of the Programme are:

1. Regular systematic examinations.

Regular systematic examinations (check-ups) of schoolchildren, youths and students in Croatia are including following examinations:

 - skin changes;
 - body height and body weight (centile curves);
 - assessment of potential abnormal body posture, spinal deformation;
 - other musculoskeletal system deformations ;
 - eye examination (strabismus, Cover test, sight, disorders of refraction), colour vision deficiencies;
 - hearing impairment, speech disturbances;
 - examination on nose deformations, mouth and pharynx (caries);
 - thyroid gland examination;
 - heart examination (murmor cordis innocens, cardiac defects, blood pressure), pulse;
 - lungs examination;
 - abdomen examination;
 - peripheral circulation;
 - arms/legs;

- genital examination;
- puberty by Tanner, kryptorchismus, testis size (Prader), menarche, menstrual cycle,
- Haemoglobin examination,
- urine examination (albumin/eritricites/ leucocytes/ bacteria),
- school achievements,
- leisure time activities,
- nutrition habits,
- smoking, alcohol, other addictions.

These examinations are performed in certain age of a schoolchild:

- primary school - at time of enrolment, 5th grade, 8th grade with professional education
 - secondary school - 1st grade
 - higher education (university/college) - 1st study year
2. Additional examinations if needed after regular systematic examinations.
 3. Examinations with specific purpose:
 - for school and boarding school enrolment;
 - before vaccination;
 - for sport activities enrolment;
 - before field trips.
 4. Screenings of all schoolchildren.
 - body height and weight (and Body mass index-BMI) – as part of regular systematic examinations and in 3rd and 6th grade of primary school
 - vision – as part of regular systematic examinations and in 3rd grade of primary school
 - colour vision – 2nd and 3rd grade of primary school
 - anaemia – primary school enrolment
 - blood pressure – as part of regular systematic examinations
 - proteinuria – primary school enrolment
 - scoliosis – as part of regular systematic examination and 6th grade of primary school
 - hearing – 6th or 7th grade of primary school
 - sexual development – as part of regular systematic examinations
 - behaviour – in the second part of 1st grade of primary school and as part of regular systematic examinations
 - risk behaviour – as part of regular systematic examinations
 - mental health – 7th grade of primary school and 1st grade of secondary school
 5. Screenings of schoolchildren at risk (hypercholesterolemia, hearing, psychoactive drugs and sexual activity). (3)
 6. Vaccination – according to the National mandatory vaccination programme.
 7. Health care for chronically ill children and children with special needs.
 8. Health education and health promotion.

Health education schedule and topics are as follows:

 - 1st – 4th grade of primary school - hygiene, healthy eating; violence and abuse;
 - 5th – 6th grade of primary school - puberty, menstrual cycle, substance abuse;
 - 7th – 8th grade of primary school - HIV/AIDS and other sexually transmitted infections, healthy development and maturation;

- 1st – 3rd grade of high school - family planning, abortion, contraception, marriage, family, children, sexual behaviour, sexually transmitted infections, self-protection and care for the personal health;
 - students in higher education (university or professional) -topics according to needs and indications.
9. Guidance services.
- learning difficulties, risk behaviour, mental health, reproductive health and chronic diseases (1, 4, 5, 15).

Documentation of data on preventive health examinations

All information, collected in preventive health examination are registered in a medical chart. Medical chart additionally contains information on:

- personal and family medical history obtained from pupils/students (anamnesis);
- personal and family medical history obtained from parents (hetero-anamnesis);
- insight into medical documents;
- information from teacher;
- control examination (when indicated).

Preventive programmes in numbers

In the school year 2005/2006, in primary school there were 391.112 children, in secondary school 186.918 children and 97.329 students in higher education.

At primary school enrolment 46.942 children were examined, in 5th grade were examined 91% of the children (44.102 children) and in 8th grade 92% of the children (45.938 children) were examined and visited counselling service regarding professional orientation. At secondary school enrolment 35.956 children (68% of the generation) were examined. Regarding the fresheners, 18.532 were examined in school year 2005/2006.

Health education has been rapidly growing regarding number of participants and variety of themes. In school year 2005/2006, 305.236 elementary school children (and 63.975 of their parents), 89.498 secondary school children (and 7.404 of their parents) and 14.888 of students in higher education took a part of lectures, group work or some other type of health education strategies.

The number of visit to the counselling service has increased each year reaching the total of 140.738 for primary, 42.495 for secondary school and 19.145 for students in higher education, in school year 2005/2006. Main reasons for visiting counselling services differ regarding age:

- primary school: chronic illness (42%), learning difficulties (24%), mental health (21%);
- secondary school: chronic illness (37%), reproductive health and STI (21%), learning difficulties (15%), risky behaviour (12%), mental health (16%);
- students in higher education: reproductive health (6.242), mental health (3.565), chronic illness (3.496), risky behaviour (2.154), learning difficulties (1.062). (14)

Preventive measures in school medicine

Prevention approach in school health services in Croatia assumes that all school health teams are constantly collaborating with different professions such as:

- school and university professionals (teachers, pedagogues, psychologists);

- other primary health care services (close everyday contacts and cooperation to provide quality health care);
- clinical professionals (gynaecologists, clinical psychologists, psychiatrists);
- rehabilitation services.

School child health booklet (SCHB)

Ministry of Health and Social Welfare of Republic of Croatia decided in 2006. to publish School Child Health Booklet (SCHB) which covers a child's life from birth to eighteenth year. Information gathered in SCHB enables systematic surveillance with unique methodology of growth and development of a child. It is possible to follow entities such as: anomalies, anthropometric measures, risks factors, social surroundings and family history. Gathered information are base for creating records which will have operative value and it will enable rapid and diverse intervention with a purpose of protection and improvement of child's health.

School health service's advantages

School health service's advantages are:

- accessibility of school medicine teams to all school children and students in Croatia;
- an unique Programme for all school children and students supported by Croatia's Ministry of Health and Social Welfare;
- primary health care service which allows direct approach for all children and students;
- school setting where children are easily available for health interventions, epidemiological monitoring and health education;
- individual approach and confidentiality.

Possibilities for improvement

In spite of the fact that the system is efficient, there exist several possibilities for improvement, among which are:

- school medicine teams consisted of school medicine specialist, nurse, head nurse per two teams and psychologist per four to six teams;
- number of patients standard – 3000-3500 elementary and secondary school children per team (5000 students per team);
- head fee should be different for elementary and secondary school children and also for students in higher education;
- health care standards correction based on the number of children emphasising terrain characteristics – dislocated schools, large number of schools with low number of children in wide areas, health care for children with special needs;
- work space and equipment standards and norms must be synchronised with health care measures;
- enable to school medicine specialists to became personal curative doctors only for school children and youth. (11,12)

Exercise

Task 1:

Different models of School Medicine Services in South-Eastern and other European Countries responding to the needs of schoolchildren and adolescents

Instructions

Carefully read the following document:

Hopenbrouwers K, Juresa V, Kuzman M, Juricic J. Prevention of Overweight and Obesity in Childhood: A Guideline for School Health Care. Katholieke Universiteit Leuven, Flemish Society for Youth Health Care, Society for School and University Medicine, Croatian Medical Association, University of Zagreb, Croatian National institute of Public Health, University of Ljubljana, Slovenian Medical Association, European Union for School and University Health. 2007.

Find on Websites description of models in Europe. Use also recommended readings.

Discuss advantages and disadvantages of different models with special emphases on past and current situation in your country.

Discuss with other students the need and importance of preventive activities of schoolchildren.

Task 2:

Identification of risk factors for cardiovascular diseases in school age and screening methods for cardiovascular diseases in school age

Instruction

Read carefully recommended papers and discuss with colleagues the risk factors and screening methods for cardiovascular diseases in school age. Make the list of priorities and propose plan and programme, including regular preventive measures in current practice. in your own country.

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Recommended readings

1. Hopenbrouwers K, Juresa V, Kuzman M, Juricic J. Prevention of Overweight and Obesity in Childhood: A Guideline for School Health Care. Katholieke Universiteit Leuven, Flemish Society for Youth Health Care, Society for School and University Medicine, Croatian Medical Association, University of Zagreb, Croatian National institute of Public Health, University of Ljubljana, Slovenian Medical Association, European Union for School and University Health. 2007.
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Chapter

4

**HEALTH
EDUCATION**

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Foundations of Health Education
Module: 4.1	ECTS: 0,5
Author(s), Degrees, Institution	Ilija Gligorov , MD, MSc, Colaborator of the Institute/ Chair of Social Medicine, Institutes, Medical Faculty, University of Skopje, Macedonia Doncho Donev , MD, PhD, Professor, Institute of Social Medicine, Institutes, Medical Faculty, University of Skopje, Macedonia
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Key words	health educational management, health educational methods, health educational principles, health educational techniques
Learning objectives	The aim of this module is to acquaint students with and to broaden their knowledge and understanding about: <ul style="list-style-type: none"> • role of health education in promotion of health and prevention of diseases; • tools and methods of health education; • recognizing facts and needs for health education; • planning and team approach in implementation of health education activities; • placing into proper context (understanding) the role of health services, formal and informal educational systems; • recognizing the role of all players (participants) in health education activities in a network of multisectoral cooperation and integrated interventions; • importance of didactics for non-professional health educators; • implementing these standards and successfully use acquired knowledge in practice.

Synopsis (Abstract)	<p>The module covers principles and concepts of health education, different approaches to health education, assessing population health needs, health education methods and tools, as well as how to work with individuals (counselling methods), with small groups (including self-help groups), and with population.</p> <p>Health education is an important tool in overall promotion of health. Health education principles are directed to healthy life style and strengthening defense mechanisms by efficient contribution of individuals in the social life. Health education is important for entire population regardless of age, educational level, gender, health and other determinants. Health education should be adjusted to the local culture needs and possibilities.</p> <p>Health promotion program of the World Health Organization from 1984 and Declaration from Ottawa from 1986 represent a basis for an innovative approach toward health education based on the social concept of health and healthy life styles. The new broader approach "Education for Health" beside relevant and precise information includes all spontaneous and organized actions directed toward health. An essential precondition for those actions is to provide such healthy environment where a healthy choice would be the easiest choice. In this way the control and responsibility for someone's health are becoming an integrative part of everyday life of the individual, family, community and society through adopting healthy life styles, and creating supportive environments for health.</p>
Teaching methods	<p>The following teaching methods are recommended: lectures, focus group discussion, case studies, individual work, consulting literature, written reports, preparation of project, preparation of poster, and school visits.</p>
Specific recommendations for the teacher	<p>Case Studies – collect data on "environment" for urban/rural groups with health conditions and including data about health status.</p> <p>Students should conduct at least one lesson in the formal schools to obtain data on their organization and problems, as well as to get an overview of main educational steps.</p> <p>They should prepare and deliver a plan and a lecture on health education as well as to present their achievements.</p> <p>Active participation of students in discussions.</p>
Assessment of the students	<p>Multiple-choice questions test exam.</p> <p>Defending written reports on case study how to write meaningful standards of health education.</p> <p>Knowledge will be estimated by examination.</p> <p>Presentation of papers on selected issues.</p>

FOUNDATIONS OF HEALTH EDUCATION

Ilija Gligorov, Doncho Donev

When people face a new situation or system of different obligations,
they adopt their behaviour, they become different...

****Jean Monnet****

Preface

Programme “Health Education” provides people in the community with knowledge about good health. It teaches them how to prevent and promote health, how to protect and help themselves and the living and working environment. Health education has roots in the ancient cultures. It is cited in the Bible and in many traditions through centuries. Certainly, it is very much needed in the contemporary society. The aim of the programme is everyone’s life to be personally and socially useful, desired and positively fulfilled. It has been confirmed that the traditional way of learning and teaching alone is not enough. Each person should take active lifelong participation in the process of health education and even more important should practice a healthy life style.

The small number of educators (1) whose primary or additional work engagement is formal health education obviously cannot satisfy all requirements for goal accomplishment. Thus, participation of many other organized forms of action is necessary. Recently the non-governmental organizations (NGOs) and certain interdisciplinary/ inter-sectional public health programmes have given their great contribution in this direction. Health services and health workers, especially public health workers are most competent to convey this programme. New educational curricula enable experts from many scientific disciplines, medical and non-medical, to be entitled as health education managers. The title of this programme itself reflects the obvious intersection of health and pedagogic sciences, which complement each other through application of natural, social and technical sciences achievements. Nowadays there are methods, techniques and projects for fast acquiring a certain quantum of knowledge and skills for managing and carrying out strategic programmes. We know that the fundamental principles of the subject must be integrated in both, the traditional and the instant curricula. The following text will focus on the basis of health education as an interdisciplinary and integrated discipline. Starting point is the assumption that similar health problems in different environments could be solved by means of same, similar or adjusted existing and/or already proved programmes and experiences in the health education.

The article contains a compilation of up-to-date available papers presenting experiences in order to adjust them for different professions on different levels of the educational scale.

Programme “Health Education in the Community”

The aim of the programme “Health Education” is people to accept the “good” habits, based on the positive attitudes and “healthy” behaviour, resulting from the actively acquired knowledge, and to avoid the “bad” habits. In the modern society we measure health of the individuals as well as health of the community. All public sectors, each individual, share the responsibility for health prevention and promotion. Each link in this chain is of great importance. The knowledge based on evidence must be applied in every segment of life. Systematic approach to this Programme requires effort, time and resources. It is proven that the good health is a repeatedly worthwhile category.

This module provides knowledge in the area of health promotion and its everyday application. Good practice results from the continual development of universal and/or specific knowledge, values and positions for “good health” prevention and promotion. The endeavours of the modern societies for intense programmes for health education and health promotion as a collection of pedagogical, medical, agricultural, industrial, administrative and political activities are evident.

The modern man should also have a modern approach towards learning. For this reason the health education process must apply modern methods and techniques, too.

The New “Programme”

The new world brings very fast changes and information expansion. People should develop skills for problem solving and making justified decisions. Photographic memory must result in practical application. The formal education, which is still basic, cannot cover and encompass all new knowledge. Socio-economic development is not based only on accumulation of knowledge but also on its application through skills, positions and actions. During the process of social maturation of an individual, in sense of identification of the personal feelings, respect of personality and the individuality and differences of the others, experiences exchange and learning from other people’s experiences are of great importance. Social responsibility develops in the course of life. The sense for empathy with other people’s experiences and ideas is important quality for cooperation. The sense for efficiency is also important as well as awareness of the personal contribution to the community values and the sense for compatibility of the personal beliefs and actions within the community.

The new programme does not neglect positive tradition. Nevertheless, it imposes many new approaches and new knowledge. It completely follows health promotion and expert health programmes of the leading global health institutions (WHO, World Bank, Global Fond etc.). In addition to health challenges over the centuries (mainly expressed through a number of standards for personal and social life and work hygiene) the treatment of the new challenges (new severe contagious diseases, massive non-contagious diseases and conditions, ecological challenges, terrorism with heavy casualties etc.) is urgent too.

The new programme has several fundamental bases: application of modern scientific and technical achievements, participation of many institutions from different action areas, significant expert responsibility of the health system, inclusion of all groups and communities and active participation of each individual.

The Health Education Programme is a practical application of medical and other “positive” knowledge in the everyday life of the society. It starts from the fact that the “healthy” habits are not inherited, and the learning process of the daily routines is often strenuous and lengthy. The approach includes interactive and cooperative methods for developing a critical way of thinking. The educators’ efforts are supported by experts, authorities, experienced individuals (“first-hand”) and peer teachers. The acquired knowledge should transform into practical skills, activities and participation. The concept emphasizes the pragmatism in sense of health protection and promotion and disease prevention before the need for secondary intervention arises.

From organizational aspect (different levels of health education in the community management) the fundamental inputs on which this new programme is based are the following: organizational management and culture, time and resource management, human resource management, personnel recruitment, personnel development, personnel performance and

motivation's monitoring, project cycle management as capacity for development, conveying the project and its coordination by establishing a complete project portfolio or programme using instruments such as: indicators identification, logic frame, planning, monitoring and evaluation. The programme consists of projects adjusted to the needs and capacity of the community.

General goal of the Health Education in the community: to acquire adequate knowledge, skills, capacities and positions for all and all age groups in accordance with local, regional and global needs and challenges.

General missions of the Health Education in the community:

- practice on at least the basic health and ecological minimum conforming to the cultural level of community;
- stimulation of the interest for self-prevention, self-help, help and prevention in and from the community;
- providing basis for lifelong learning and practising healthy life style.

Modes of Health Education in the community: the Health Education Programme encompasses the following modes: formal education, knowledge upgrading, constant self-education, acquiring knowledge and advanced studying, skills and general family education, learning through media, associations, and internet and in public non formal educational facilities. The organized education and training are carried out through regular teaching classes and non formal modes of education, such as: consultative-instructional teaching, correspondence-instructional teaching, open teaching, distant teaching etc.

This basic module is primarily intended for post-graduate careers in community health promotion management and for continuous education. It is necessary for the direct conveyors of the health education and prevention programmes to complete this (or similar) module and to go through a more detailed practical training. They will comprehend the importance of the health education as a lifelong learning and practice and will be capable to apply the health-educational approaches in their work. Further continuing education and specialization will entitle them as experts in this area.

Teaching profession

The formal education for teachers, as profession for knowledge and skills (in certain *medical* teaching subjects) transmission, differs in different countries' medical education institutions and in some has a non formal character. When medical professionals (as well as experts from different fields that are not formally educated for teachers) enter the formal educational process they must acquire basic and advanced knowledge in the field of pedagogy and other educative disciplines.

The cases of non formal professional qualification for many professions including trainers, teachers and educators in the field of health ("Training the Trainers", "Peer Education" and similar) are usual (2). Also in this case the standards for the educational process should be always and everywhere satisfied.

Health education for the community teachers should be acquired, through formal and non formal training, knowledge and skills in the following areas of pedagogical psychology: attitudes and attitude forming, behaviour, customs and habits, norms and social standards, tradition, health culture, communication, needs, motives and motivation, personalities, emotions and feelings, attention, perception, studying, memorizing (and forgetting), thinking, interest, intelligence, temperament etc.

Studying recommendations for broadening the knowledge encompass the following topics/issues that should be learned by individual studying:

- constructivism in the studying process (for example according to Jean Piaget), (3,4,5); theory of meta-cognitive learning (for example according to Ann Brown and Isabel Beck), (6,7);
- learning through writing (8,9);
- critical thinking (10,11,12,13);
- mode of learning in adults (14,15);
- education for social responsibility (through: sense for empathy, efficiency and compatibility of the personal believes and actions), (16,17).

Study plan and programme, curriculum, project plan and programme:

Education programme portfolios are time framed as well as defined for certain age groups of students, contents and study schedules. They link the goal of the training and learning to the behavioural principles for shaping the individual's behaviour.

The curricular movement analysis anticipates the following central elements: the aim of the learning, the hierarchy of the curricular goals and the control of the study goals achievement. Möller (18), in 1980, gave the characteristics of the curriculum directed towards the aim of the learning:

- the authors of the curriculum develop its goals;
- the process of goals setting should be practical;
- the goals must be clearly described (to be precise, but not limited on methods choice);
- the success of the learning and training based on the set goals could be tested efficiently (evaluation).
- Models and strategies for planning the curriculum are based on its goals (19,20).

Medical Education (for professionals in the medical professions)

The period of medical education for health professions: medical school, undergraduate – graduate, postgraduate, continuing education (21).

The cooperation in the field of medical and health education on international level is intensive. There are a number of internationally, regionally and nationally adjusted projects that contribute to the health problem solving and health education of the population and health workers. International institutions and associations, governmental and non-governmental organizations, foundations and universities participate in the activities of the above tasks. For illustration, here are some of these institutions:

- *World Federation for Medical Education (WFME)*(22);
- *Association for Medical Education in Europe (AMEE)*(23);
- *European Network of Health Promoting Schools (ENHPS)*(24);
- *Association of Schools of Public Health in the European Region (ASPHER)*;
- *International Union for Health Promotion and Education (IUHPE)*;
- *Institute for International Medical Education (established in 1999)*;
- *Collaborative On-line Learning (a new distance education method)*;
- *Development and Demonstration Centre in Continuing Education for Health Professionals, University of Southern California, School of Medicine.*

Health education of the population

By definition “The Health Education is not just an information about health dissemination but it is an active process of learning through the experience” (25).

Historically, the health education as a concept is determined as a system of subsystems, and has developed through several phases: health propaganda, health literacy and health education.

Health promotion

Health promotion is a broader concept that enables people to undertake a conscious control over their health (and to promote it).

In order to achieve a complete physical, mental and social health each individual or group must be able to identify and convey his/its aspirations, to satisfy his/its needs and to change or control the environment.

Hence, health as an everyday life element is not a life goal. The health is a positive determination and direction that emphasizes the importance of the social and personal capacities as well as physical fitness. The health service and the wider social community are not the only responsible factors/instruments for health promotion. Each individual has the responsibility for healthy life style and general prosperity.

Due to complexity and international universality further in the text the term “health education” in terms of pedagogical and educational categories depending on the context will be used.

Goals of the Health Education in the community:

- attaining knowledge about health and its upgrading;
- acquiring positive positions that strengthen the health;
- changing the erroneously acquired knowledge and habits;
- conveying skills for healthy life style (health promotion);

Global goals of the Health Education are:

- the individuals and the community to grasp health as something priceless;
- to prepare each individual to be able to take care about his health, to take partial responsibility for his health and to give priority to measures for high quality life style;
- to inform and educate each individual to have positive attitude towards health care services and the benefits for people if appeal to it on time.

Basic principles of the Health Education are:

- to be scientifically reliable and educational;
- to be planned in details, based on strategy and action plan;
- to be up-to-date, systematic, consecutive and flexible;
- to be voluntary and conscious;
- to be directed towards the individual and the group; locally and regionally;
- to be connected and supported by visual means.

Methods and tools in the health education process

About the education and training methods

Many scientists in the field of pedagogy justifiably classify the educational methods by different criteria. There are differences even in the definitions and names of methods. The modern educational methods and techniques enable people to study independently, actively

and interactively, and to acquire knowledge that can apply in practice. Being knowledgeable in various learning techniques promotes the creativity and combining, which makes the learning efficient and interesting. Thus, we should teach the programme participants to think with criticism, to actively seek for accurate information, to link the old knowledge to the new one, to share knowledge and to explore the cause-result relations. The participants are responsible for their own behaviour and communications in the social environment. Instructors should also have a new approach with interactive atmosphere, adequate communication techniques and opinion sharing inside the group. They teach, but they do not dominate. They act as mediators in the training, they demonstrate, give directions, support discussions, encourage questions, advise debates, explain. Many theories about the learning modes are implemented in the basis of the health education methods and teaching techniques. The learning theories actualize themselves through the teaching methods and techniques for efficient learning where participants undertake a series of initiatives.

The modern teaching model introduces techniques for stimulation of the audience's capacity and readiness to apply what has been learnt. The critical thinking is a higher level model on the scale of the knowledge acquiring capacity.

Many different well planned and applied methods, used in other disciplines, give good results in the health education, too.

Teaching methods include (cited in alphabetical order): brainstorming, case study, debates, demonstration, directed private/ individual study, discovery methods, discussions, games, individual practice, lectures, lessons, programmed learning, projects, role play, simulations, and tutorials.

Training methodology: frontal, individual, group work, team work, team training, distance learning, participants' needs analysis, exercises, questions and answers.

The standardized/ prepared in advance education may be formal (as a national educational system) or non formal. It may include several methods/techniques in the course of the education/ training in one subject, theme or lesson.

Forms of (primarily) non formal education: seminars, conferences, congresses, symposia, festivals, workshops, supervision, open space methodology, training at work, coaching, custom based, train the trainers, peer education.

Definitions and methods grouping: the *methods* are planned procedures and actions that approach the participants systematically, scientifically, pedagogically and sociologically in order to achieve the educational goals. The general methods can be used in health education with or without any adjustments. One of the many classifications divides them in individual methods and methods for work in and with a group.

Individual methods – examples:

- directed private study (for example individual reading of recommended texts);
- planned conversation with an expert (for example arranged conversation, interactive interview, formal interview with already prepared directed questions, etc.);
- a man-billboard carrying health information message.

Group methods – examples:

- *method of group talking “a life word” - that has several variations:*
 - future educators and activities organizer meeting;
 - educational work or training in small group (for example 4, 6, 9, 12, up to 15 participants);
 - frontal expert teaching method to small, medium or large group;

- transmission and/or evoking “participant’s” experiences as a life demonstration by a guest speaker;
- peer teacher (trained for this purpose);
- education through questions and answers in a group;
- panel discussion (participants: a moderator, experts, interested audience, ordinary audience, with a possibility for “life phone” or visual participation of the audience during the panel);
- playing (acting) certain role (monodrama, drama, a short play piece and similar).
- *complex group methods:*
 - drama pieces – theatre;
 - health educational excursions (method and source of information);
 - organized tours to special expositions, museums and collections;
 - health-bus as mobile collection of methods and means that will bring the health education closer to the beneficiaries on the field;
 - multimedia application in a computer lab, joined connection to internet or usage of specially equipped media-club (medioteka)
 - health-educational courses, workshops, festivals, seminars, symposia, congresses, campaigns, conferences, exhibitions etc.;
 - combined methods for health education by means of different printed (textual) materials (books, pamphlets, picture books, posters, flyers, slogans, billboards, comics, magazine articles, stories and circular letters).

Applied methods overview:

“Case analysis” method enables an active critical thinking where participants draw an instructive conclusion at the end;

“Brainstorming” method was recommended in the introduction of this session as tool for stimulating the fantasy and creativity. There are tutorials and rules for its application.

“Discussion” method has several variants. It is used in situations where there are more different opinions about some emerged problem.

“Playing role” method is used to make participant feel, think and act as someone else who has certain features important for the subject.

“Guest in the community” method has several variants and purposes. It could be an introduction with an “interesting” experience, author testimony, or interactive discussion, questions and answers.

“Work in group” method is good because engages all the participants. It has its variants and rules can be set (for example: how to get the right to talk, who is in charge, who writes the minutes, who give reports and similar). There should not be many groups and subgroups and they should not be too big.

“Determine your position” method is a useful approach for controversial subjects. The participants have one attitude/opinion upon a certain issue and after the discussion they may change it. It could be applied at the end of the subject taught and could evaluate the acquired knowledge.

“Teaching” method enables intense transfer of knowledge. Absorbing all the transferred knowledge without an interactive participation of the listeners is not possible. Teaching skill should be practised. It involves techniques of changing the talking rhythm, diction and intonation, mimics and gesticulations in an atmosphere that animates the listeners. Lectures are important segment of the learning process. Traditional teaching *ex cathedra* is the most

common form of teaching. Disadvantages of the traditional teaching are: it is difficult to maintain the concentration and the concentration is maintained only in the first 15 minutes, small percentage of what is heard is memorized; it only stimulates a lower level of thinking in the listeners and mainly initiate the processes of recognition and remembrance. The advantage of the traditional teaching is the quantity of the transferred new information (knowledge) and it is more convenient in situations when there is a shortage of the study material (27).

Debating techniques enable exchange of opposite opinions, positions and arguments, mostly in cases of opposite attitude of two groups or two individuals.

Cooperative learning method, as a directed cooperation and positive interdependence of the participants (divided in pairs or groups), directed towards concrete problem (issue), develops mutual understanding and is used for creating new ideas. Elements of the cooperative learning are: positive interdependence, interactive support, individual responsibility, shared leaderships, developing social skills, supervising and effective team work (28).

Reading is a model through which people acquire new knowledge during their whole life. Reading is a mode of thinking and learning. Many initiators could stimulate the reading (for example, the teacher, peers, public media and similar). From this point of view health propaganda, environmental influence, experience sharing, lobbying, discussing and validating are very used. The reading technique could be applied to a group work with combined methods or completely independently in a different surrounding. Additional reading and expressing by writing contribute a lot to the critical thinking, advanced learning and positions shaping (29).

The multimedia educational model as a process uses picture +sound +motion +virtual linking to other spaces and contents.

Educational tools: the health education, as the general education, uses various material and technical tools or instruments in order to increase the education efficiency and effect. These instruments bring the teaching content closer to the students stimulating their senses with effect on senses association, thus facilitating the activity of the teacher. Several examples of instruments, intentionally prepared and/or adjusted to be also useful for the health education, are:

- Health, general and specialized, exhibition (thematic collection) along with an oral descriptions by a custodian or a medical expert;
- Static pictures demonstration devices:
 - slides and slides shows with a slide projector;
 - merry-go-round as separate device – slide projector with its own screen;
 - transparencies with applications (graph foils with graph projector);
 - teaching album/atlas (thematic collection of pictures and/or drawings);
 - epi-projector (epidiaskop) for projecting pages with images and text from the book;
 - paintings and drawings (they could be, for example, prepared in “ISOTYPE”, acronym of “International System of Typographic Pictures Education”) as a simplified painting and drawing mode of figurative international alphabet. A drawing shown in this way is understandable for all cultures.
- Motion pictures demonstration devices:
 - motion-picture projector and film tape with health education content;
 - flannel-set (flannellograph);
 - magnetic board with prepared thematic figures made from paper or other light material with a bottom or peace of iron to be attached on the board;

- PVC set (plastigraph) with models for health education;
- Flip Chart;
- TV-video systems and video tapes with thematic contents;
- computer applications with health-educational contents on a diskette or CD, plus a computer and LCD projector.
- Audio devices:
 - a record player with thematic records;
 - a tape recorder with thematic tapes;
 - a radio and a thematic radio show;
 - combined audio system that may contain a record player, a tape player, a radio and other sound carriers or collectors with health-educational contents;
- Modern (digital, magnetic) memory carriers and recorders are also used as tools for health education. Floppy disks, CD and DVD players, flash memories, MP3 players, PALM and other newer sophisticated devices replace the older teaching tools. They have high quality recording, longevity and are spread throughout the world.
- Mass media may also be used as health-educational content transmitters (uni-directionally or bi-directionally). Mass media (as well as channels) are: radio, public-address system, and the press, specialized magazines, giving information by telephone, specialized cinema and TV shows and internet.

The planner and the teacher should not give up of any tool beforehand. Depending on the situation the tool that is most suitable for achieving the goal and meets all the material and other prerequisites in accordance with the problem, the environment and the educated group, should be used.

Elements of the communication process

The educational process includes a *source*, transmission *path* and *receiver* of the information. The transmission *path* is different and variable. The receivers are the sense organs of the learner. The space, the air (with its different physical and chemical characteristics) is the simplest and most common mediator. There are many different forms of communication between the information source and the receiver. Combination of the modern communication techniques result in higher efficiency of the educational methods and tools. The fundamental studies reveal all the elements of the message's "receiver" and "source", the transmission paths, the feedback and the other factors of influence.

The oldest communication form, right after the gesticulation and drawing pictures, is the verbal one. Elements of the verbal communication are: language - understanding, confusion, clarity, adequacy, rejection and acceptance, listening - rules for good listening, positions, literature, etc. Face to face communication is aided by the non-verbal communication, that includes: expression of the face, physical distance between the individuals, the body language (touching, appearance, gesticulations, etc.). During the communication the elements of psycho-dynamics (interactive, emotional and transactional relation) are established.

There are several known communicational obstacles that should be neutralized/overcome during the planning and the health education conveying. These kinds of obstacles are: social and cultural differences, limited possibilities, contraindications, not paying enough attention to the conversation, identifying oneself with the other in order to understand (what would I do if I were he/she?). Analysis of a video tape of "five minutes of the teacher" method, used during the teachers' training, helps the educator overcome the personal obstacles.

The technical devices use different paths to transmit the information to our senses. The modern technology strives to neutralize the obstacles (which are sometimes deliberately provoked and destructive, for example, the fear of electronic communication by the means of the computer technology comes from the “hackers” and the computer “viruses”).

Application of the health education methods and tools

During the project cycle adequate methods (and techniques as direct activities) for achieving the goals are planned as well. Conveying adequate methods, as acts and activities for systematic approach to the students, will meet the scientific, pedagogical and sociological efficient principles of the educational theory in accordance with the goals. Thus, methods that are really going to be highly beneficial for a concrete planned education are being chosen.

The health education project's tools and methods, as instruments for conducting the teaching process and training, are planned, chosen, adjusted and used in accordance with the characteristics of the group of listeners (age, culture etc.). The teacher must be sufficiently prepared in terms of technical skills and very well trained in applying teaching methods and tools. In the course of activity, depending on the situation, the teacher explains and gives instructions about certain teaching tools usage or he/she uses them by himself properly.

The manager, during the project's health activities cycle, should study the existing didactic guidelines and recommendations in order to make the best combination of different teaching tools, techniques and methods.

The teaching facilities, for formal as well as non-formal education and training, should be very well didactically adjusted. The ambient (working environment, furniture and equipment) should be optimized in accordance with the activity.

The safety of the whole process should be at maximal level.

Health Education Management

Health education begins in the earliest childhood. It is a lifelong learning and it takes place in the family and home, in the educational institutions, at work, in the health institutions, in the narrower and broader social community. The health education subjects related to the general and specific health needs and problems could be informal or incorporated in thematic modules, projects or health education programmes.

Basic steps in the health education management are: planning (for example a project cycle), consultation (with experts for example), capacity building and organizing, research, education-training, monitoring, evaluation, re-planning).

The planned health education can be formal or non formal. The formal is under governmental/public specialized educational and other institutions' jurisdiction and is linked to strategic documents, such as the National Strategy, and planned, organized and conveyed health education.

The non-formal health education planned health-educational activities and projects carried out by individuals, groups and organisations, which are not under state education system's jurisdiction.

The dominant local and regional health problems and needs for health education are place specific and must be well studied from different aspects. The teaching content is determined after their identification. Each programme/project for health education elaborates activities according to the teaching contents, population's groups, participants, time, place and mode of convey. In communities where certain conservative traditional positions, influenced by

superstitions, dominate, additional efforts for education and righteous positions about healthy life style are needed. In order to influence the young generations promptly and efficiently it is important to work continuously with the parents, especially with the mothers.

Health education contents grouping areas: general dominating priority subjects for the whole population, vulnerable or highly threatened population groups oriented subjects, most common (for the environment) subject areas.

The techniques used for health education are not isolated and inter-independent, they intertwine and complement each other and with many other factors.

There are many individual and group differences in terms of intensity and the subject of interest imposing the need for more specific approach. The information sources regarding the populations' broad interests are: well planned questionnaires, analysis of the FAQ (frequently asked questions) in the magazines and newspapers or on the radio and TV interactive shows and on internet. This approach gives insight into the most common problems the population face and cannot solve. After the priority problems are determined the mode and techniques for their clarification and education of the population are chosen.

Elements of a good lesson

A lesson's (teaching unit for acquiring new knowledge) planning, moderator's preparation before the class and activities during the class: evoking the already learned, understanding the meaning of the lesson and feedback (30).

Extra intense activities after the class could also be planned: further training regarding the lesson, independent researches, knowledge sharing, applying "good practice" (31).

Health education programs and projects' management and association with special occasions

The manager must be familiar with special occasions and established calendar of events of the community for which the health education programs and projects are intended to. This information enables him/her to plan independent or joint activities with health-educational contents.

The health education on issues related to respiratory diseases (for example decreasing the flu incidence) is primarily planned and carried out during local seasons, autumn and winter. The spring, summer and autumn's activities are mainly focused on issues referring to the intestinal infections and food poisoning. The messages for women's health prevention are most intense in March and on the Women's Day. Nevertheless, these messages must be sent in continuity. The global problems are associated with the World Health Day (on April 7th). Certain health problems are matter of daily, weekly, monthly, yearly or over a decade (even over a period of a century) intense campaigns for prevention and control of the global and priority problems. Such global example is the Millennium Development Goals (MDGs), (32).

The health education programs are integrated in the social life (especially in the formal education). They are planned, coordinated and conveyed in an inter-sectors multidisciplinary fashion. These programs are within the expert competence of the health sector that unites and includes non-governmental organizations (NGOs), educational and many other governmental and non-governmental institutions.

Many programmes and projects' activities should necessarily include trained volunteers that can, in coordination with the health sector, extensively and intensively convey them in a disperse space.

Expert competence for health education management and health education in health institutions

The health institution manager plans, organizes and controls a health education *programme* within and outside the health education intended for the community population.

The health workers in line with the law and job's assignments are obliged to carry out an integral health education. Health education contents should be applied during the appointments with the patients in the health institution. Combined techniques and adequate methods and teaching tools are planned and applied continually.

Health education tasks are assigned to each health worker based on the beneficiaries. The methods of individual training, giving instructions and explanation or planned conversation and interview are mainly used for primary health care patients. More complex and group methods for health education are used on secondary and tertiary level.

The health-educational ambient in the health institution must be also well planned and must make sense. The accompanying equipment, pictures, schemes and messages in the institution's facilities are important for this purpose. The ambient should first of all, be associated with good health instead with disease. In order to stimulate the beneficiaries to assume a positive position towards health hallways, waiting rooms, ordinations, interventions rooms, the sanitary facilities within the health institution etc., should be thoughtfully planned. For example, the contents applied and devices placed in the intervention rooms inform the patients about the intervention performed facilitating their communication and collaboration with the health worker. When the patients are children the ambient is decorated in a manner that occupies children's attention as much as possible and relax them since they can be easily traumatized, resulting in bad experiences with the medical interventions. It is important that sanitary facilities of the health institutions are clean and neat. The supplies, appearance and neatness of the sanitary facilities contribute to the positive habits of the beneficiaries. The functionality of the sanitary equipment, soap, toilet and hand paper supplies, are very important factors. The present situation, even though in some places is excellent (in others good and in third bad), can be improved. This is why we especially underline the significance of the health education in the example settings. The manager in charge should control the employee whose assignment involves hygiene, supply and maintenance of the sanitary facilities. He plans and introduces new equipment and new cleaning products and disinfectants, as well as further education of the assigned employees.

Health Education in a counselling office within a health institution

The managers of the primary and secondary health care should establish a counselling office for work with specific population groups. The counselling office is often a separate equipped room within the health institution. The personnel and the tools of the counselling office are directed towards health promotion and prevention in specific healthy groups or towards rehabilitation, adaptation and re-socialization of chronic ill persons for whom a work therapy could also be organized. The personnel could be a full time or part time engaged. In the counselling office messages or teaching tools for visual training and education are exposed. Educational methods and tools adjusted for the programme/project's lesson are used. The education is conveyed on individuals or small groups like young mothers, children, or people affected by certain health problem. It is important to update and adjust the contents and to convey a planned, organized health education and training.

Health education in the dentistry: the managers that plan and organize local, regional or national health education in health institutions, schools and community, include health of the oral cavity in their programmes. From expert's point of view this is generally done in the dentistry. The population must be familiar with the rules for oral cavity's hygiene and disease prevention, the anatomy and growth and developmental time-line of the teeth, as well as with the factors that influence these processes. Nowadays, the manufacturers for households find their interest in the personal hygiene products. Through their excellent advertisings they not only advertise their products but they carry out health propaganda, education and even training. Nevertheless, the correct information like which type of toothbrush is good, how to use it properly, how does the food affect the teeth, the significance of the regular dental control, is very important for the children and their parents.

The dentists carry out health education during individual appointments or group systematic check-ups of pupils, certain type of professionals and others. They organize and convey lectures, tribunes, discussions etc. They use appropriate teaching tools, for example posters, multimedia techniques, models, live demonstration of teeth brushing and oral cavity hygiene maintaining etc., by different methods and techniques.

The other personnel (the dental nurse-technician, for example) participate in the health-educational program as well. They take part in the educational programmes with activities before and after the dental check-up or intervention demonstrating the procedures for dental cleansing or distributing health-propaganda materials e.g. flyers, toothpastes, mouth cleansers, etc.

Health education within the public-health nursing/visiting-nurse service: public-health nursing/ visiting-nurse service is a public health branch. It is a fieldwork that conveys prevention oriented health education. The multivalent visiting-nurse service has a wider diapason of activities. It carries out all-inclusive health education and training as well as preventive medical check-ups within small or bigger communities (one family, one club and similar) or works with individuals with specific needs or conditions. The field work gives insight and controls the acquired knowledge application and valuable information for the planners so they analyse and re-plan the programmes.

The visiting-nurse service manager cooperates with the other health services' (curative and preventive) managers. They plan the health education programmes, projects and activities together. Public-health nursing, as independent service or within another health institution, should be wide spread and used in all conditions and environments as private and collective households (homes for singles and/or the aged and similar), companies, humanitarian associations, sports clubs, clubs for retired persons, etc.

The managers prepare yearly, mid-termed and strategic programmes for the visiting-nurse service according to the field and community characteristics. They use indicators and analyse and estimate the community's conditions and needs.

The following standards for the service should be fulfilled: appropriate training for performing standardized procedures, appropriate functional equipment and tools for field work and personnel's motivation and continual education. The management should also provide working conditions in the health institution: work space for preparation and analyses, furniture, card file, database etc.

Health education in specialized services within the preventive activity: the preventive medicine activities, in all their capacities (services and institutions), as part of the national

health system, have legal, professional, moral and exclusive right and obligation for conducting the widest scope of health education. The managers provide general social, inter-sectoral, legislative and administrative support through these services. They also obtain indicators and useful analysis for planning, programming, conveying and evaluation of the health education programmes for the population. A great commitment is put in the population health education process in order to achieve the goals at all levels of the prevention. Establishing, equipping, maintaining and use of a media-club for modern health education in the medical schools and prevention health institutions is very important. For the purpose a specialized expositions and museums are also organized. Lectures on actual and long-lasting health problems with higher social medical significance as maintaining good health or chronic diseases, injures and infectious diseases, are also prepared and carried out. The economic sector, the education and the governmental administration join the health sector in its activities. They are involved in the health education and training methods and tools development and adjustment.

Health education in the hospitals: hospitals are primarily intended for ill people treatment. It is ever-lasting effort, hospital stays to be as short as possible. The hospitals' management, among other tasks and planning, includes organization and conveyance of health education of patients during their hospitalization. The health and other personnel inform the patient and his/her family about some characteristics of his/her illness: its prevention, causes, its early and late diagnosis, treatment and rehabilitation. If the hospitalization is longer, (in hostels for example) in addition to the partial education, other projects, as habits and attitude changing, work therapy and similar, could be planned.

The hospital personnel inform the patient about the hospital roles and habits, diet, personal hygiene and bed tidiness, therapy rules, if the illness characteristics and condition allow it, at the first contact of the patient with hospital at his/her admission and discharge or during his/her hospitalization and treatment. It is very important to plan health education for parents (mainly mothers) hospitalized with their ill small children. They should be educated to maintain properly hygiene of the child, how to care for the ill and on skills for totally healthy life style.

Activities for the visitors (family, relatives, friends etc.) are also planned. They include information about the visiting rules, visiting hours, hospital's life, and hygiene maintenance, in order to contribute to faster convalescence of the ill and to avoid contact diseases transmission.

The in-patients health education plan encompasses general and specific health topics. Depending on the patient's level of knowledge adjustments for individual approach are made. Activities for small groups motivated to participate in the health education are organized as well. The level and the intensity of the training fit to the illness phase. The hospital has many places where health-educational material could be exposed. An internal radio or TV show could also be used.

Health education within the pharmacy and pharmaceuticals industry: the health education management's plans should include the pharmacies on local and regional level and the pharmaceutical and cosmetic manufacturers on national level.

Pharmacy is a very convenient environment for health education. In the pharmacies people supply themselves with medicaments, sanitary, accessory and cosmetic products and similar depending on the sale licence. The health education within the pharmacies is

performed by informative and educative posters, brochures and flyers. The themes on these advertisings are general hygiene and health contents that apply to some of the products in the pharmacy. Information about some disease, or healthy life style practising, or medicaments and food supplements' mode of use could be more detailed. The pharmacists could advise and give usage instructions to individual customers on the products or could organize personal hygiene and cosmetic products promotion. The pharmacies should be subject of regulations observation control regarding the advertisement restriction of certain products.

Nowadays the pharmaceutical industry invests a lot in the medical professionals' continuing education and education of the population. Manufacturer's management body plans and organizes the methods and means for these activities. The public health manager responsible for health education on a national level and these manufacturers should cooperate. They should bring the plans and the activities into accord for mutual benefit satisfying both, the population needs and the manufacturer's profit.

The internet through creating informative and/or educative web pages with possibility for interactive communication takes its place as a mode of approaching and acting on the target groups.

Health education management in different institutions and professions

Health education in the preschool children's institutions

The national level health education planning includes the preschool institutions (children's nurseries, kindergartens, playhouses, preschool clubs etc.) as well. The personnel and other invited teachers convey specific activities for health education of the children:

- understand the importance of health and promptly undertake proper actions;
- on a local level, in accordance with their age, take part in organized health-related activities and environment promotion and protection;
- acquire positive habits for hygienic healthy life style, skills for detecting bad habits and factors and abandoning them;
- intercede attitude and measures in favour of healthy life style and request the same from the others.

It is very important for these institutions to be arranged according to high hygienic standards and have health-educational contents.

The personnel directly carry out the health education projects and activities in cooperation with health workers, humanitarian organisations and parents volunteers. The plan involves the most appropriate methods for the group. Teaching tools should also be strictly selected and adequate to the age. When children are involved, the individual, group or combined methods and training through live demonstration, role playing, puppet theatre on health-educational contents etc. are more efficient. The children actively participate, form positions together, make decisions and undertake responsibilities for health and environment protection (33).

Health education in the primary and secondary schools

Planned systematic, compulsory health education of the school population is highly necessary in the formal compulsory education.

The management responsible for health education of the population should enable to achieve the health promotion goals through national programmes, projects and activities stratified by the specific biological growth and developmental phases, starting with the school children as a specific population in the phase of intense learning. The expert consulting in the

planning process is in competence of the doctors, specialists in school medicine, pedagogues, sociologists and defectologists (special education teachers).

The school environment highly influences on the habits developed in this specific period of the human life. It is the influence that lacks in the individual and distance learning. Everything related to the teaching and non-teaching school activities should be according to the standards set by the school medicine for this kind of environment. The technical requirements for the classrooms, cabinets, furniture, heating, light, ventilation, sanitary facilities, water-supply, organized school kitchen etc. should be satisfied.

The plans will not achieve the goal completely without continuing advanced education of the professional school teachers. For consistent transfer of knowledge needed for creating positive health habits in pupils the up-building of the teachers' expertise and skills as well as their motivation is a must. The health professionals along with the school teachers take part in many activities. They help in operative plans' making, their conveyance as well as in the continuing education.

The programmes for this population are also based on prior situation analysis (needs, requests, priorities and specifics) and the wide international community's experiences implementation.

Pupils need multidisciplinary information in many spheres of the social life such as traffic culture, public places' bon-ton, etc. If there is no health education subject in the curricula it is necessary to include health education contents and messages in the programmes of the other subjects teaching contents. The desired level of mental and physical health and social behaviour in accordance with the health promotion and healthy life style standards is achieved through special health education actions. The knowledge transfer has bigger effect if the environment influences on pupils positively, e.g. clean environment, well organized collective diet in the schools, etc. (34).

Health education within companies (at work)

Employees' health has a concrete economic dimension. Managers responsible for health education of the population prepare strategic, regional and local programmes to educate workers on their health's prevention, manufacture standards meeting and environment protection. The managers and their advisers incorporate this knowledge in appropriate projects and activities for health education of the personnel. The programmes always include health areas. Health, psycho-social, pedagogical and economic approach for continuing education of all employees is applied. For certain professions consulting teams that determine the health education's priorities, models and contents are formed. Consultants are medical professionals (industrial medicine practitioners and others), pedagogues, sociologists, occupational health engineers, economists, lawyers etc.

The aim of the health education at workplace is the workers' awareness and influence rising on the workplace conditions and risk factors in order to improve the unfavorable situation.

Poverty and health: poverty is the most important bad health determinant. The poverty and the social exclusion are key factors that directly influence the health. The World Bank regularly monitors the situation with the poverty rate by household monetary measurements. Absolute poverty is when a family cannot satisfy the essential food and other, non-food, needs. Extreme poverty is when the family does not satisfy the essential food needs (35,36).

Health Education at informal places and events

The local, regional or national level health education planner must be familiar with the date and time of certain social events in order to organize and convey health education activities at the same time and place. Health promotion is an integral part of the sport and cultural manifestations, summer camps etc. However, in the leading activity's background propagandas, health and educational methods and tool that contribute to the goal are organized and carried out. Health-educational contents are incorporated on the billboards, posters and flyers. At some other mass- events an intentional billboards could be exposed or brochures and flyers could be distributed. Verbal advises at public places, in buses, supermarkets etc. could be organized as well.

Case study of Macedonia

About the situation

The Republic of Macedonia is one of the signatory countries of the United Nations Millennium Declaration. The report of the Millennium Developmental Goals in the area of health is available at www.un.org.mk/MGD/MGDnew.htm. Information about the completed and current health care projects (some of them are sponsored by World Bank, Global Found to Fight AIDS, Tuberculosis and Malaria, UNICEF, Early Childhood Programme and World Health Organization) could be found at www.zdravstvo.gov.mk (e.g. Jeffery HE, et al. The impact of evidence-based education on a perinatal capacity building initiative in Macedonia. Medical education; 2004.).

Every philosophical answer to the question "Are people educated in health?" is justified. Statistics shows that conveyance of the known (older and newer ones as well) prevention activities against diseases and preventable conditions (for example non-smoking, healthy diet, sport, immunization) (37) require greater knowledge, awareness and action. The morbidity analysis has shown that most frequent are precisely this type of diseases (e.g. cardiovascular diseases and injuries) in R. Macedonia.

Health education incorporation in the *formal* education teaching contents in R. Macedonia starting from the second half of the XX century up to date has a variable proportion, intensity and contents. The R. Macedonia's case study after the World War II started with massive local courses in all communities (cities, villages, women's groups etc.). Realizing the economic, educational and health situation, the health education programme of that time began a phase of general health *enlightening*. The health *education* phase followed soon after. The analyses of the healthy behaviour nowadays shows that majority of the population is familiar with the basic standards for health prevention. The harmful side-effects of many technological processes are known. Nevertheless, the manufacturers must be obliged to invest in prevention and protection. Even though many people are aware of the consequences of their bad habits, efforts should be made to change them.

At the beginning of the XXI century we cannot register a specific health education subject in the elementary and general high schools. The situation is similar in other countries too (for example in Croatia the procedure for introducing a health education subject in the school has already taken several years). At the same time we register a number of *non-formal* health education projects primarily conveyed by civic associations (often sponsored by foreign and international institutions' donations), and lately also in cooperation with governmental institutions. The education curriculum reforms until year 2007 do not include introduction of health education teaching subject in the compulsory (elementary and secondary) education

in R. Macedonia unlike the informatics subject (whose application becomes more and more intense) and religious instructions. Still, we have confirmed that health-educational topics are integrated in many other teaching content subjects (e.g. biology) or the home-room teacher discusses them within the class.

The *medical* high and advanced schools and the *medical* faculties (obviously intended for health professionals) in R. Macedonia *have* developed curricula with health education teaching subjects or contents. The goal to transfer the basis for this teaching subject in as much as possible, occupations is achieved within the “Course for the social and behavioural sciences for health”. This course is part of the postgraduate studies curriculum of the Centre for Public Health within the Medical Faculty in Skopje in which topics, seminars and workshops on “Management of health education in the community” are incorporated. We hope that new generations of public-health managers will repeatedly multiply their knowledge, skills and influence on the community for continuing general health education practising. It is noted that this area’s topics are incorporated in the curricula of some other professions (for example at the Faculty of Social Work and Social Politics, Interdisciplinary Studies in Public Administration, Faculty of Pedagogy and others).

Introduction of compulsory health education in the elementary and high schools teaching programmes is a recommendation and conclusion related to the case study example. Concerning the compulsory education situation, the need of systematic and planned health education in the schools is emphasized. Lifelong learning and healthy habits should be incorporated in the daily life.

In 2007 the Government of R. Macedonia has undertaken intense activities for reparation of the worsened technical conditions in almost all primary and secondary level educational facilities. It has allocated the needed financial resources. Switzerland Government’s donations for this purpose will increase the budget for health education in schools. The schools besides the educational curriculum have facilities for health-educational contents exposures (for example, sport facilities, neat sanitary facilities, kitchen etc.).

The formal education in R. Macedonia is a subject of reforms. In accordance with the law, primary and secondary level education (of 13 year duration) is compulsory (for the citizens known as “free of charge education”) and it is a Government’s responsibility.

We present the R. Macedonia professional teachers’ data regarding educations for easier comparison with the EU countries. They have been educated in accordance with the pre-school, primary, secondary and tertiary educational level institutions’ needs. All teachers have at least a university degree. The job position classification is as follows:

- educator in pre-school institution;
- elementary-school lower classes teacher (all subjects teacher);
- elementary-school upper classes teacher (one subject teachers);
- secondary-school teacher (has a diploma and teaches only one subject);
- assistant (master of science or art, specialists);
- invited professors (academics, visiting professors, experts);
- academic titles: lecturer and senior lecturer;
- elected academic titles: assistant professor, associate professor, full-time/ regular professor and research fellow.

Institutional jurisdiction for health education management in The Republic of Macedonia

The specialized public-health in R. Macedonia is organized on the secondary and tertiary health care level. Leading specialities are social medicine, hygiene and medical ecology and epidemiology. Locally and regionally, public health institutions as health care institutes (some of them have a dispersed units) are active. On national level, active state institutes for public health are the National Institute of Public Health and the Institute for Preventive Medicine within the Ministry of Defence. Other health institutions' managers, governmental administration and other institutions cooperate with them on the health education issue.

The main objectives of the tertiary level highly specialized preventive public health institution: National Institute of Public Health, i.e. the organizational unit Sector for Social Medicine – Department for Health Education, History of Medicine and Journalism (available from: www.rzzz.org.mk/soc_medicina.asp#3) (Accessed: 07. 07. 2007) are presented as a case study from R. Macedonia.

This institution:

- conveys health-educational activity through global and specific national *programmes* for health education;
- participates in certain programme's activities conveyance on field;
- monitors the conveyance and result evaluation;
- plans and coordinates health promotion activities;
- cooperates with WHO on implementation activities for health promotion;
- offers expert-methodological help;
- participates in the health education of different health professionals profiles;
- has direct cooperation with the national and foreign media, humanitarian organisations and associations;
- publishes different health-educational papers, articles, brochures, placards, flyers, etc.;
- conveys research in the area of history of medicine.

Exercises

Seminar work, individual (distance) learning and briefings

Exercises in several modern methods and techniques (e.g. interactive teaching, cooperative learning and similar) are planned for the participants in this module. Helped by the teacher, students prepare and present individual seminar papers, presentations, lectures, or organize debates.

By research and individual (distance) learning and learning through reading and writing, students should comprehend the concepts of: positions and position forming, behaviour, customs and habits, norms and social standards, tradition, health culture, communication, needs, motives and motivation, individual's personality, emotions and feelings, attention, perception, studying, memorizing (and forgetting), thinking, interest (being interested), intelligence, temperament. They should prepare a briefing about the characteristics of these concepts, which can be generalized for the local community, and presented in front of the whole group.

Group of 5 students prepares the steps in the health education program management. Each and everyone briefs about one of the phases.

Group of 3 students prepares the main parts of a lesson (class, teaching unit) on a given health-educational topic and each one briefs for 3 minutes to the whole group. The task

for other 3 students is to present a text (as a part of a teaching unit) with the most intense motivation effect on the listeners to learn, shortly elaborating why the text is motivating, and presenting important conclusions at the end, in exactly 1 minute.

Preparations: students should make operation plan for one lesson as part of a health education programme.

Teaching accessories: projecting screen, computer, LCD-projector, blackboard, flip chart, equipment for simultaneous/consecutive translation, loudspeaker system, graph projector and graph-foils, copy machine, printer, etc.

Combined method for community health education application

First of all, has to be identified the problem (for example: tuberculosis).

Approach: programme management (multi-directional): planning, advising, organizing, research. Central activities: education, evaluation and report.

Procedures: estimation of the problem's dimension and severity by several indicators (for example: the morbidity trend, incidence, prevalence); analysis of the target group social position, the specificities in its positions towards health, vaccination rates (e.g. BCG vaccine) etc.; general plan creation, consultations and preparations. After the priorities of a certain health education programme are determined, planning and determination of the most suitable modes and techniques for achieving the goal, follow. The activities that will be conveyed are planned in details in every organizational aspect (their dimension, time, place, participants, logistic, etc.).

The activities (for example: education of the population in protection against TB) are conveyed in accordance with the action plan:

- *health propaganda activities:* printing and mass distribution of adequate message materials (for example badges, posters, balloons, key pendants, etc.) in order to animate and invite different population groups (e.g. parents, pupils, etc.) to take part in the programme activities;
- *health informing activities:* the approach is through mass media (for example radio and TV shows in effective periods of the day, adequate articles in general and specialized newspapers and magazines). Feedback, questions and answers, from the listeners, watchers and readers should be provided. Within these activities the actual problem in the environment (TB for example) is completely intensely and extensively presented, emphasizing the disease prevention measures;
- *health education activities:* organizing seminars, courses, workshops, etc. in schools, companies, local community, etc. The activities intended for the general population are performed by selective groups (for example teachers, health workers, non-governmental organizations, etc.);
- It is very important to plan and carry out continued monitoring, periodical analyses and final analysis of the programme or project.

Glossary of some essential terms

(Full glossary is available from: www.euro.who.int/observatory/Glossary/Toppage)

- **Course**

A course for this purpose is taken to be a planned series of learning experiences in a particular range of subject-matters or skills offered by a sponsoring agency and undertaken by one or more students.

- **Formal education** (or initial education or regular school and university education)

Education provided in the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous 'ladder' of fulltime education for children and young people, generally beginning at age five to seven and continuing up to 20 or 25 years old. In some countries, the upper parts of this 'ladder' are constituted by organized programmes of joint part-time employment and part-time participation in the regular school and university system: such programmes have come to be known as the 'dual system' or equivalent terms in these countries.

- **Non-formal education**

Any organized and sustained educational activities that do not correspond exactly to the above definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out-of-school children, life-skills, work skills, and general culture. Non-formal education programmes do not necessarily follow the 'ladder' system, and may have differing duration.

- **Special needs education**

Educational intervention and support designed to address *special education needs*. The term 'special needs education' has come into use as a replacement for the term 'special education'. The older term was mainly understood to refer to the education of children with disabilities that takes place in special schools or institutions distinct from, and outside of, the institutions of the regular school and university system. In many countries today a large proportion of disabled children are in fact educated in institutions of the regular system. Moreover, the concept of 'children with special educational needs' extends beyond those who may be included in handicapped categories to cover those who are failing in school for a wide variety of other reasons that are known to be likely to impede a child's optimal progress. Whether or not this more broadly defined group of children are in need of additional support depends on the extent to which schools need to adapt their curriculum, teaching and organization and/or to provide additional human or material resources so as to stimulate efficient and effective learning for these pupils.

- **Adult education** (or continuing or recurrent education)

The entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong, improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose:

- to complete a level of formal education;
- to acquire knowledge and skills in a new field;
- to refresh or update their knowledge in a particular field.

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- International Society for Equity in Health -- http://www.iseqh.org/index_en.htm
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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Level of Education and Health Status of Different Social Groups: Case Study Macedonia
Module: 4.2	ECTS: 0.5
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Key words	Education, socioeconomic status, health, morbidity, mortality, health promotion, health education, interaction
Learning objectives	After the completed module students and professionals in public health will broaden their knowledge and understanding regarding: - the level of education and the rates of morbidity and mortality; - influence of education on the level of morbidity and mortality; - education and mechanisms for positive association with health; - health education programs and activities for health promotion in relation to the level of education.

<p>Abstract</p>	<p>The educational level is an important indicator within the socio-economical status for health evaluation and a powerful instrument in promotion of population's health. In 2000 a study conducted in R. Macedonia, in 15 municipalities with different gross national product per capita, encompassing 1129 examinees older than 18 years. The results of the conducted research showed statistically significant association of the educational level with the morbidity. Higher morbidity emerges in persons that are illiterate (78,57%) and in those who have completed only 1-3 elementary school grades (77,08%). There is also an interaction between the mortality and the educational level. Persons with lower educational level have higher mortality rate. What kind of interaction is there between the educational level and the positive health? People with lower educational level are more susceptible to diseases; they are less informed which leads to a poor health. Morbidity and mortality rates are lower in people with higher educational level, who also have high level of self-informing that augments their health awareness and culture, leading towards positive health. According to many research studies, the mechanisms that link education to positive health are the employment and self-satisfaction with the job, healthy lifestyle, psycho-social resources etc. There is a mutual negative effect between poverty and lack of education that provides skills and information needed for managing the stress situations life brings with itself. Education, employment and incomes increase the capacity of self-control, and that condition strengthen the health in relation to the environment. The social support, which is most frequent in persons with higher educational level, promotes health and decreases mortality through physiological mechanisms of the environment. People with higher educational level most likely will look for preventive health care (yearly check-ups for health control, immunization and other preventive examinations) and will probably not abuse alcohol and drugs.</p> <p>Preparation of various programs for applying the health education will contribute in the process of directing the individual to correct behavior that leads towards positive health, opposite the hostile influences of the social environment, which leads to bad quality in health (based on the education).</p>
<p>Teaching methods</p>	<p>Lectures, focus group discussion, nominal groups, case studies</p>
<p>Specific recommendations for teachers</p>	<p>Case studies – students will have possibility to conduct survey for assessing health status of various socio-economic groups in relation to the level of education, and to participate actively in realization of health education activities directed to health promotion.</p>
<p>Assessment of Students</p>	<p>The final grade should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work and final discussion, and quality of the seminar paper</p>

LEVEL OF EDUCATION AND HEALTH STATUS OF DIFFERENT SOCIAL GROUPS: CASE STUDY MACEDONIA

Lenche Mirchevska, Doncho Donev, Snezhana Mojsoska

Introduction

Socio-economic conditions and factors and their effect on population's health, as possible causes for emerging of health problems, are subject of intensive research in many countries worldwide.

In the mid 20th century dominated the public-health idea that the host, the environment and the agent are equally responsible for the disease occurrence. Host's factors are: age, sex, lifestyle, genetic predisposition, education, professional status, personality. The global health of the population primarily depends on the genetic and social factors, risky behaviour and health service development. The risk of disease is different in different socio-economic population's groups. People with higher socio-economic status have lower risk of disease and suffer from chronic diseases in the old age. In lower socio-economic status groups, in addition to the chronic non-infectious diseases dominate the acute infectious diseases, poverty, high mortality rate in newborns and early death (1).

Determinants of the individual's position in the social hierarchy are the education level, the profession and the incomes. The education is the most significant cause, of all other determinants (financial situation, incomes, social status, political, cultural and economical power, ethnicity, etc.), for the different health conditions in different socio-economic groups (2).

The actual economic situation in R. Macedonia unfavourably influences on the living standard. The low economic development causes a stagnation in the social development and investment in the population health.

Educational system in Macedonia and its comparison with the educational systems in other countries

Majority of the countries in the world, due to lack of information about the profession and the family income, use only one indicator – the educational level of the individual or group instead of the three indicators for socio-economic status measurement. Some authors consider the educational level as an important determinant of the populations' health condition as well. How precise will be the classification of the educational level depends on the country's socio-economic and educational system. In the biggest world educational systems that include four educational levels the complete education last approximately 12, 15, 18, 21 and more years. According to Kunst and Mackenbach in some European countries the education is classified as follows: incomplete education, elementary education, secondary lower and secondary upper education, tertiary (post secondary) education (3).

R. Macedonia's legislation classifies the education as: incomplete elementary education (and persons without education), elementary education, 3 years secondary education, 4 years secondary education, advanced school education, higher education (includes higher education, master and doctorate degree) (4). The educational system in R. Macedonia is going through reforms (9 years elementary education).

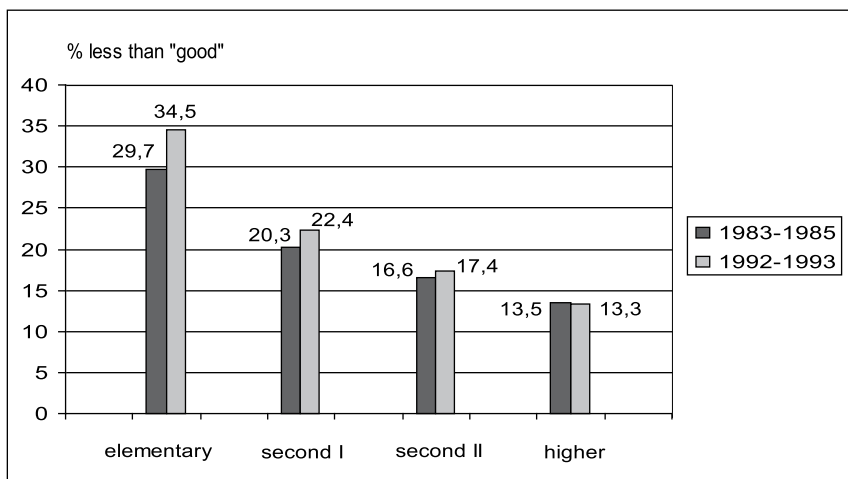
Other countries experiences on the effect of the education on the population morbidity and mortality

Studies in many countries have shown that there is a statistically significant difference (correlation) between the education and the morbidity and mortality rates. Higher socio-economic groups (with higher educational level) have lower morbidity and mortality rates and vice versa, the lower socio-economic groups (without or with lower educational level) have higher morbidity and mortality rates.

The studies in Finland show correlation between education and incapacity. In Finland, incapacity as an invalidity level is more frequent in persons with elementary and secondary education, while the persons with higher educational level are free from incapacity (3).

A recent study which analysed socio-demographic variation in the prevalence of obesity in Estonia, Lithuania and Finland on the basis of three cross-sectional surveys in 1994, 1996 and 1998, found that over the course of this period obesity increased only in Estonian males and that a significant socio-economic gradient was found only for women across the three countries and for men only in Finland. Women with lower educational levels were statistically significantly more likely to be obese. In Estonia the adjusted odds ratio comparing high to low education group was 0.44 (0.31-0.64) for women (5).

Figure 1. Percentage of the survey population with perceived general health "less than good" by level of education in the Netherlands, aged > 16, 1983-1985 and 1992-1993



Source: Kunst A. & Mackenbach J. *Measuring socioeconomic inequalities in health*, fig. 15. p. 101, 1994

The studies in the Netherlands (Fig. 1) show that worse health is most frequent in people with lower educational level (elementary school). The situation is opposite within the population with completed third level (post-secondary) of education (3).

In a Greek study (1983) the perinatal mortality rate was measured. In addition to the parents' education, two more indicators were considered: the mothers' health problems and the housing quality. The results have shown correlation between the education and the perinatal mortality rate. The Greek children whose parents are with lower educational level had higher perinatal mortality rate (3).

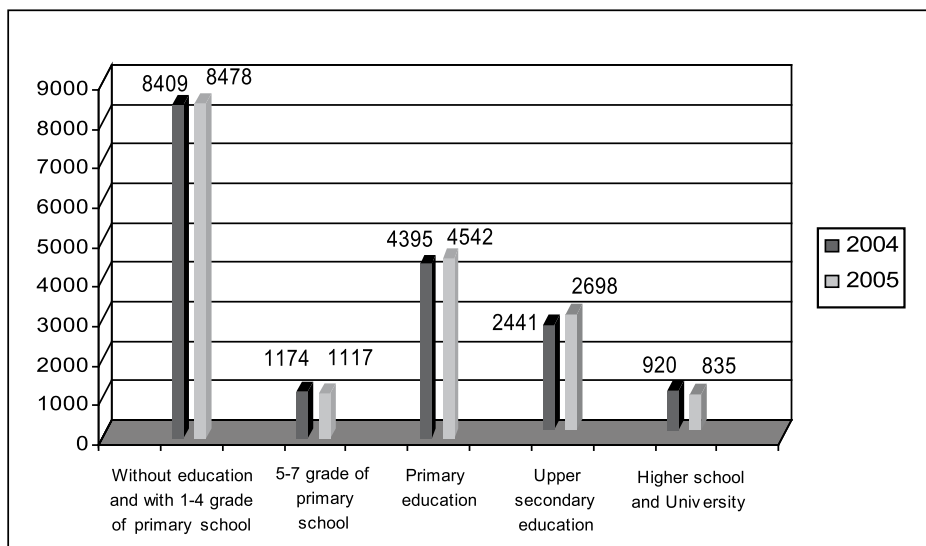
Correlation between the education and the mortality and morbidity rates in Macedonia

Educational level is important as socio-economic status indicator as well as the population health estimator. The survey carried out in Macedonia, in 15 communities with different gross national incomes per capita, included 1129 adults over 18 in 1997 and 669 in 2007. Students from the Advanced School of Medicine in Bitola and the Interdisciplinary Studies in Public Administration participated in the questionnaire survey. The aim of the survey was to confirm the correlation between the educational level, as socio-economic status indicator, and the mortality, as the population’s health estimator. An epidemiological method with retrospective research approach was applied, as well as prospective questionnaire for confirmation of the correlation between educational level and morbidity, which is also a population’s health estimator. Statistical significance for accepting or rejecting the hypotheses was computed by statistical methods (correlation coefficient, linearity and Chi- square test). The results in the both surveyed periods showed statistically significant correlation between the educational level and the morbidity and mortality rate (10).

Education and the mortality rate in Macedonia

In the study conveyed in Macedonia data of the State Statistical Office were used. The mortality rate analysis showed that it correlates with the educational level.

Figure 2. Educational level and number of deaths in Macedonia (2004-2005)



Source: State Statistical Office of the Republic of Macedonia, Statistical review 2.4.4.12/477, 2004:25, 2.4.5.11/509 2005:25, 2.4.6.11/537, 2006:25

According to the data of the State Statistical Office the total number of deaths was 17944 in 2004 and 18406 in 2005. Figure 2 shows the educational level and the number of deaths. It can be seen that the number of deaths, 9583 or 53.4% in 2004 and 9595 or 52.1% in 2005, in the population without education and uncompleted elementary school was higher than the mortality rate in the population with high education, which was significantly lower, 5.1% in 2004 and 4.5% in 2005. According to the R. Macedonia's population structure analysis (2006 Work Power Questionnaire) the population groups with completed elementary school (33.3%) and 4 years secondary school (32.3%) were the most represented population groups in 2005. Since the groups without education and incomplete elementary school constitute only 14.5% of the population and mortality rates are high in these population groups, we can conclude that there is a correlation between the education and the mortality (6).

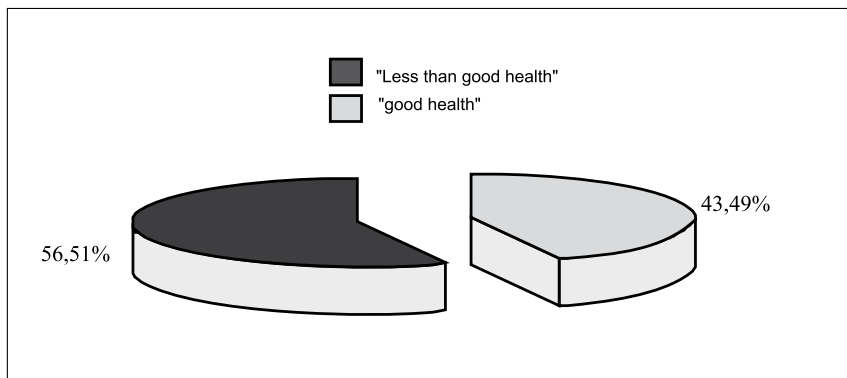
Education and the morbidity rate in Macedonia

The studies throughout the world, including our country, have shown that population groups with lower educational level suffer from wider spectre of diseases. They are less informed, which leads to conditions of worse health. High educational level population groups have lower morbidity rates due to the higher level of self-informing, which increases the health awareness and culture. According to many studies the mechanisms that link higher educational level with positive health are the employment and self-satisfaction with the job, healthy lifestyle, psycho-social resources, etc. Education, employment and the incomes increase the sense of self-control, which strengthens the health in relation to the environment. People with higher educational level undertake more health preventive initiatives (control check-ups at least once a year, immunization and other preventive check-ups, higher self-control regarding the risky behaviour). Social support that is more frequent in people with higher educational level promotes health in the social environment.

Survey results in Macedonia in 1997 and 2007

The results from the questionnaire survey in Macedonia in both analysed periods (1997/2007) have shown better health, lower morbidity rate, less visits to physicians in the groups with higher socio-economic status (10).

Figure 3. Structure of the self-reported modalities “good health“ and „less than good health“ (research 1997)



According to the modalities analysed within the questionnaire, the majority of the surveyed (56.51%) came out for bad health.

The questionnaire in 2007 (Figure 4) has revealed notable worsening of the situation in comparison to the situation 10 years ago. The 69.25% of the surveyed people visited their physicians for bad health, and only 30.8% for good health (10).

The most frequent visits to physician office in 2007 were paid by the illiterate people. The most probable reason is the worsen health as a result of the insufficient financial resources for living, harder work conditions, inadequate nutrition and bad socio-economic living conditions. Only 8.43% of the people with high education made a visit to the physician (Fig. 5), (10).

Figure 4. Structure of the self-reported modalities ”good health” and ”less than good health” (research 2007)

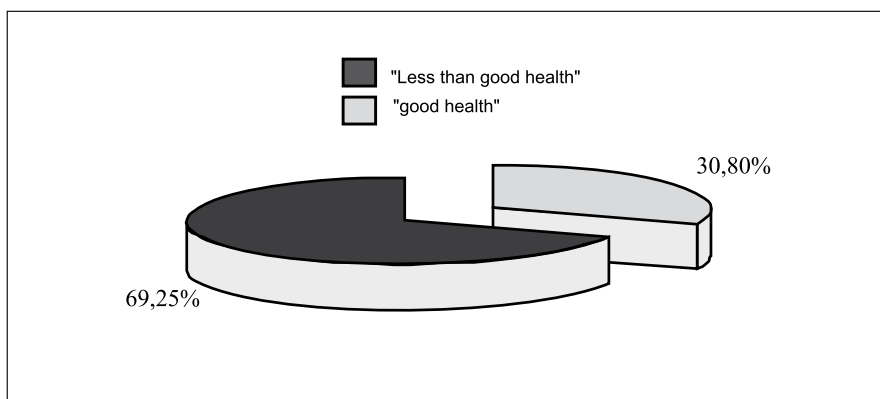
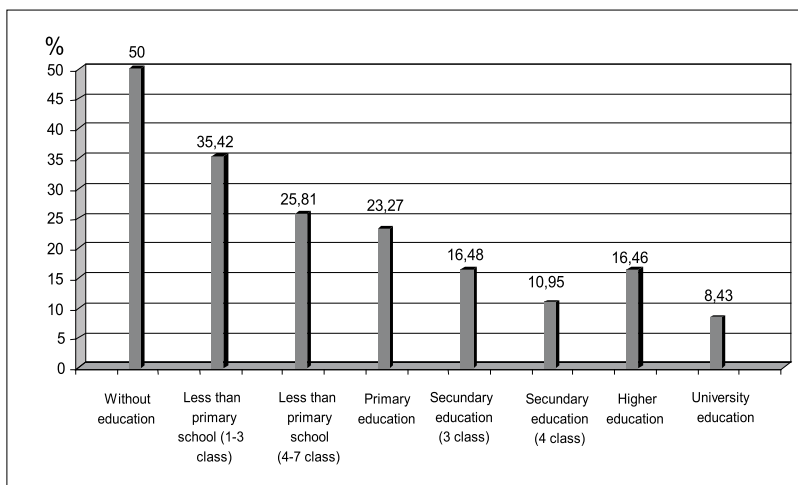


Figure 5. Structure of the visits to physicians in general medicine service, by level of education of patients (research 1997)



The estimation of the structure of patients who visited physician office (Fig. 5) was made according to the educational structure of the surveyed people (10).

The study in 2007 has also demonstrated a statistically significant difference between the doctor's visits and the educational level: $X^2=83.93175$, D.F. = 14, ($p<0.01$). People with lower socio-economic status regarding the education pay visits to physician offices most frequently (55.56% illiterate persons versus 4.76% persons with high education), (10).

Figure 6. Structure of the visits to physicians in general medicine service, by level of education of patients (research 2007)

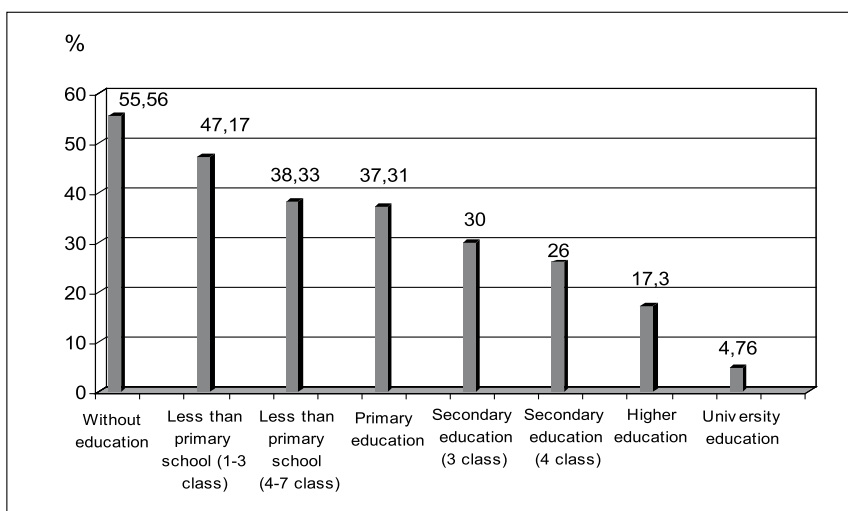
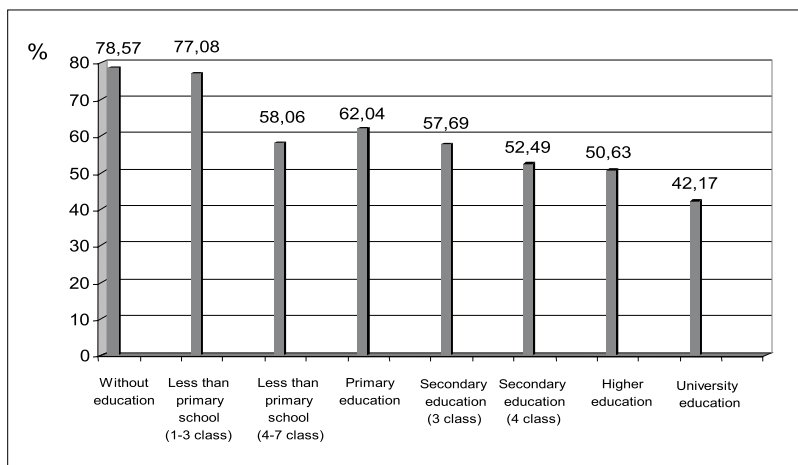


Figure 7. Structure of self-reported diseased persons according to level of education in % (research 1997)



The results from the survey in 1997 about the structure of the diseased persons according to their educational level showed higher morbidity rate (78.57%) in lower socio-economic population groups (illiterate people) in comparison with people with higher educational level. The morbidity rate in people with higher educational level was 42.17% (upon the surveyed people's statements). Similar situation was registered in 2007, too. The level of education with statistical significance correlates with the morbidity: $X^2=152.70342$, D.F.=84, ($p<0.01$). The linear regression equation shows reverse association. Increasing of the educational level decreases the morbidity rate and vice versa. Higher morbidity was registered in the illiterate and people with completed 4-7 elementary school levels (10).

According to the analysis of the population's health in regard to education (1997) surveyed people with elementary and incomplete elementary school had bad health in 57.4% of all cases. Similar situation was confirmed in 2007 as well. This explains the significance of the educational level, as a socio-economic status indicator and its influence on population's health. Lower socio-economic groups (with lower educational level) have worse health and contrary, highly educated people have better health. Therefore, it can be concluded that health awareness and culture, acquired through learning and education, is very important for the health of the population.

The analysis of causes of poor health in regard to the educational level have shown that cardiovascular and respiratory diseases most frequently occur in people with secondary, elementary and uncompleted elementary school (10).

Education and mechanism for positive association with the health

The most significant mechanisms between higher educational level and good health are:

- Job position and socio-economic living conditions;
- Socio-psychological resources and conditions;
- Healthy lifestyle.

Job position and socio-economic living conditions

Most frequent indicators for this relation are: employment and unemployment, family incomes, profession and economic difficulties, work engagement and self-satisfaction with the job.

Education and employment

The employment fulfils the prerequisites for prosperity of the employee and his/her family. Unemployment could cause health worsening, poor nutrition, stress etc.

The survey of the number of realized visits to physicians' office in regard to the employment status in 2007 showed that retired persons (49.19%), bankruptcy-workers (32.14%) and unemployed (19.09%) go to physicians' office most frequently. There is a significant statistical correlation between the employment and visits to physicians' office ($X^2=127.8$, D.F.=14 ($p<0.01$)). The situation in the survey of 1997 was similar. These data lead to the conclusion that retired persons compared to the pupils and students, who are the youngest and healthiest populations, due to the biological characteristics and changes in the course of ageing have higher morbidity rates and are more common visitors to the doctor's offices. The frequent visits to doctor's offices by bankruptcy-workers and unemployed may result from the stress they have experienced, poor nutrition, financial incapacity for satisfying the basic family needs etc. The above conditions could be confirmed with adequate targeted studies (10).

In the last several years the unemployment rate is decreasing. It is bigger in the male population while the unemployment rate among the female population increases (Tab. 1).

Table 1. Structure of unemployed persons in Macedonia according to gender (population over 15 years)

Year	Unemployed			Unemployed (rate)		
	Total	Men	Women	Total	Men	Women
2003	315868	191850	124018	36,7	37,0	36,3
2004	309286	186223	123063	37,2	36,7	37,8
2005	323934	191096	132838	37,3	36,5	38,4
2006	321274	191856	129418	36,0	35,3	37,2

Source: State Statistical Office, Statistical report 1.2.7.06, LVI Skopje, 2007: 66

Table 2. Number of unemployed persons in Macedonia according to the level of education 2003-2006

Level of Education	2003	2004	2005	2006
Total	315868	309286	323934	321274
Without Education	3679	4648	4083	5429
Incomplete primary education	16737	15745	13794	16016
Primary education	112594	97333	97773	97068
3 years of secondary education	49093	44403	49122	51397
4 years of secondary education	108408	123110	131391	122517
Higher education	7688	6126	7880	6939
*University level education	17669	17920	19892	21910

* University level education included: University level education, Master degree and Doctorate (PH.D)

Source: Queschener labour force, Statistical report, LVI 1.2.7.06, Skopje 2007:66

In regard to the education the unemployment was higher in people with completed 4 years secondary education, 122 517 persons or 38.1%, and with completed elementary school, 97 068 persons or 30.2% of the total number of unemployed in R. Macedonia in 2006 (Tab. 2).

Unemployment and the long period of waiting for employment have health and social consequences such as: postponed marriage for single persons, disordered family relations, depression and apathy, bad school performance in children of unemployed parents, incapacity for health services payments (participation), poor nutrition and incapacity for covering the education tuitions. There is an outstanding significant difference between the employment status and the morbidity ($X^2=255,27$, $C=0,429427$, $D.F.=84$, $p<0,01$), (10).

Education and family incomes

Education significantly correlates with family incomes. The lower educational level could cause certain economic difficulties. The study results have disclosed that the people with lower educational level have lower incomes and bigger economic difficulties. The unfavourable economic situation on the other hand influences the health (cause depression, hopelessness, poor and bad nutrition, tendency to smoking and alcoholism, weak immunity etc.).

Better education ensures “better and more stable” working environment, with bigger autonomy in the tasks performance and self-satisfaction with the job, since there is a diversity of work assignments resulting in higher level of creativity and organization.

The study in conducted in Macedonia (1997) showed that in the examined group with outstandingly favourable financial status (higher socio-economic groups) had excellent health (40.7%). In the population group with clear unfavourable financial situation (lower socio-economic groups) poor health was more frequent (29.7%). There is statistically significant correlation between the financial status (family incomes) and the morbidity rate ($X^2=122.75$, $C=0,29901$, $D.F.=9$, $p<0.01$), (10).

Education, work engagement and self-satisfaction

Work engagement and self-satisfaction with the job in people with lower educational level results in: greater physical burden, less safe work, monotony in the tasks completion, exclusion from the process of decision making, less subjective reward and less other people’s recognition for their work, etc.

People with higher educational level have better job positions and better health as per our analysis. Higher percentage of retired persons, farmers and housewives presented with bad health condition.

Education and socio-psychological resources and conditions

The following socio-psychological resources were assessed in our survey: sense of control, social aspects of the education and social support, correlation with the sustainable development of the population, education and family planning.

Sense of control

The sense of control as control over personal life is mentioned in many studies throughout the world. It is considered that the individual with higher educational level accepts healthier lifestyle and is more effective in changing and adjusting his/her environment. In lack of control, it is not the individual but other forces from his/her environment that determine the

consequences. Education, employment and financial situation increase the sense of control necessary in every day life. The sense of self-control in regard to the environment increases the individual's and groups' initiatives, intensifies the prevention activities and promotes physiological mechanisms' regulation, a condition that leads to health improvement.

Social aspects of education and social support

The most important changes that have occurred in Macedonia over the last several years are: changes in the social structure, division into classes and impoverishing of the population, especially in the undeveloped areas, some rural communities and mountainous areas. More than 1/3 of the R. Macedonia population lives in poverty and some families face chronic hunger (23% cannot buy food). Majority of the poor people (Report from the project "Social exclusion and insecurity of the Macedonian population", Institute of Sociological, Political and Juridical Research, Skopje, 2000) has limited access to financial resources, education, health care and food (7).

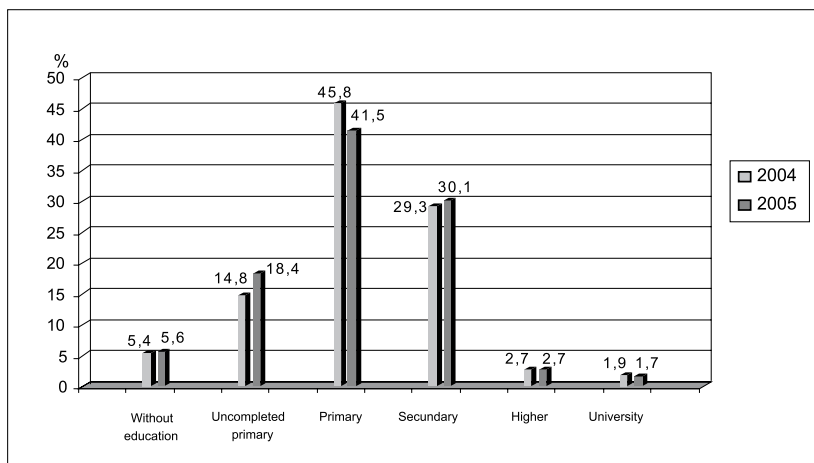
Educational structure and sustainable development of the population

Educational structure is one of the most important components for sustainable development of the population. Higher education and expert qualification results in bigger work power and bigger work productivity. Education develops people's personality and humanity that contributes to the social status improvement. Positive changes in the educational structure have positive influence on the entire socio-economic development and the demographics changes in the population (natality, mortality, migration and other structural changes).

Illiteracy rate in the population aged 10 years and older in Macedonia continually drops from 5.4% in 1994 to 3.6% in 2002 (census). According to the educational structure (educational level), 36.9% of the population 15 years old and over in Macedonia have secondary education, 35.0% have elementary education, 13.8% have not completed the elementary school, 6.5% have high education, 3.2% completed advanced school, 0.2% have master and 0.1% doctorate degree. Thus, groups with elementary and uncompleted elementary education predominate with 48.8%, which is an unfavourable factor for sustainable development of the county. The studies have shown that people with lower educational level experience bigger existential insecurity (31% with complete secondary education versus 12% with high education), (7). In 2006, population group with elementary education was dominant with 33.3% from the total population, followed by the population group with four years secondary education (32.3%), uncompleted elementary education (11.1%), completed advanced school (3.0%), and at the end the population group with high education that included individuals with master and doctorate degree (7.3%), (6).

There is a significant correlation between *education and poverty*. According to the investigation of the Institute of Sociological, Political and Juridical Research-Skopje on the population distribution and sustainable development, there is a high correlation coefficient between education and poverty. The educational level of the household head (2002) and the poverty are in inverse proportion and vice versa. The probability for poverty is higher if the household head has no education or has not completed the elementary school (37.8%) in comparison to those with the advanced school (9.9%) and high education (6.2%), (7).

Figure 8. Relative poverty according to the educational level of the household head, 2003-2005 70% of median equivalent expenditures



Source: State Statistical Office: Poverty line-Report 4.1.6.50, 2006:8

The situation in 2005 (Fig. 8) was similar to the situation in 2002. Poverty was more frequent in families where the household head was without or with uncompleted elementary school (24.0% from total). Poverty was the biggest in families where the household head had only elementary education (41.5%) in contrast to the families where the household head had a university degree (1.7%), (4).

Education and family planning

A number of studies have confirmed that education is the key factor in family planning, i.e. population growth. Those studies have revealed correlation between the education and the number of children in the family. Population groups with elementary and uncompleted elementary school had 4 and more children (28.4%). In contrast, the families with higher educational level had 1-2 children (42.6%). The Roma and Albanian families in Macedonia and other countries had higher birth rate. This is most probably a result of the higher illiteracy and lower educational level among Roma and Albanian women (7). It has been suggested that more surveys are needed to measure the extent of the influence of education and economic status to family planning and the number of children in the family in various social groups and categories of the population.

Education and healthy lifestyle

Several parameters related to education are important for healthy lifestyle, including nutrition, smoking, physical activities, alcohol abuse and number of health consequences.

Nutrition

Nutrition is significantly linked to the population’s health condition. The food basket cost is about 15% and more than 50% of the total family incomes in the developed and non-developed countries, respectively. The high food basket cost in R. Macedonia (“monthly

food basket” cost is very high, approximately one average salary per four-member family) is of high concern (8). Families with lower incomes and lower educational level cannot easily provide diverse and nutritiously good food, which is a risk factor for malnutrition and poor nutrition caused diseases. Some groups are at high risk of over-nutrition, a risk factor for cardiovascular, endocrine and other diseases.

Smoking

World wide studies, including studies in our county, consider smoking, as cause of number of diseases, at the top of the list of all problems that affect health. It is thought that the people with higher educational level have higher health awareness, culture, are more informed, and are able to avoid or control smoking. If they smoke they have good prospects to decide and quit smoking. They also go on sporting more often, which positively influence on many health problems, including smoking.

Alcohol abuse

People with higher educational level are much more informed about the harmful effects of alcohol abuse and thus, they can more easily comprehend it. People with lower educational level are more susceptible to alcohol abuse. There is a statistically significant correlation between the alcohol abuse and the morbidity and mortality rates.

Health consequences

A number of studies have confirmed the correlation between higher educational level and good health. The results from the study in Macedonia have demonstrated that people with higher educational level are more informed about the role and significance of measures on diseases prevention and control (eradication). They are more likely to ask and receive preventive medical care (yearly systematic health check-ups, immunization, screening for early diagnosis and complications).

When health is in question, it is important to consider which are predominant and responsible factors determining health: low-quality social life or individual responsibility? Nevertheless, some findings claim that health determinants occur as part of the individual’s behaviour (for example, smoking or alcohol abuse instead of healthy lifestyle is a personal choice). The above arguments lead to the conclusion that socio-economic resources and the personal attitude towards health are the determinants that link the education to the low-quality lifestyle, which could be a cause for health disturbance.

The study of the correlation between education and health in different test groups in R. Macedonia in both analysed periods lead to several conclusions: the educational level and the morbidity rate are in statistically significant correlation, excellent health is more frequent case in people with higher socio-economic status regarding the educational level, and poor health is a case in people with lower educational level. Thus, it could be concluded that health awareness and culture, acquired through learning and education, is very significant for the health of the population.

Conclusion

The analysis of the research data has led to general conclusion that education may play a significant role in the health-educational programme and health promotion conveyance. The organization of health-educative programmes and practical application of health-educational

activities are integral part of the health professionals' education curricular contents. Health education contents planning and programming should encompass the previously planned activities. Linkage of health problems to the socio-economic living conditions in the social environment induce including the whole community in prevention the diseases and promotion of health. This will contribute to health awareness and culture rising. Health education programmes should be based on: good knowledge of the health-educational methods, health workers expertise, monitoring of the health service and health care development, implementation of the health education in the legislative, integration of the health education in the educational institutions. Health-educational programmes should include: contents about the health education, priority health problems, demographic data and general data about the region, indicators for population's health condition estimation (birth rate, morbidity, mortality, determinants of the hygienic-epidemiological condition etc.), organisation and level of the health service development, financial resources, work methodology, application of health-educational tools, areas of actions, etc. These data contribute to: identification of the health education programme goals, programme's tasks and contents determination, teachers entitlement and working mode, personnel planning, programme participants, programme time-line schedule, programme budget planning.

An impression has been created that health-educational activity within education has not been adequately used so far. Partial inclusion of the health-educational issue in other subjects (biology, physical education and similar) gives only partial results. It is necessary to organize more efficient form for development of this activity in the educational institutions. The possibilities for students' participation in other activities conveyed in the community, should always be considered and used.

The leaders and the population, for the mutual interest, actively help in neutralization of all obstacles in the course of the programme conveyance and should support the programme (9).

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Title	Social Marketing in Marketing Health
Module: 4.3	ECTS: 0.5
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Key words	marketing, social marketing, health, health promotion
Learning objectives	After completing this module students should: <ul style="list-style-type: none"> • be aware of importance of health communication in health promotion; • increase knowledge about social marketing and its uses in marketing health; • understand basic elements of social marketing; • become aware of the complexity of a social programme in term of participator, approaches, different social, cultural and economical environment as well as in term of broader social support from governmental and nongovernmental organisations.
Abstract	Health communication is one of key approaches in health promotion. In last decade more and more techniques used by commercial marketers are used, termed in this context »social marketing«. It became integrative and inclusive discipline that uses a wide range of social sciences and social policy approaches as well as marketing. Like commercial marketing, social marketing is also focused on the consumer, and similarly, it is the knowledge on what people want and need and how to persuade them to buy what we are producing. On the other hand, there is a great difference between commercial and social marketing in the product. The paper presents the rough overview of the concept of social marketing and its basic characteristics.

Teaching methods	Teaching methods include introductory lecture, exercises, and interactive methods such as small group discussions. Students after introductory lectures first carefully read the recommended paper on social marketing. Afterwards they discuss the social marketing concepts and social marketing process phases with other students, first in groups of small groups (2-3 students) and then in a large group. In continuation, they need to find papers on use of social marketing in practice and try to critically discuss strengths and limitations of use of social marketing in marketing health, e.g. in public health programmes. At the end in small groups they need to describe at least one case of social marketing process.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• training materials: recommended readings are mainly available in the internet;• target audience: master degree students according to Bologna scheme.
Assessment of students	Assessment is based on multiple choice questionnaire and case-study.

SOCIAL MARKETING IN MARKETING HEALTH

Evgen Janet, Lijana Zaletel Kragelj

Theoretical background

Health needs and social change

Health need is extremely complex entity and it is composed of several components being medically defined need, socially determined need and perceived need (1). Fulfilling any of these components is often tightly connected to social change, e.g. change of more risky lifestyle to less risky one, or change of knowledge, attitudes, and values in local communities or in the society as a whole. Social change, in fact, is the essential in protecting health of the population.

Social changes could be spontaneous and unplanned on one hand, or planned and released on purpose. When it is planned and carried out on purpose it is a process conducted by one group of people (so-called change agent) which attempts to persuade other group of people (so called target adopters) to accept, modify, or abandon certain behaviour, attitude, practice etc. (2). When this process is linked to changes related to health, e.g. health behaviour, we are talking about health communication.

Health communication and marketing health

Health communication

Health communication is a key strategy to inform the public about health concerns and to maintain important health issues on the public agenda (3-5).

It is extremely important in achieving greater empowerment of individuals and communities and as such tightly connected with health promotion and disease prevention. It is relevant in a number of contexts, including on one hand the dissemination of individual and population health risk information, and health professional-patient relations on the other (6).

Health communication may take the form of discreet health messages or be incorporated into existing media for communication, from mass and multi media communications to traditional and culture-specific communication like story telling or songs. It encompasses several areas including social marketing (4).

The main functions of communication are to inform, to persuade, to remind and to stimulate change behaviour.

Marketing health

From the standpoint of common consumer, classical marketing is advertising of products, while in professional usage the term has a wider meaning. According to American Marketing Association, marketing is defined as an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders (7). It is a customer centred activity.

In the past marketing was mainly used by profit organizations but recently more and more by non-profit organizations as well.

Managers of non-profit organizations try today to find as many stakeholders/partners as possible to realize their visions, they strive to acquire funds/donations and they establish networks in their social environment. At the same time they try to persuade their employees

to be pleasant and friendly to their »consumers«. The activities are on one hand similar to those in profit organizations, but on the other hand they are much more complex since the financial profit is not the main guidance at all. So, the activities are on one hand similar to those well known in classical marketing, but on the other they are importantly different. All these activities are known today as social marketing.

It is more and more obvious that using social marketing health could and need to be marketed as well. It represents a powerful tool for mastering contemporary health challenges which pose enormous burden on health care systems all over the world (8-10). It is more and more obvious that health systems need to re-orient to capture health problems of the populations also from the standpoint of health (bio-psycho-social model of health) and not only from the standpoint of disease (biomedical model of health).

Social marketing

Short history

Social marketing has emerged as an application of marketing philosophy and methodology to social and related issues. As a formal discipline it was introduced by two marketing experts Philip Kotler and Gerald Zaltman in 1971, with their publication *Social Marketing: An Approach to Planned Social Change* in the *Journal of Marketing*.

Regardless that social marketing is basing on commercial marketing concept it has become recognized in last decades as a distinct discipline.

Definition

First definition was raised by Kotler and Zaltman. They defined social marketing as the design, implementation, and control of programs calculated to influence the acceptability of social ideas, and involving considerations of product, planning, pricing, and communication, distribution and marketing research (2, 9). Beside this definition, there exist several more or less similar definitions, among which we could find following ones:

- social marketing is the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of society (11);
- social marketing is the use of commercial marketing techniques to promote the adoption of a behaviour that will improve the health or well-being of the target audience or of a society as a whole (12);
- social marketing is the use of marketing theory, skills, and practice to achieve social change, e.g. in health promotion (13), and
- social marketing is a programme-planning process that applies commercial marketing concepts and techniques to promote voluntary behaviour change (10).

From another point of view it is an approach to promote health behaviour which uses marketing techniques to influence the voluntary behaviour of target audience for health benefit.

Basic characteristics of social marketing

Social marketing is characterized by some typical features which originate from its classical marketing roots (2, 9, 10, 12, 14):

1. Exchange theory.

Social marketing is based on exchange theory. The social marketing process creates a voluntary exchange between a marketing organization and members of a target audience based on mutual fulfilment of self-interest, i.e. the marketing organization exists to fulfil its mission, and the target audience members act in their own interests.

2. »Marketing mix« concept.

Social marketing uses numerous marketing concepts. Probably the most known of them is »4Ps« or »marketing mix« of product, price, place, and promotion concept (Figure 1).

Figure 1. The 4Ps of »marketing mix« concept.



The main characteristics of this concept from the social marketing standpoint are:

- product in social marketing is what the social marketing programme is trying to change within the audience (the right kind of behavioural change) and what the audience stands to gain (it does not include only the behaviour that is being promoted, but also the benefits that go along with it);

Product could be tangible e.g. a preventive health examination, healthy behaviours like healthy nutritional habits etc., or less tangible e.g. environment protection. Of course, target audience should first have a problem which they want to solve (perceived health need), and they should believe that the product we are offering is the solution of that problem.

To be efficient, all attributes and benefits of the product should be identified and explained to the target audience. Enhancing awareness and strengthening of skills of the target audience is extremely important for »sale« of the product. In short, target audience should have straight and clear answer to the question »What does the product mean to me?«;

- price in social marketing is what the consumer must give up in order to receive the programme's benefits – the costs; these costs may be tangible (e.g., money, time, travel, etc.), but mostly the are intangible (e.g., changes in beliefs or habits, energy spent, pains while performing a healthy habit, etc.).

To be efficient, we need to determine what the highest price is for target audience of using/performing the product. By performing research on this issue the cost could be minimized so that they do not prevail over perceived benefits of the product;

- place in social marketing is about where the product is accessible and convenient to audience, where the exchange will be held (distribution channels). It includes for example mass media, but could be interpersonal communication as well.
The place for delivering messages to target audience in social marketing is often the place where they are making decisions related to the behaviour to be changed, e.g. if we want to increase the vaccination rate against the certain disease agent we need to ensure easy access to vaccination service on one hand, and availability of this service (e.g. enough vaccination teams) on the other.
In social marketing it is extremely important to deliver benefits in the right place at the right time.
- promotion means how the exchange is communicated, how the message is delivered to the audience (e.g., appeals used). This is the most visible part of social marketing. Consecutively common consumers perceive these two notions as synonyms. Among main instruments/methods of communicating the product to the target audience are:
 - public relations, e.g. talk shows, or press releases;
 - personal communication;
 - advertising, e.g. TV or radio commercials, posters, or pamphlets;
 - special events, e.g. health fairs.

The formulation of price, product, promotion, and place is, as emphasized several times, tightly connected to research about audience characteristics, behaviours, preferences, etc., in order to determine what benefits and costs they would consider acceptable and how they might be reached.

This concept was lately expanded to more than 4Ps being publics, partnership, policy and purse-strings (12, 14).

3. Audience segmentation.

Audience or market segmentation is the process of dividing a target audience into homogenous subgroups with distinct, unifying characteristics and needs. For example, factors such as regional location, ethnicity, gender, exercise habits, readiness for change, or media habits could be used to segment the larger audience to smaller homogenous groups.

In order to be effective as much as possible, social marketing needs to identify patterns that distinguish one target group from another to effectively target marketing strategies. Research of potential targeting groups is essential in this process.

Segmentation can help to develop messages, materials, and activities that are relevant to the target audience's current behaviour and specific needs, preferences, beliefs, cultural attitudes, knowledge, and reading habits. It also helps to identify the best channels for reaching each group, because populations also differ in factors such as access to information, the information sources they find reliable, and how they prefer to learn.

4. Competition.

In commercial marketing, competition refers to products and companies that try to satisfy similar wants and needs as the product being promoted while in social marketing, the term refers to the behavioural options that compete with healthy recommendations, e.g. using the elevator competes with taking the stairs because of ease and quickness or

having potato chips for a meal competes with having a fruit and vegetable because of taste. Competition also encompasses the organizations and people who offer or promote alternatives to the desired behaviour, e.g. fast food restaurants offer less healthy food choices or friends may encourage a college student to drink until drunk.

5. Consumer orientation.

Social marketing programs are generally consumer-, not expert-driven. They are targeted to serve a defined group of people. A central principle in the social marketing is a commitment to understand the consumer and to design products to satisfy consumers' wants and needs. Those applying social marketing methods need to know in details preferences and values, relevant beliefs and attitudes, and of course current behavioural patterns of the target audience.

6. Continuous monitoring and revision.

Social marketing relies on continuous programme monitoring to assess its efficacy in desired behaviour changes. Monitoring helps in identifying activities that are effective and those that are not, and in making midcourse corrections in program interventions.

Social marketing process

Social marketing programmes are similar to other programmes, what means that elements of the social marketing process are similar as well. The social marketing process is composed of several phases (9, 10, 12) which could be abridged to four main phases: planning and strategy development, development and pre-testing of the programme, and evaluation of effectiveness of the programme. The last phase is tightly linked to the first phase (feedback to the first phase), therefore we can present the social marketing process as a cycle which is to the certain extent similar to the evidence based public health cycle (15 (Figure 2).

Figure 2. The social marketing process cycle.



1. Planning and strategy development.

The initial planning stage involves gathering relevant information to help identify preliminary behavioural objectives, determine target markets, and recognize potential behavioural determinants and strategies. Planning is crucial for the success of any social marketing programme, and doing careful work at this stage help to avoid making expensive alterations when the program is under way. Formative research is then conducted to investigate factors identified during the initial planning phase to segment audiences and determine those factors that must be addressed to bring about behaviour change.

Strategy development involves the preparation of a realistic marketing plan comprised of specific, measurable objectives and a step-by-step work plan that will guide the development, implementation, and tracking of the project. The plan includes the overall goals of the program, a description of the target audience, specific behaviours that will be marketed toward them, and strategies for addressing the critical factors associated with the target behaviour. The social marketing plan is organized around marketing's conceptual framework of the 4Ps.

2. Development and pre-testing of the programme.

Campaign concepts, strategies, materials and messages are then developed, pre-tested, piloted, and revised prior to program implementation.

3. Implementation of the programme.

4. Evaluation of effectiveness of the programme.

Monitoring and evaluation activities continue throughout the program implementation to identify any necessary program revisions, as well as to understand program effectiveness and make midcourse corrections as needed.

Social marketing programmes evaluation

Evaluation is a critical and ongoing component of social marketing programmes. The theory of change relies on a supposition of relationship between the activities of social marketing programme and its outcome(s). This means, that we presume the »cause-effect« relation between both elements and believe that Y (result) will happen if we will implement X (activities of social marketing strategies).

Shortly, we can consider the evaluation of programme as testing of hypothesis. There are some basic principles regarding the process of evaluation such as: systematization puts value on standardized procedures, which are designed with the purpose to achieve the goals; facts i.e. data about programme and its effects are used; interpretative facts are used for criteria building.

All main types of evaluation of a programme, formative evaluation, process evaluation and summative evaluation (16, 17) are usually used.

1. Formative evaluation.

Formative evaluation helps social marketing practitioners to develop and improve/refine concepts, messages, products, services, pricing, and distribution channels before they are fully implemented. They use qualitative methods, such as focus groups or key informant interviews, to pre-test marketing concepts, messages, and materials in a cost-effective manner. They may also pilot-test materials with individuals who share

characteristics of the target market in order to verify their effectiveness, identify diverse channels for delivering the message, and measure outcomes;

2. Process evaluation.

Process evaluation methods are used to track program outputs and processes during implementation;

3. Summative evaluation.

Summative evaluation is driven in the form of outcomes monitoring. This analysis compares the program's program objectives with its immediate and long-term outcomes to determine what worked, what didn't, and whether the program was cost-effective.

Social marketing in public health

Social marketing approach is rather different in comparison to classical public health approaches. First of all they are mostly biomedically oriented (basing on biomedical model of health), and they only convey the information on health hazards but fail to conceive behaviour change. Passing information alone, with the assumption that individuals will commence the process of change at the moment they come to know about the potential health hazards of specific unhealthy behaviour, is completely ineffective. Social change needs education and motivation to be accepted and performed.

Social marketing methods are extremely useful in motivating social change. They help us to come to know the target audience in details, and consecutively to be more systematic, efficient and effective. But along usefulness we should be aware that using marketing concept in non-profit organisations is much more complex and much more exact piece of work than in profit organisations. Also we should be aware of ethical dilemmas of social marketing.

Ethical considerations

Social change is extremely serious and responsible piece of work. The marketing of social products, services, and ideas is particularly prone to ethical dilemmas. Unlike most commercial marketing, social marketing involves some of people's most deeply held beliefs and moral judgments (10). The line of demarcation between doing something beneficial to target audience and its manipulation is extremely thin. Consequently, each social marketing programme should be carefully planned and all potential pitfalls anticipated. If not so, sometimes is much better not to do anything than to be at risk to cause even more harm.

Case studies from Slovenia

National campaign aimed at changing nutrition and exercise behaviour

In autumn 2003, Ministry of Health of Republic of Slovenia launched the health campaign entitled Let's do something beneficial – let's eat fruit and vegetables 5-times a day and be physically active a half an hour a day. The campaign was basing on a similar model from United States (18). The campaign employed social marketing to increase Slovenians' consumption of fruit and vegetables and enhance physical activity. Its main characteristics were:

- its focused goal was to increase fruit and vegetable consumption and intensify health enhancing physical activity by raising awareness of the health benefits;
- its approach was built on an established theoretical framework;
- its messages were designed and disseminated using consumer-driven communications strategies;

- formative research helped the planners to understand their audiences and improve messages (19).

The campaign could be analysed from the »4Ps« concept of social marketing standpoint:

- Product: consuming more fruits and vegetables each day and increasing health enhancing physical activity to minimize the risk of chronic diseases and improve general health status;
- Price: the costs of eating a healthier diet (e.g., financial cost of buying fruits and vegetables, time cost of shopping for and preparing them, psychological cost of “worrying” about getting the recommended number of servings etc.);
- Place: visible places like main roads, grocery stores and other points of purchase, as well as population micro environment like housekeeping;
- Promotion: branding campaign to increase awareness – slogan with the easy-to-recall fruit/vegetable bicycle (Figure 3). Distribution channels included mass media advertising, jumbo posters along main roads, small posters at grocery stores, and pamphlets distributed to all housekeepings.

Figure 3. The campaign’s Let’s do something beneficial – let’s eat fruit and vegetables 5-times a day and be physically active a half an hour a day brand - fruit/vegetable bicycle. (Source: Ministry of health of the Republic of Slovenia)



Regional campaign Living with Lead

In 2003, Regional Institute of Public Health Ravne launched the health campaign entitled Living with Lead in the region of Mežica valley at the north of Slovenia where in the past the mine of lead and zinc including the smelter of the lead and zinc ore was located (20). The results of this activity which was going on for several centuries are still present. Persistent exposure to low concentration of toxic substances represents today important problem, especially for youngest age groups. In the campaign social marketing concepts were used. Its main characteristics were:

- its focused goal was to increase endangered population awareness of presence of lead in the environment, and to enhance use of simple but effective preventive measures to minimize as much as possible toxic effects of exposure to lead;

- its messages were designed and disseminated using consumer-driven communications strategies;
- formative research helped the planners to describe the extension of the problem and characteristics of the target audience (21).

The campaign could be also analysed from the »4Ps« concept of social marketing standpoint:

- Product: use of simple but effective preventive measures to minimize toxic effects of exposure, e.g. hands hygiene, wet cleaning of residential premises, careful structure of meals for infants, etc.;
- Price: the costs of eating a healthier diet (e.g., financial cost of buying instead using home produced fruits and vegetable, time cost of shopping for them, psychological cost of »worrying« about preparing enough healthy diet for children, etc.);
- Place: schools, kindergartens, grocery stores and other points of purchase, as well as population micro environment like housekeeping;
- Promotion: branding campaign to increase awareness – easy-to-recall slogan and meaningful images (Figure 4). Distribution channels included press conference, local and national mass media advertising, talk shows, small posters at different places, etc.

Figure 4. The campaign Living with Lead promotion material. (Source: Regional Institute of Public Health Ravne, Slovenia)



Exercise

Task 1:

Carefully read the paper:

Grier S, Bryant CA. Social marketing in public health. *Annu Rev Public Health* 2005;26:319-39. Available from: URL:<http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.publhealth.26.021304.144610?cookieSet=1&journalCode=publhealth>.

Task 2:

Discuss the social marketing concepts and social marketing process phases with other students.

Task 3:

In bibliographic database (e.g. MEDLINE) try to find at least two papers on use of social marketing in practice.

Task 4:

Critically discuss strengths and limitations of use of social marketing in marketing health, e.g. in public health programmes.

Task 5:

In the group with three other students describe at least one case of social marketing process. For accomplishing this task it is recommended to contact an agency which performs social marketing programmes (e.g. in Slovenia one of regional public health institutes).

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Recommended Readings

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4.3.1 HEALTH LITERACY

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Education and literacy: The key determinants of health

Health researchers and health care professionals from both the developed and developing countries, have been concerned about the link between health and education (1, 2). Kickbusch mentioned that „education and literacy rank as key determinants of health, along with income and income distribution, employment, working condition and the social environment“ (3). Mazaar stressed the importance of knowledge, learning and education as prerequisites for development of societies in the 21st century (4). Nutbeam states that „education has been an essential component to promote health and prevent diseases throughout centuries (5).

However, the facts from the UNDP, UNESCO and OECD, cited by Kickbush, describe the world's situation as follows (3):

- There are an estimated 876 million illiterate adults in the world (~ 25% of the world's adult population);
- More than 130 million children in the world are not enrolled in school;
- Even in the developed countries, ~ 100 million people are functionally illiterate.
- 88% of all internet users live in industrialized countries which account for 15% of the World population;
- Four out of five websites are in English while only one in 10 people speak this language.

The Canadian Health Report „Towards a Healthy Future“ states „literacy levels, which are usually but not always, related to levels of education, are important predictors of employment, active participation in the community and health status. They are also important predictors of the success of a nation“(6).

Literacy and Health literacy: Challenges in terminology

Literacy

Definition of health literacy starts from the definition of *literacy*. The traditional understanding of literacy defined general literacy as a person ability/capacity to read, write and have numeric skills. However, general literacy involves a complex set of abilities to understand and to use a variety of skills needed for one person to function in society. The Centre for Literacy of Quebec (CLQ) defines literacy as „a complex set of abilities to understand and use the dominant symbol system of a culture for personal and community development“(7).

The Canadian Education Research Information System has defined six skills needed for an adult to function in society (8):

- Quantitative literacy
- Scientific literacy
- Technological literacy
- Cultural literacy
- Media literacy and
- Computer literacy.

Literacy experts defined three types of general literacy (9):

- Basic/functional literacy: basic skills in reading and writing, the ability to use printed and written information to function in society;
- Communicative/interactive literacy: advanced cognitive skills which, together with social skills can be used in everyday activities;
- Critical literacy: advanced cognitive skills which, together with social skills, can be applied to critically analyse information.

Health literacy

Therefore both health and literacy are dynamic concepts that influence our ability to function in modern society, it is important to add the seventh skills – health literacy.

One of the simplest definitions of health literacy, given by The Centre for Health Care Strategies in 2000, is based on general basic/literacy definition: „Health literacy is the ability to read, understand and act on health care information“(10). It means that this proposed health literacy definition includes „the ability to apply reading and innumeracy skills in a health care setting“. These skills include the ability to:

- Read consent forms, medicine labels and other written health care information;
- Understand written and oral information given by health professionals:
- Act upon necessary procedures and directions (medication etc.).

This definition has been focused on medical and health care settings. In contrast, the US Healthy People 2010 link health literacy to the promotion of health and preventive behaviours. They defined health literacy as: „The capacity to obtain, interpret and understand basic health information and services and the competence to use such information to enhance health“(11). Unfortunately, this definition did not include that health literacy is not only a personal characteristic, but also a key determinant of population health.

The first formal health promotion definition of health literacy is given by WHO in Health Promotion Glossary, 1998:

„Health literacy represents the cognitive and social skills, which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health“(12).

Nutbeam, as the author of this definition, wrote his comment as follows: “Health literacy implies the achievement of a level of knowledge, personal skills and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions. By improving people’s access to health information, and their capacity to use it effectively, health literacy is critical to empowerment. Health literacy is itself dependent upon more general levels of literacy. Poor literacy can affect people’s health directly by limiting their personal, social and cultural development, as well as hindering the development of health literacy“(12).

Health literacy as a central pillar in health promotion

Health literacy is not only a personal characteristic; it is also a key determinant of population health. Gastein Health Declaration in 2005 urged policy-makers, researchers and public health professionals to lead the way in making health literacy a central pillar of its policies and actions at European, national and local level. In explanation why health policy is so important they mentioned that:

- Health literacy is the essential life skill for individuals: it may help individuals and communities seek and use information and take control over their health (empowerment);
- Health literacy is a public health issue: building health literacy improves overall people's health,
- Health literacy is an essential part of social capital: low health literacy is a strong contributor to health inequalities;
- Health literacy is an important economic issue: people with low literacy are more likely to use health services, less likely to be compliant with medicines and to use preventive service and incur higher health care costs (13).

The last but not the least, the message is given to professionals: „To be a health literate society, we need a health literate public but also health literate health professionals, politicians and policy-makers“(14).

Exercises

Task 1.

Carefully read the paper and make your own definition of literacy and health literacy. Share your definition with others and make group consensus on health literacy definition (in your own language).

Task 2.

Using available data from Internet, compare your country with other European countries (adult literacy rate and youth literacy rate, differences between male and female, number of children out-of-school, etc). Discuss the differences, if any.

Task 3.

In small groups to develop local/national strategies to improve health literacy applying concepts and principles described in recommended readings.

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4.3.2 MEDIA AND HEALTH

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Medicine/healthcare, media/mass-media and public are three independent entities which overlap in certain circumstances. Such definition of their relationship comes from past research of communication models influence of media and public (1-3). There are areas of human activities with which public does not have direct contact with and on which it is informed only through media (politics or science, for example). On news in the medicine and public health the public learns mostly from media, and medicine becomes topic outside personal experience or interest, also through media when media chose it amongst many events and topics and start speaking or writing about it.

The main challenge in South-Eastern Europe is democratization of societies, improving access to information concerning health and environment and media-experts/journalists ability to communicate them to general public. On the other hand, mass-media, politicians and professionals all must take responsibility to improve health literacy (4). Unfortunately, lack of communication and miscommunication are making very often the gap between the public health professionals and journalists. Important questions are:

- How to raise health issues on the editorial and policy agenda?
- How to bring improvements into the health and media experts relationship?
- How to exchange health news in response to globalization?

This paper is a trigger for reflection and discussion aiming to:

- To stress the importance and value of communication with mass-media in health promotion and disease prevention
- To understand the necessities of collaboration and dialogue between media and health sector since only together, with joint efforts, they could bring improvements in health and quality of life of the people
- To find out how to make ethically and scientifically founded, relevant, reliable and understandable information about more publicly available through media (e.g. improve public access to good quality health information
- To treat news people (journalists) as health co-workers
- To promote idea that health (not only disease) could make attractive story as well as a positive (not only negative) side of patients rights and health service provision.

Two roles of media: health and healthcare

Health, disease and healthcare are constantly present issues in media. The long term aim of health promotion is to improve public access to high quality and reliable information concerning health. Role of media in delivering a message has been recognized a long ago. Examples of good practice have shown strong influence of media in two areas (5).

The first role is the transfer of health messages, providing information about health and disease, creating value system in communities which accepts certain behaviors and stigmatizes others. It is about role of media in health education, health literacy and promotion of health culture.

In spite of the strong evidence that lifestyle choices are major contributors to the global burden of disease, public health efforts have met with only limited success (6,7). Analysis of these limited successes points to the need to enhance the visibility and impact of public health aims and values in the health information marketplaces that shape the choices, behaviours and perceptions of policy-makers and the general public. Those information marketplaces are currently dominated by hazard merchants. Hazard merchants utilize their enormous buying power to push and keep public health issues on the margins of the health information marketplace. Therefore, media has an extremely important role in advocacy and raising awareness in general public, policy-makers and others.

Second role of media refers to process of information, informing patients and (healthy) people about the health care system itself, about the success and mistakes of health workers and professionals, about the breakthroughs and new insights in medicine, and at the same time encouraging the population to have more active role in the creation of health policy, deciding on patient right's issues, selection of health care strategy development, expenses in health care, choices in health care measures, and all other numerous issues of health and social policy (8).

Today media, worldwide and in Croatia, differently fulfils two main roles. One of the reasons is a change of roles in communication process, "providers" and "receivers" of the messages. Until recently, lay-user of media messages was passive recipient at the end of linear process, without possibility for interaction and with limited possibilities of active search and finding what he wants to know and wants to participate in.

In the 21st century – century of knowledge, we are witnessing changes both in expectations and demands towards the media. Besides information itself, receiver of the message is looking for credible source, professional and ethical explanation of the information, not satisfied with merely transfer of facts, demanding relaxation with media message which influences quality of life. Media today play significant role in esthetics and explication.

Privatization of the "big" media (TV, radio, press) has influenced choice of the issues these media are covering. Head line news, content appealing to the readers and "bad news" are most frequently chosen. This leaves us with numerous dilemmas:

- Are media helping to health professionals in practice, participating in health education or they do more damage then benefit?
- Are the health and disease related information always professionally credible and ethically justified?
- Is active participation of health professionals in media self-promotion or real need?
- Can public health and healthcare without media and can media professionals without collaboration with health professionals?

The news media are one of the most valuable and powerful resources for change in society – yet they are also very misunderstood and poorly used (9).

Media and health professionals – intersectoral collaboration

Creating and influencing change is a long-term process with much resistance and it is critical to identify and develop collaboration between two sectors – media and public health. Both sectors have the same basic principles. Professional task of health care is information of citizens about news in health and medicine, about patient rights and obligations, dissemination of knowledge and messages about health and disease to individuals, groups and community. Professional task of media experts is satisfying the public's needs and expectations, and the

right to truth is a part of the Codex of honor of the Journalist association. Common for both sectors is to provide messages which are (a) professionally correct, (b) professionally and ethically justified and (c) understandable and clear.

Collaboration with media often resembles to swimming up the river, if you stop for a moment you are meters down again. Prerequisite of the successful collaboration is continuing work and joined education.

Expanding national and transnational telecommunication capacities have created opportunities for communicators (public health workers, other health professionals, media experts, policy communicators, nongovernmental organizations, etc) to influence lifestyles choices. Therefore, the WHO Regional Office for Europe established the European Health Communication Network (EHCN) aiming to:

- Recognize and promote awareness of the importance of health communication;
- Bring communication professionals more centrally into the health sector and improve the relationship between health professionals, government, NGOs and the media, and
- Support skill development and highlight good practice;
- Make health information available through the media that is ethically and scientifically sound, relevant to current health concerns, reliable and understandable by target audiences (9).

In order to help in work media with health and health care European Health Communication Network has prepared following ten guidelines for professional health correspondents:

- Seek to do no harm. Human rights and the public good are paramount.
- Get it right. Check your facts and your sources, even if deadlines are put at risk.
- Do not raise false hopes. Be especially careful when reporting on claims for miracle cures or potential health scares.
- Beware of vested interests. Ask yourself, “Who benefits most from this story?”
- Reject personal inducements. Always make it clear if material is being published as a result of sponsorship.
- Never disclose the source of information imparted in confidence.
- Respect the privacy of the sick, the handicapped and their families at all times.
- Be mindful of the consequences of your story. Remember that individuals who may be sick or handicapped – especially children – have lives to live long after the media have lost interest.
- Never intrude on private grief. Respect the feelings of the bereaved, especially when dealing with disasters. Wherever possible avoid close-up photography or television images of victims or their families.
- If in doubt, leave it out.

There is no doubt about mass-media influence on creating and shaping of public opinion. There is no doubt whether to use media in health promotion. Prerequisite for effective use of media is good plan (what, to whom, what purpose), implementation (co-workers, media channels, costs) and evaluation during the implementation and of the effectiveness. But the most important prerequisite for developing media messages is active collaboration and team work among professionals from different sectors – journalists, designers, psychologists, representatives of the target audience. Only then invested resources will be fully justified.

Case study: Building Bridges between health professionals and journalists: Motovun Summer School of health promotion – Media and Health Course

Introduction

Nine years ago, the European Office of the World Health Organization and International Press Institute had initiated the process of development of European Health Communication Network. Ideas promoted by this initiative had found, in Croatia, very fruitful soil. Due to the existence of the respectable national focal point (Andrija Stampar School of Public Health) and due to (already) established local, Healthy Cities - media network we quickly gain “operational” capacity. The aim of this project in Croatia is to improve public access to high quality and reliable information concerning health, health service and environment.

In order to stress importance and value of communication in health promotion, and promote dialogue between media and health sector, in 2001 we introduced a monthly thematic gatherings. Through thematic gatherings we are primarily, seeking to improve journalist’s access to information concerning health and environment and to demonstrate journalist ability to make a great story out of relevant, reliable and scientifically sound information. Croatian Health Communication Network is promoting idea that health (not only disease) could make attractive story as well as a positive (not only negative) side of patient’s rights and health service provision. Common training and joint work on media projects is seen as a way to upgrade collaboration between media experts and health professionals and bring improvements in health reporting in our country and, hopefully, throughout sub-region.

Motovun Summer School of Health Promotion – Media and Health Course

Since 1999 Croatian journalists’ participation in all World Health Organization major events was ensured. They contributed to Ministerial Conferences presenting the Croatian situation regarding nursing and tobacco control. Since the year 2000 Courses Media and Health have become an integral part of the Motovun Summer School of Health Promotion and the focal point for yearly health and media professionals gathering. Media and Health Course is organized in collaboration among Andrija Stampar School of Public Health, Croatian Journal Association – Section of health care journalists and Croatian healthy Cities Network. Our mission is simple – to improve collaboration between media experts and health professionals. Each year we define our goal according to current situation and events.

Media and Health 2001 Course convened even larger number of participants who arrived from almost all Southeast European countries (Albania, Bulgaria, Romania, Yugoslavia, Bosnia and Herzegovina, Croatia) to discuss the issues of democratization of society (improving access to information concerning health and environment and journalist ability to communicate them to general public), on how to bring improvements into the health and media experts relationship, on how to raise health issues on the editorial and policy agenda, on how to improve Ministries and media relationship and how to create an Internet-based health news exchange (in response to globalization, media and health issues).

Media and Health Course 2002 started exploring gaps in crisis communication among health care professionals, journalists and general public. Since the “Baxter case”, October 2001, in which 23 patients on dialysis died due to manufacturer’s mistake, health related crisis seemed to become Croatian everyday story. During that course we have started to work on crisis communication plan which would obligate all interested parties.

Media and Health Course 2003 continued discussion regarding crisis communication, resulting with preliminary “Guidelines for crisis communication”, developed by Croatian Journalist Association, Ministry of Health of the Republic of Croatia, Croatian Parliament, Croatian Health Insurance Fund, Croatian Chamber of Physicians. 2002 and 2003 Motovun Media and Health Courses emphasized the need of introducing the role of a spokesperson in Croatian health care sector, especially in national institutions like Ministry of Health, Croatian Institute of Public Health and large clinical hospitals.

In 2004 we devoted *Media and Health Course* to credibility of information and patient’s rights, in 2005 to mistakes, both in medicine and in health journalism, and in 2006 during Media and Health Course new reform of Croatian health care along with Health Strategy of Croatian Ministry of Health was presented to public.

Since we try to stay current with the issues every year, *Media and Health Course in 2007* was called “Political battle for health” because Croatia is facing parliament elections in November 2007. We have invited all parliament parties from Croatia to present election programs concerning health and health care. We are witnessing importance of health in upcoming presidential elections in the USA, so by emphasizing health in our parties political programs we wanted to give our politicians an opportunity to present their visions of Croatian health care development, to see whether they are feasible for health care work force and acceptable for patients, are they restrictive or developmental. Croatian television broadcasted a 3 minute lead story in central evening news about 2007 Media and Health Course, confirming our belief that health is the essential part of political programs.

Every year Media and Health Course gathers all journalists members of the Croatian Journal Association – Section of health care journalists, physicians, Ministry of Health officials, hospital managers, representatives of pharmaceutical companies, representatives of health related NGO’s. Events like this, that give a chance to media experts and health professionals to work together and learn from each other, are very rare globally, but informal and charming surrounding of Motovun and Central Istria is helping to keep usually confronted sides on the same goal of improving collaboration. That’s why our course has throughout the years become almost unique, and each year we have “old” participants who are coming back to Motovun to enjoy the spirit of understanding and tolerance, and each year we attract more and more new participants.

Our experiences in the last 7 years working with Croatian Journal Association – Section of health care journalists confirm the thesis that communication is essential. Problems often occur when we only see one side of the problem (our side). Team work and networking provide better understanding, enabling media experts and health professionals to experience the demands of each profession. One of the most interesting details was role play exercise during 2002 Media and Health Course, when physicians played a role of journalists during press-conference and journalists played a role of physicians. Neither of them felt comfortable in “new” position and both gained experience which helped them to become more aware of the demands and expectations of each profession. 2006 course will be remembered by outstanding discussion about Croatian Health Strategy, during which Minister of Health devoted 2 hours of his time to be available for questions from participants.

Bad examples show us that there is much more to do in the domain of improving communication between media experts and health professionals, and we all have so much to learn. Good examples have become a part of the collective memory of Motovun’s Media and Health Courses and have silently become a part of our every day routine, as if they were

always present in our communication. This is one of our successes, and the friendships made in Motovun are very important success too. This is one of the ways we are trying to aware the importance and meaning of communication in health promotion, and to determine how by media present to public information that are relevant, evidence-based, ethically correct and credible.

Conclusion

Most of the information that the public receives on health problems comes through the media. This is very obvious as regards issues like AIDS, Ebola fever or “mad cow” disease, but it is equally true of “diseases of civilization” linked to such unhealthy lifestyles as smoking, alcohol abuse or lack of physical exercise. But if they serve as vehicles of information, the media also help to propagate harmful ways of life. Especially vulnerable in this respect are those people in countries in transition who indiscriminately yearn to adopt “Western” lifestyles.

For evidence of this we need look no further than the ubiquitous advertisements for cigarettes in Eastern Europe, both in the newspapers and on giant hoardings. After helping to create new smokers among young people impelled by one-upmanship or unthinking admiration for imported novelties, the media in those countries will certainly convey information about the harmful effects of smoking and publicize the draconian measures taken by other countries to fight against this scourge.

So the impact of the press, radio and television on public health is a complex affair, but its importance is steadily growing. Every opinion poll that examines what the public wants puts health high among the priorities for readers, listeners and viewers. Yet regular sections or programs devoted to health problems are far from common in the media, though nobody could possibly imagine them failing to have a section on sport, the weather or celebrity gossip.

It is something of a paradox that information about health should be considered of secondary importance by editors and program directors when public interest is clearly so strong. One possible explanation is that “medical” news is often considered too “specialized” and that journalists themselves may suspect they don’t have sufficient knowledge to discuss such topics without the risk of making mistakes. What cannot be denied is that many scientists, particularly in the health field, complain that their statements have occasionally been distorted by journalists. This is certainly a real problem, but there are wrongs committed on both sides, however: If it is true that the press sometimes takes these matters too lightly, the specialists themselves are often ignorant of the ways in which journalists work and of the constraints they face. They may refuse to make an effort to explain matters precisely to interviewers who, generally speaking, have rather limited ideas about the subject of the interview. The specialists therefore have to share the responsibility and take pains to ensure that what they say is very clear. The journalists in turn should not hesitate to say so if they have not fully understood and to ask the person interviewed to explain. With a little effort on both sides, there can be much better collaboration between those whose precious findings or knowledge are vitally needed by the general public (doctors, research workers, specialist groups or international bodies) and those whose task is to transmit that information.

We hope our work will create mutual understanding and closer collaboration. Through media news and stories exchange all aspects of this project are assuring Croatian general public access to European knowledge and experience in the area of health and environment.

It is assuring mutual exchange of health promotion ideas, experience and technology between countries of the region (and sub-region) on the equal base. Project is upgrading collaboration between health and media professionals inside country and between the countries what will result, finally, in overall better understanding. Improved journalist's access to information, assured through the monthly topic gathering concerning health will benefit general public but as well us, health professionals. We will gain partners (health co-workers) and ensure two-way communication even in the crisis situations (like the one with Baxter dialysis equipment, physician's strike, SARS, etc.), which are not uncommon in our part of Europe.

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Recommended additional readings

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2. Chapman S, Lupton D. The fight for public health: Principles and practice of media advocacy. London: BMJ Publishing Group, 1994.
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List of useful Web resources

1. <http://www.sla.purdue.edu/academic/comm/healthcomm/Introduction.html> (Health Communication Around the World)
2. <http://library.emerson.edu/guides/healthcomm.html> (Health Communication Resources - Emerson College Library)
3. <http://www.aed.org/JhealthCom/> (Journal of Health Communication)
4. <http://www.hcn.net.au/> (Health Communication Network)
5. <http://www.hcmn.org> (Health Communication Materials Network)
6. <http://www.who.dk> (World Health Organisation Europe)
7. <http://www.who.dk/london99/cpa01.htm> (WHO Europe Health Communication Network)
8. <http://www.journalofhealthcommunication.com> (Journal of Health Communication)

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Education in Practice a Bit Differently Than Usual
Module: 4.4	ECTS: 1
Author(s), degrees, institution(s)	Lijana Zaletel Kragelj, MD, PhD , Assistant Professor University of Ljubljana, Faculty of Medicine, Chair of Public Health, Slovenia Milan Krek, MD, PhD Candidate, Teaching Assistant Regional Public Health Institute Koper and University of Ljubljana, Faculty of Medicine, Chair of Public Health, Slovenia Ivan Erzen, MD, PhD , Assistant Professor Regional Public Health Institute Celje and University of Ljubljana, Faculty of Medicine, Chair of Public Health, Slovenia
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Key words	health communication, health education
Learning objectives	After completing this module students should: <ul style="list-style-type: none">• recognize the importance of health communication and health education;• increase knowledge about health education and its uses in different target groups;• understand basic elements of health education.

Abstract	<p>Health education is becoming more and more important approach to control various public health problems, especially in the populations with high percent of older age groups. At the first sight this approach seems to be very easy to practice but to plan and to practice properly this approach in various target groups it is necessary to have certain knowledge and skills.</p> <p>On one hand there exist different target groups in the process of health education with different needs and with different level and capacity of accepting the information on health. Practice of health education in old age groups differs substantially from the practice in adolescents or preschool children. On the other hand health professionals with different undergraduate background could be involved in the process of health education among them also physicians.</p> <p>In Slovenia, physicians of different speciality, especially general practitioners and family medicine specialists could be involved in health education on different occasions. Getting certain skills in health education could be of enormous importance for them.</p>
Teaching methods	<p>Teaching methods include introductory lectures, extensive discussion on methods of health promotion in practice, discussion on core theme of the health education practice, and health education practice. Students after introductory lectures prepare themselves to practical approach in respect of methodology and core theme. Afterwards they realize health education workshop in practice in at least three different groups of target population.</p>
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 50%/50%;• facilities: for preparational work a computer room; for health education workshop a room for about 20 pupils-learners, and students-educators;• equipment: for preparational work computers, LCD projection equipment, internet connection, access to the bibliographic databases; for health education workshop no special equipment is needed;• training materials: readings on health education methodology and on core theme of health education workshops;• target audience: undergraduate students of medicine.
Assessment of students	<p>Written report on health education practice.</p>

HEALTH EDUCATION IN PRACTICE A BIT DIFFERENTLY THAN USUAL

Lijana Zaletel Kragelj, Milan Krek, Ivan Erzen

Theoretical background

Health education definition

According to Last (1), health education is the process by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance, or restoration of health, whilst according to World Health Organization (WHO) it is an activity which comprises consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills which are conducive to individual and community health (2, 3).

The concept of health education is strongly related to several other concepts among which the following are important for understanding of this module:

- the concept of health behaviour and health behaviour change;
- the concept of lifestyle,
- the concept of health promotion;
- the concept of health communication;
- the concept of empowerment, and
- the concept of salutogenesis.

Concepts, related to health education

Health behaviour, risky health behaviour and health behaviour change

Health behaviour could be defined as a behaviour, which is related to health condition of an individual. There exist specific forms of health behaviour which are proven to be associated with increased susceptibility to a specific disease or ill-health and are as such designated as risky. Risk behaviours are usually defined as »risky« on the basis of epidemiological or other social data (2).

If the health behaviour of an individual or of a group of individuals is risky, the change of this behaviour to less risky or more healthy, is logical and reasonable. Changes in risk behaviour are major goals of disease prevention, and traditionally health education has been used to achieve these goals (2, 3).

Within the broader framework of health promotion, risk behaviour may be seen as a response, or mechanism for coping with adverse living conditions. Strategies to respond to this include the development of life skills, and creation of more supportive environments for health (2, 3).

In the process of health behaviour change existing behaviour is replaced with new one and as such relates to the adoption of innovations (3).

The health behaviour change could be individual or collective process.

In some population groups, e.g. in adolescents, strong collective risky health behaviour is present. Individual behaviour change in such a case is hardly to be efficient, and collective change is proposed (3).

Health education and health promotion

The term »health education« is often equated to the term »health promotion«. Certainly, on the other hand they overlap to the certain extent, but on the other hand they are definitely not

synonyms. The debate about the overlap between these two terms, or better these two concepts, began in eighties when the range of activities of promoting health overgrew the narrow focus on lifestyle approaches (4). The problem of overlapping has historical origins, since in the past, health education was used as a term to encompass a wider range of actions including social mobilization and advocacy. These methods are now encompassed in the term health promotion, and a more narrow definition of health education is proposed by WHO to emphasize the distinction (2).

Health education and health communication

Today, health education is in many cases understood as one of the key methods of health communication.

Health communication is a key strategy in health promotion. It is aimed at informing the public about health concerns and to maintain important health issues on the public agenda (5, 6).

But health education is not only concerned with the communication of information, but also with fostering the motivation, skills and confidence (self-efficacy) necessary to take action to improve health (2). Health education includes the communication of information concerning the underlying social, economic and environmental conditions impacting on health, as well as individual risk factors and risk behaviours, and use of the health care system. Thus, health education may involve the communication of information, and development of skills which demonstrates the political feasibility and organizational possibilities of various forms of action to address social, economic and environmental determinants of health.

Health communication may take the form of discreet health messages or be incorporated into existing media for communication, from mass and multi media communications to traditional and culture-specific communication like story telling or songs. It encompasses several areas, including social marketing (2).

The main functions of communication are to inform, to persuade, to remind and to stimulate change behaviour.

Health education and lifestyle

According to Last (1), lifestyle is the set of habits and customs that is influenced, modified, encouraged, or constrained by the lifelong process socialization. In this process health education could have enormous impact in a positive manner if it is conducted in an appropriate way (corresponding to behaviours and needs of specific target group). In this process, it is extremely important to be aware, that if health is to be improved by enabling individuals to change their lifestyles, action must be directed not only at the individual but also at the social and living conditions which interact to produce and maintain these patterns of behaviour (2).

Health education and empowerment for health

Health education is extremely important in achieving greater empowerment, a process through which people gain greater control over decisions and actions affecting their health (2). It could take its part in empowerment for health in individuals as well as in communities. It is relevant in a number of contexts, including on one hand the dissemination of individual and population health risk information, and health professional-patient relations on the other (4, 7). Empowerment is among others a social, cultural, and psychological process. Again, it is

extremely important to be aware that empowered people as an outcome could be achieved only by considering all potential interactions.

Health education and salutogenesis

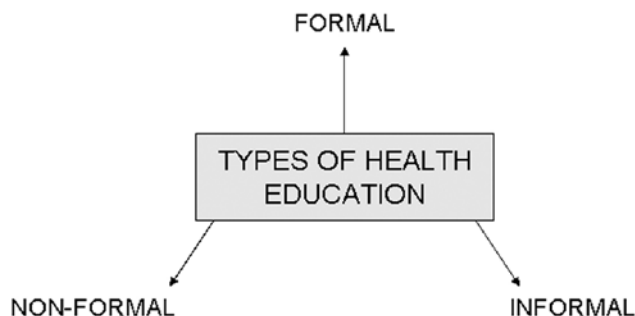
One of the key issues of modern curative medicine is the origin of diseases, since etiological treatment (i.e. influencing the cause of the disease) is the most effective. The mechanism by which a certain etiological factor causes disease is called pathogenesis (1). Opposite to this concept is a concept of salutogenesis. Salutogenesis is a concept that focuses on factors that support human health and well-being rather than on factors that cause disease (8-10). Pathogenesis is thus related to biomedical comprehension of health, whilst salutogenesis to bio-psycho-social comprehension of health (4).

Today, salutogenesis with the concept of sense of coherence (SOC) represents a part of the theoretical background in health promotion (8), and as such also for the health education.

Types of health education

Like in education on general, we distinguish between different types of education, being formal, non-formal, and informal (11) (Figure 1).

Figure 1. Types of health education.



1. Formal education.

Formal education is defined as regular schooling that follows a normal pattern and use of a curriculum that covers a wide range of knowledge, skills, values and attitudes. It is performed in educational settings.

Formal health education is taking place in schools as well as in health settings (e.g. primary health care centres). It is a part of regular educational curricula in schools, or part of a regular preventive procedure in health care.

2. Non-formal education.

Non-formal education is defined as any organized and sustained educational activities that do not correspond exactly to the definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages. It may cover educational programmes to impart adult literacy, life-skills, work-skills, and general culture, as well as health and environmental education. Non-formal education programmes do not necessarily follow the »ladder« system like

formal education does, and may have differing durations, and may or may not confer certification of the learning achieved (12). The activities may include courses, workshops and apprenticeships that meet specific needs of population groups.

Education providers should consider enriching formal schooling with non-formal activities, since non-formal education may be a critical supplement for students enrolled in formal schools. For adolescents in particular, non-formal educational activities may greatly expand their opportunities for learning. Among others, health themes can be explored through non-formal courses to further students' understanding and to provide them with accepting social environments in which to discuss these issues.

Non-formal health education can place in schools as well as in health settings (e.g. primary health care centres), but outside the regular curricula, and can be performed by various performers, also by specially trained peers.

3. Informal education.

Informal education is defined as education through learning channels, such as mass media and mass publicity campaigns, where there is little or no possibility for attention to the individual.

Effective health education process in adolescents

When designing non-formal health educational activities, it is important not to overlook or underestimate learner concerns or needs. Some may be unrealistic, but none are unimportant. Learners should know that their concerns have been heard and that their ideas have been incorporated as far as is possible. Quality education is partly a result of gaining buy-in, trust, and participation/ownership from learners.

From this point of view, in health education process in certain population groups e.g. adolescents, specially trained peers could be important channel to distribute »healthy ideas« of any kind e.g. unhealthy behaviours (smoking, alcohol consumption, illicit drugs consumption, unhealthy nutrition, insufficient physical activity, etc.), sexually transmitted diseases, environmental health, etc. Peer education has proven to be quite successful in past efforts.

Peer-education is effective skills-based health education process, since children are benevolent to learn through social interaction with other children (11). Considering of involving youth in all stages of health education programmes is effective because:

- young people can use language and arguments that are relevant and acceptable to their peers;
- young people have credibility with their peers and may be able to offer applicable solutions to prevention problems. Especially students of medicine have credibility with a bit younger peers what secondary school students are. In many respects, students of medicine are a model, or better an ideal, to be reached in the future;

Also those, who are in role of peer educators may benefit from improved self-esteem and skills and attitudes with regard to health.

Case study - health education practice for undergraduate medical students at Ljubljana Faculty of Medicine/Slovenia
Health education in the curriculum of Ljubljana University Faculty of Medicine

Health education is introduced to medical students in Slovenia as one of public health methods in the frame of Social medicine in the second and third school year out of six school years of educational process:

- all students got acquainted with different types of health education, and different levels of health education (primary, secondary, tertiary) by attending the lectures in the second school year,
- students with special interest for public health approaches in medicine have opportunity to practice certain skills in health education by attending the elective module »Health education – A practical approach«, one of 23 elective topics in the frame of Social medicine in the third school year.

Elective Module »Health Education – A Practical Approach«

Historical background

The health education approach could be properly introduced to medical students only through practice, but we should be aware that only certain percent of medical students (in Slovenia about 20%) are susceptible to public health approaches.

At Medical faculty of University of Ljubljana the need for searching for the appropriate opportunity to transfer health education topic from theory to practice was identified few years ago. Since this topic is incorporated in the subject Social medicine, we started to think about how to realize it. The solution was to try in the frame of elective part of this subject. There were several options possible.

Opportunity

At one of the Ljubljana general secondary schools (gymnasiums) – »Gimnazija Ledina« secondary school – the personal contact was established. The idea was introduced to responsible persons and the response was more than positive. Together we have identified the common need for collaboration, being:

- from the point of view of »Gimnazija Ledina« secondary school, the need to transfer certain health topics to adolescents, and
- from the point of view of Faculty of medicine of University of Ljubljana, the need to transfer certain skills in health education to the students.

Identification of needs

At »Gimnazija Ledina« secondary school identified the need for establishing the supportive environments for health through skills-based health education process.

Health supportive environments is extremely important, since it offers people protection from threats to health, and enable people to expand their capabilities and develop self reliance in health, and opportunities for empowerment. Furthermore, in empowerment, life skills are extremely important. According to WHO, life skills are defined as abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. Transmission of life skills from peers, who are specially trained, thus could represent to other peers could be used for empowerment.

Focusing the health topic to be transmitted

As previously described, many different health topics could be peer transmitted. We decided first to concentrate on one of the urgent health problems in Slovene adolescents – the problem of drugs and alcohol consumption.

Workshop course in practice – Drugs and adolescents

Aim of the workshop

The main aim of the workshop is to become familiar with the methods of health education with target group, and collecting basic experiences of how to pass on health educational contents, with intention to get acquaintance with all phases of the process, from planning to evaluation. For the last, methods of qualitative analysis were supposed to be used.

Methods

1. Health education (HE) method.

The method of group discussion with peers is used (3, 13). With this method, several aims could be achieved (3):

- increase of knowledge:
 - it assist the process of transferring knowledge from an expert (in our case from the trained peers) to the group,
 - it help people assimilate knowledge by giving the participants an opportunity to ask questions,
 - it help participants of the discussion to relate the new information to what they already know and to revise their attitudes,
 - it can be of great use in providing information about how to cope with problems discussed in every day life;
- change in frame of reference:
 - it can help in creating awareness of problems and feelings (it is sometimes easier to acknowledge one's feelings in a group where other members openly discuss their own feelings too,
 - it can help to arrive at concrete formulation of a problem (the more clearly a problem is defined, the more likely the solution is found),
 - it can help to form an opinion about problem discussed,
 - it can lead to a change in norms (if the group itself concludes that they should change attitudes and norms, they indeed do change);
- behaviour change:
 - it has an important role in individual decision making, what was demonstrated long ago in a series of experiments by Lewin (3),
 - it leads to collective decisions,
 - it can have an important role in helping people become aware of their collective interests, and in deciding how they can best protect these interests,
 - it generally strengthen a person's decision to implement the choice already made, and thus leading to a confirmation of the choice

Discussion with peers has several advantages. As already discussed, the adolescents have no positive relation towards classical presentation of health-educational contents and that is why classical lectures are almost not appropriate educational method. In guided group discussion

with peers we try in the group of pupils:

- to remove secrets, why some young people use legal and illegal drug, (especially alcohol), consequence they see and their relations with adults in view of drugs,
- to encourage young people in the process of discussion to think about negative consequences of drinking alcohol and taking drugs,
- to send positive messages – messages how to protect their own health in every aspect of drugs.

This method has also some disadvantages. For group methods to be effective, group size is important. When the group is too small, there will be insufficient input for discussion. When the group is too large, several participants will not take their part in the discussion. Generally it is recommended that a group size is between five and fifteen participants. Some other disadvantages are:

- problems/themes are discussed less systematically than in a lecture,
- there is a danger that some participants dominate the discussion while some others do not participate in it,
- a good discussion assumes participants have at least minimal knowledge about the theme of the discussion,
- there is a chance that incorrect information given by one participant will not be corrected,
- the socio-emotional climate has a great influence on the effects of a group discussion (it is not always easy to influence this climate to be a positive).

Group discussion needs a lot of preparation and planning, and it is not in any case a process, which will »just happen« (13). There are many ways of triggering it off and providing structures which help every member of a group to participate in the discussion. There are several methods, two of them being:

- brainstorms – this is a useful way to open up a subject and collect group members' ideas. An open question to which there is no single right answer e.g. »Why do people drink alcohol?«. Every suggestion should be accepted, without comment or criticism;
- rounds – a round is a way of giving everyone an equal chance to participate in the discussion. Each member of a group is invited to make a brief statement.

2. Insight in the workshop theme.

Students should be familiar with the theme of health education workshop, in the case of the workshop Drugs and adolescents with the problem of drug abuse in Slovenia (14).

3. Methods of evaluation of the workshop.

Evaluation means making a judgement about a health education activity (13). The judgement could be posed:

- about the outcome, i.e. whether the objectives, which were set, were achieved (e.g. if the pupils at the end of the workshop know how much alcohol would put them »over the limit«), and
- about the process, i.e. whether the most appropriate methods were used, or if they were used in the most effective way.

Organizing groups of students

A group of three to four students visits an individual group of 16 pupils. Each student visits at least three groups of pupils, so he/she can become aware of diversity among target groups.

There are two kinds of roles within each student group: a leader of a discussion, and a keeper of the minutes. How the students share the roles within the group depends completely on them. It is suggested that one out of the three (or two out of four students) takes care to write down everything about what is happening, the other two lead a discussion/interview (but it can also be vice versa).

Summary of the workshop and conclusions (the lesson learned)

When the students are finished with the workshops, they sit together (first alone, if they want, and then with the teacher) and try to evaluate the process, and the outcome e.g. assessing:

- pupils' relation towards drug abuse at the beginning and at the end of the workshop, and
- their knowledge about self-preventive measures.

Exercise

Task 1:

Carefully read selected chapters of the textbook about health education methods, about evaluation of health education process, and selected papers on the theme of health education process (e.g. about illicit drugs), and discuss these issues with the teacher.

Task 2:

Arrange yourself in groups of 3-4 students and allocate your role within the group: a leader of a discussion, or a keeper of the minutes.

Task 3:

Make a visit to a group of about 16 pupils at least three times. Perform a guided group discussion on selected theme. In continuation you will find some valuable suggestions on how to run a workshop.

In order that the workshops would be unified for the groups of pupils as much as possible, each group of students should follow the same principles, and try to follow the similar course of the workshop:

1. At least one student within the group has to be a punctilious observer of what is happening and be a keeper of the minutes. His/her role is to follow if the course of the workshop sticks to the schedule. Other students should focus on asking questions.
2. Establish a positive atmosphere, an atmosphere of trust and first try to explain to the pupils what the subject matter of your visit is in a simple and clear way. Maybe it would have the best effect on reciprocal relation, if you ask them for help. Give them to know, that they are the one, who is going to help you by fulfilling your task, and that you are not there to moralize. Explain them it is your task to find out their opinion about drug abuse.
3. Ensure them secrecy of data and that you will not use any personal names. For this purpose may every participant temporarily use a false name, so it would be a bit easier for you to follow and write down stories of individual participants.
4. You may use a dictaphone, but in that case you must not use personal names neither fictitious name.

5. We suggest you start with common questions, which refer to spending free time, where they have spent their vacation, pressure in school, etc. In that way, you loosen the pressure among pupils, before you start with hard questions.
6. After the introduction, you start with first complex of questions that refer on basic question, why young people take drugs. You can connect that question with a whole bunch of questions. It depends in which way the conversation will develop itself.
7. Now comes the question about place of youth in current society and how is that connected with drug abuse. Here you have to pay attention to that, how they spend their spare time, what are the possibilities the society has to offer to young people, are they allowed to speak up and share their opinion, what do they think about school (as a constraint or something that carries them on and represents a nice experience).
8. You may ask them how they solve their own problems and where with reference to that do the drugs step in. Do not avoid the questions about use of alcohol and tobacco and try to connect that kind of drugs with use of illicit drugs. Do those, who take drugs, also often drink alcohol? Was alcohol a primary drug and it was proceeded with use of other drugs?
9. How do the teachers look on the drug abuse among pupils. What would happen, if someone would have publicly used drugs in school or if would get known, that someone has been taking drugs. What are their suppositions about the reaction of teachers (or other school personnel)?
10. What kind of relation would they, as schoolmates, have towards a pupil, who is on drugs? What should be done with him? Would they want him to get expelled? Clear up the relation among pupils, who do not use drugs, and the drug-taker, who would appear in the class.
11. How do their families look upon the problem of drug abuse? What would happen at home, if their parents found out, they use drugs? What kind of relationship would their parents have towards them and what kind their brothers or sisters or their peers.
12. Speak about problem of drugs on parties. How does it look like, if one of their friends in having a party? Can they imagine a party without alcohol or do they think it would not go without it. What kind of drugs do people usually take on parties? What do they think about drugs abuse on parties? Why is it necessary to take drugs on parties, if they think it is necessary (does alcohol help them to make contacts with other people, does it enable them a relaxed atmosphere, etc., or are there other reasons)? Do they drink alcohol beverages, when they go out with friends?
13. You can find out what do the pupils, teachers and parents think about marihuana.
14. Nowadays, is it necessary to take drugs, if you want to be a part of society? Is taking drugs a status symbol? Are you more important, if you take drugs?
15. How much do they know about consequences of drug abuse? Do they know enough or too little? Would they lessen the consumption of drugs and alcohol, if they knew more about consequences?
16. In their opinion, what are the chances to prevent the drug abuse among youth? What do they think, the society should do? What would they do? What their parents and school should do? Maybe in discussion you will find others, who could do something in this aspect.
17. What do they think is an effective therapy? Do they have a preventive in the field of drugs in school? Does it work? If not, what would have to be fixed? In what way would the preventive be effective?

18. How much do they know about prevention by adults, and what is their point of view of it? Do they know the „alcohol law“? Do the adults respect that law? If they order a drink in a bar, does the waiter ask them to show the ID (or other document) or do they serve them with alcohol drink without questioning? What about in stores, can they buy a drink in a store? Have they seen anywhere a warning, that selling alcohol to underage persons is forbidden? Do older companions buy alcohol for them (18 years or more)?
19. What about self-preventive? What do they do on parties, where drugs are being used, to protect themselves from eventual noxious consequences?
20. In discussion, you keep looking for new dilemmas and then you try to talk about them and to pass positive messages. At the same time, you carefully take notes of their opinion and their answers. Throughout, you conscientiously take notes about the answers.
21. In the end, you thank them nicely for their cooperation and make an arrangement to present them the results of the discussion they had with you, of course if they are interested in it.

Other important suggestions

1. In discussion, every time you get the answer to previous question you will find yourself before new challenges and before a dilemma, how to set a new question, because with the help of questions you will step by step reveal the structure of phenomenon.
2. When you will be asking questions, you will be opening new dilemmas and new questions all the time; that will not be dilemmas only for you, but mostly for the one who is answering.
3. You will build questions on previous answers, but in spite of all that you should try to keep on primary outlined path
4. Thoroughly you conscientiously have to write down the answers, so in the end you work with interpretation of the process would be easier.
5. Leader of discussion should keep close a reminder with questions (annexed file) as a help by guiding the discussion.
6. The student, who is putting down the answers, prepares for himself sheets of paper for putting notes for separate complex of questions (annexed file) in advance. With that kind of help you will have less trouble with writing down, it will go easier and faster.

Task 4:

When three visits are accomplished discuss your experiences (positive and negative) with your teacher. If necessary, the discussion can take place after every visit.

Task 5:

Write a report on your visit, including your opinion on importance of this kind of health promotion activities.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Psychological Foundations of Health Sciences
Module: 4.5	ECTS: 0.25
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Key words	Concepts in health psychology, risk behaviours, stress, stressful events, coping strategies, health communication
Learning objectives	At the end of this topic students should be able to: <ul style="list-style-type: none"> • identify psychological factors of health and illness; • understand and apply basic concepts in health psychology; • understand and apply basic models of health behaviour; • understand stress and coping with stressful events; • explain and apply communication skills in health care delivery.
Abstract	Recent developments in theories and models in the field of health psychology are discussed in this module. The application of the basic psychological concepts to health, illness, and health care is analyzed. The issues addressed concern the psychological factors in the development of illness, stress and coping, interventions to improve coping with stressful events, and models to promote communication skills in health care delivery.
Teaching methods	Lectures and discussions in small groups.
Specific recommendations for teachers	Active participation of students in discussions.
Assessment of Students	Short written examination.

PSYCHOLOGICAL FOUNDATIONS OF HEALTH SCIENCES

Sashka Popova

Recent developments in the field

In the twentieth century, theoretical and practical advances in psychology helped lay the foundation for contemporary important and interest areas in personality, social, clinical, and health psychology. As a microcosm of both psychology and the interdisciplinary endeavour of behavioural medicine, these developments have taken the position that biological, psychological, and social factors are implicated in all stages of health and illness, and the bio-psycho-social model is a guiding framework for the application of both psychological theory and research to health, illness, and health care.

Much of the strongest work involved provides theoretical and conceptual frameworks that constitute major contributions inasmuch as they are often lacking in traditional medicine and medical practice. In this context, it becomes essential to consider such distinct theoretical ideas and models as:

1. **Psychodynamic conceptions.**

Psychodynamic theories have gained widespread acceptance and are deeply entrenched in the public view of human behaviour. These conceptions of human nature commonly view human behaviour as motivated from within by various needs, drives, impulses, and instincts. Thought refers to acts of reasoning, reflection, imagining, and other personal activities. Psychological methods are evaluated in terms of their effectiveness in changing actual psychological functioning.

2. **Trait theory.**

Trait theorists are concerned with how dispositions generate behaviour, and motivate and guide it as well as with assessing personality traits and testing their predictive utility. Recent research developments suggest specific models of personality-disease relationships. Among these are the investigating role of Type A behaviour syndrome in the aetiology of coronary heart disease, and the potentially protective role of positive emotional states and coping styles in the development of illness.

3. **Rotter's social learning theory.**

The theory infers that behaviour is a function of expectancy and reinforcement value in a specific situation. Training in mature decision making, healthy behaviour, coping with stress and other life skills is of great importance.

4. **Bandura's social cognitive theory.**

The theory accords a central role to the mechanisms through which the individual operates: cognitive processes, motivational processes, affective processes, selection processes, and the power of forethought to override feedback control. Self-monitoring, self-regulation, including appropriate goal-setting, self-efficacy, and self-control mechanisms are described as effective and productive cognitive coping strategies.

5. **Creativity in everyday life.**

Recent research suggests that these individuals that use to understand and control events in their lives include the creation of new original ways to act upon the environment and their life conditions. They engage in the creative process as they construe their world, plan their activities, and regulate their behaviour within some reality constraints. Creativity involves awareness of context and the flexibility of thinking that can lead a person to the creation of multiple perspectives and new ways of looking at things.

Creative individuals take risks and have a willingness to try out new ideas. Attributes that are related to creativity are autonomy, seeking out information that leads to change, independence of judgment, willingness to take risks, self-confidence, and creative self-image (1).

Application of psychological theory and research to health, illness, and health care

As a science and a field, health psychology is now so diverse and productive that it has made substantial contributions to the understanding of healthy behaviours and to the comprehension of the myriad factors that undermine health and often lead to illness. By the end of 1990s, the following definition of health psychology had regained wide acceptance. Health psychology is recognized as the “educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, the identification of etiologic and diagnostic correlates of health, illness and related dysfunction, and health policy formation” (10).

Recent studies have gone beyond the simple relationships between psychological factors, health and illness to an attempt to specify the models and pathways whereby psychological factors can be integrated into the nature of health and illness. This trend is evidenced in research on health promotion, stress and illness, personality and disease, coping, social support, and the factors affecting patient’s recovery. These investigations have addressed theoretical and conceptual frameworks that elucidate:

1. Life transitions and health.

The life course approach addresses critical periods in human development. That is, to a large extent, changes in psychosocial structures and processes that confront the person with the necessity to adapt and cope. Such life changes include a number of events as transition from primary to secondary school; leaving parental home; engagement; marriage; pregnancy; job insecurity or loss; loss of a spouse, family members or close friends, and others. Some life events and circumstances are specific to each transition point in the course of life and may result in disability. More over, common denominators in the cause of psychosocially induced ill health are the discrepancy between human needs and environmental possibilities for their satisfaction; the discrepancy between human capacity and environmental demands; and the discrepancy between human expectations and the situation perceived. Such discrepancies are common in times of environmental deprivation or excess, when there is conflict between social roles, or when social change is rapid and there are no generally accepted rules of conduct. Research on life- events from birth to death suggests that the experience of profound and loving human relationships builds a strong psychological resource for the person’s ability to cope with stressful events during the whole life course. High self-esteem and problem-solving abilities are valuable resources for coping throughout life, and especially with psychological changes associated with aging. More over, the elderly are subjected to multiple psychological stresses brought about by such factors as social isolation, grief over loss of loved ones, and fears of illness and death.

2. Cultural profile and health.

Cultural profile is very important factor in the successful implementation of health education for culturally different individuals. Key variables of the cultural profile may

influence health care beliefs and practices of individuals. Certain cultural components are present in every social group. Assessing cultural background and gathering data have significant meaning to the development of a culturally appropriate health care.

Research provides a framework for pursuing culturally sensitive health care (5).

Important cultural components are:

- cultural identity - including patient's own cultural values, beliefs, and priorities;
- value orientation - the nature of people's relationships to one another, the main purpose of life, the value of time in the culture, the relationship between individuals and nature, cultural values regarding human nature;
- communication style – as examples must be noted: language and dialect preference of the individual; non verbal behaviours: body language, facial expresses, and the use of personal space; community customs: specific health care beliefs and practices;
- learning styles – informal and formal ways of education; often health educational programmes are too traditional in their approach, giving individuals information on health issues but failing to use imaginative, interactive ways of providing training;
- religion – preferences, beliefs, rituals, and taboos;
- health beliefs – attitudes to the alternative health care; response to pain; crisis and illness beliefs
- family relationships – family roles, lifestyles, decision making and living arrangements.

3. High-risk psychosocial situations.

Four general categories of these situations were identified by Levi (8):

- uprooting – in the sense of depriving individuals and groups from experiences that provide emotional support, sense of belonging, and purpose in life;
- dehumanization of health care institutions - in the sense that needed services are provided impersonally and mechanically ignoring patients, and treating them as passive recipients of health care;
- psychosocial side-effect of the spread of innovations - in the sense that a given technology may change the behaviour of people in an unexpected and hazardous manner. Examples are the increasing anonymity and mechanization;
- psychosocial factors as constraints on health programmes and activities – in the sense that important measures meet obstacles arising out of cultural and behavioural patterns of the population. Included here are, for instance, the stigma attached to certain health conditions, communication difficulties, clashes of values arising from cultural diversity.

4. Life-style factors.

The role of behavioural factors in development of disorders and chronic diseases is increasingly clear. The practice of health behaviours has been recognized as one key to the success of primary, secondary, and tertiary prevention, as well as of health promotion. Each health habit has a complex pattern of aetiology, maintenance, change, and relapse. Much recent attention has been focused on how best to combine the advantages of the individualized approaches and mass-media appeals to change some targeted health habits - they may produce only modest behaviour changes but they affect many different groups of people, and are low-cost intervention methods (4). Such

methods have great impact on personal behaviour. However, they are very expensive, and affect a small portion of the population.

5. Cognitive factors in health and illness.

People's psychological attributions and beliefs, and the representations that people hold regarding their health conditions are involved in the experience of health and illness. For example, a significant number of patients' complaints made to doctors are psychological in nature and have no significant physical counterpart. If the psychological problem is resolved all symptoms disappear. Headaches, or weakness without physical explanation, are such examples. These symptoms may result purely from interpersonal tension. In the clinical practice people's adherence, uptake and preparation for medical procedures are of great importance as well (9).

6. Personality and disease.

Recent research on personality and disease has identified at least two major psychological factors that play a part in the precipitation of disease. The first involves personality and coping style. The second major factor involves stress stemming from life events. Until recently, research focuses on:

- the direct impact of stress and other psychological states on physiological processes;
- the impact of psychological factors on risky health practices;
- the impact of psychological factors on people's response to potential illness conditions.

Research has succeeded in identifying certain broad principle of behaviour. For example, the importance of feelings of personal control when people practice particular health behaviours, and experience stress, as well as whether their pain control efforts are successful, and how they adapt to chronic disease and disability.

Other important developments include advances in the conceptualization and measurement of the high-risk psycho-physiological processes in the organism. Such pathogenic mechanisms are:

- subjective reactions and health – the occurrence of anxiety or depression in response to a great variety of environmental stresses in our everyday experience;
- behavioural reactions and health – dependence on alcohol, psychoactive drugs and nicotine;
- physiological reactions and health – sympatho-adrenomedullary reactions, adrenal cortical reactions, thyroid reactions, endocrine reactions, bodily function, and health (2).

Different models of psychosocial factors highlighted the view on how best to structure influences, and create belief systems and personal competencies. These models suggest that the personal activity in a given situation depends on inherited characteristics, previous experience, and socialization over the life course.

7. Stress and illness.

Stress is a concept that has been defined in many different ways by researchers. Commonly the definition considers stress to be the state of an organism when reacting to new circumstances. Lazarus and his associates identified psychological appraisal

as a crucial mediating process in the experience of stress. Events are judged to be positive, negative, or neutral in their implications, and if judged negative, they are further evaluated as to whether they are harmful, threatening, or challenging.

8. Coping strategies.

Coping as defined by Lazarus is the process of managing external or internal demands that are perceived as taxing or exceeding a person's resources. Coping may consist of behaviours and psychic responses designed to overcome, reduce, or tolerate these demands. Coping mechanisms can take three forms:

- psychological resources – they represent the abilities that people have. They are personality characteristics upon which people draw from within themselves to help them deal with threats imposed by the environment. Examples are self-esteem (the positive attitudes people have toward themselves), feelings of mastery and competence, and the feelings of control people have over their lives;
- social resources - they represent support that people have. They are aspects of peoples' interpersonal networks. They involve the social support available from family, friends, fellow workers, neighbourhood. It is usually equated with emotional support but it may also involve tangible resources such as information and cooperation;
- specific coping responses – they represent the things that people do. In another words, they represent their concrete efforts to deal with specific strains of life. These specific coping responses may be influenced by both, the psychological resources of the person and social resources. Specific coping responses concern behavioural mechanisms and include techniques such as the relaxation response, biofeedback, running. Coping techniques involve cognitive mechanisms that involve efforts of controlling meaning, that is, specific interpretations made to neutralize the effect of the stressful life event or interpreting the event as a challenge (7).

Application of psychological skills to health care delivery

The World Health Organization "Health for All Policy for the twenty-first century" emphasizes the importance of the basic psychological determinants and prerequisites for health. Educational and intervention strategies aim at improving the life skills and psychosocial wellbeing of people, helping them to manage life situations and make healthy choices. People should have an increased ability to cope with stressful life events. They should be enabled to develop and use their own potential in order to lead socially, economically and mentally fulfilling lives. Health professionals should help people at all ages to gain a sense of coherence, build and maintain social relations, and cope with stressful situations and events (3).

The last two decades show an increasing sense that health psychology issues are well integrated into the health enterprise. On the research side, the emphasis on cost-containment draws researchers heavily into primary prevention activities designed to keep people healthy with the goal of reducing the use of health care services. By identifying risk behaviours and by developing programmes that best help people to achieve a healthy lifestyle psychology contributes to the larger endeavour that attempts to keep people healthy. On the clinical side, psychology increasingly identifies the benefits, and liabilities of self-help groups, peer counselling, self-management programmes and other educational ways to provide service delivery that integrate more effective psychological approaches.

Individuals who are identified early as at risk for particular disorders need to be trained in how to change any modifiable risk-related behaviours as well as in how to cope psychologically with their risk status. Increasingly, the psychological approaches will be called to address concerns of aging, including the problems of living with chronic disability and disease. There is now extensive literature demonstrating the success of psychology in analyzing life-skills. Life-skills are defined as those personal, social, cognitive and physical skills, which enable people to control and direct their lives and to develop the capacity to live with and produce change in their environment (6).

Successful self-management programme could be achieved with careful attention to two areas. These are the learning programmes, which provides appropriate knowledge, skills, attitudes, beliefs, and perceptions that determine the extent to which any person develops and maintains an appropriate self-management regime. Education must therefore be a continuous component of long-term clinical care. Therefore, health professionals have to undergo some training in educational methods. Health care team should give patients and their families enough psychological support to enable them to pass through the psychological crisis that follows diagnosis and to accept a new concept of life. Attention should be focussed on the handicapped. There is a need for appropriate services because they are not available to many handicapped that are particularly vulnerable to acute and prolonged psychological and emotional distress.

It would be extraordinarily useful if health professionals teach people how to communicate more effectively in health care. The key issue is sensitivity. People have to learn to be more sensitive to their own feelings, to others so that, when they do make themselves vulnerable, that vulnerability to be treated with care and respect. The recent years have witnessed an interest in the self-concept phenomena. Among the main components that influence health communication, none is more central and pervasive than the self-concept. It is central element of communication, which is build from the values the person holds; his or her beliefs, attitudes and perceptions of the world and of those who inhabit it. The self-concept once created, is not a static entity. It can change, as beliefs, values and perceptions of the world change. The self-concept also creates the way in which a person presents him or herself to the world. More recently, there is a great number of research evidence for pro-active, competence motivation in people. This means motives urging people to ignore safety and security, and to take on new, difficult, and challenging tasks. In this context, the patient is the active and curative agent in the therapeutic relationship.

Health education strategies are called on to increase individual and collective responsibility for behaviour and life-styles that threaten people's health or wellbeing. Health programmes tend to concentrate on giving people the knowledge and skills needed to overcome the barriers to successful and healthy lives so that more people to have a wider and easier range of healthy choice.

Exercise

Task 1:

Carefully read the contents of the module.

Task 2:

Discuss with other students theoretical and conceptual frameworks of psychological foundations of health sciences.

Task 3:

Give special attention to application of psychological skills to health care delivery.

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Recommended readings

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Chapter

5

**SELECTED TOPICS
IN HEALTH
PROMOTION AND
DISEASE
PREVENTION**

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Epidemiological Surveillance and Control of Communicable Disease: Basis for Evidence Based Health Promotion and Early Response - Practical Perspective
Module: 5.1	ECTS: 0.5
Author(s), degrees, institution(s)	Robert Hartley Stevens, BSc, MB BCh BAO, MSc Public Health Officer, World Health Organization Country Office, Turkey
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Key words	Population surveillance, communicable disease control organization & administration
Learning objectives	After completing this module students and public health professionals should be: <ul style="list-style-type: none"> • aware of recent developments in national legal requirement for communicable disease surveillance and control; • recognise the scope and scale of development needed; • understand the link between public health practice and management sciences.
Abstract	The adoption by WHO's member states of the International Health Regulations (2005) represents a paradigm shift away from mandatory reporting of specific diseases to a requirement for ministries of health to notify WHO concerning any potential Public Health Emergency of International Concern (PHEIC). The European Union (EU) has also issued legislation on CDS&C, epidemic early warning and response, bioterrorism, and large number of related fields, including food safety, water quality, zoonotic diseases, blood safety, border controls, data protection and confidentiality etc, that are binding on EU member states. Harmonisation of national public health legislation to this acquis communautaire is a requirement for accession to the EU. This paper reviews the key guidance on strengthening CDS&C systems to meet the IHR and EU requirements, and it attempts to give a brief overview of international resources and implementation activities. If WHO member states are to respect the deadline of 2012 for achieving the stated IHR minimum core capacities, significant domestic investment will also be required, particularly for laboratory strengthening. Furthermore, Field Epidemiology Training Programmes and laboratory scientist training schemes will need to be established within the context of attractive careers in public health.

Teaching methods	Review paper of current state of the art.
Specific recommendations for teachers	100% individual students' work.
Assessment of students	Could be assessed by the quality of proposals and plans for strengthening CDS&C that result.

EPIDEMIOLOGICAL SURVEILLANCE AND CONTROL OF COMMUNICABLE DISEASE: BASIS FOR EVIDENCE BASED HEALTH PROMOTION AND EARLY RESPONSE - PRACTICAL PERSPECTIVE

Rob Stevens

Introduction

Surveillance provides health intelligence to health protection systems, which are the foundation for health promotion. The need for health intelligence has never been greater: good communicable disease surveillance and control (CDS&C) has already limited the spread of avian influenza, it helps to prevent a pandemic of human influenza, and even if that is not possible, it may provide sufficient early warning to slow down global spread, giving time to implement measures that could save millions of lives¹; and good public health practice appears to have eliminated the new disease of SARS². Strengthening of surveillance systems is necessary, however, to sustain successes and, for instance, to detect deliberate release of biological agents against the background 'noise' of endemic disease³, and to institute second generation surveillance for HIV/AIDS.

The adoption by WHO's member states of the International Health Regulations (IHR) 2005 represents a paradigm shift away from mandatory reporting of three named diseases to a requirement for ministries of health to consult WHO concerning any health-related event that may pose serious international risk.

The European Union (EU) has also issued legislation on CDS&C, bioterrorism, and large number of related fields, including food and water quality, zoonotic diseases and blood safety, that are binding on EU member states. Harmonisation of national public health legislation to this *acquis communautaire* is a requirement for accession to the EU. Accession programmes in South-Eastern Europe have had a considerable impact of surveillance system strengthening.

This chapter reviews the key guidance on strengthening CDS&C systems to meet the IHR and EU requirements, and it attempts to give a brief overview of international resources and implementation activities. The promotion of health can be understood in at least two senses: 1) advocating for conditions and values in society that tend to improve population health; or 2) improving the health and wellbeing of individuals by encouraging them to have positive attitudes and behaviours. Strengthening surveillance contributes to both understandings by, in the first case, providing evidence of the need to maintain and improve traditional public health interventions such as sanitation, clean water and vaccination; and in second, yielding persuasive information on risk, and the effectiveness of both protective factors themselves and their communication to the public.

Concepts and Definitions

CDS&C is a cornerstone of public health, which is:

'The science and art of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organisations, public and private, communities and individuals.'⁴

This definition comes from a Ministry of Finance report that puts forward evidence-based arguments for substantial increases in multi-sectoral spending on health as a cost-effective

means of improving both individual prosperity and national productivity. This represents one of the few occasions since the post World War-II expansion of welfare systems in both communist and capitalism countries that investments in health have been recommended as good economics. Such arguments are particularly relevant right across WHO's European Region, where there is a strong and direct relationship between gross domestic product (GDP) and the percentage of GDP spent on health. On average, in countries which have a smaller 'cake', the health sector also gets a smaller cut of this cake. This relationship can be easily verified by plotting national wealth against health expenditure indicators oneself from the WHO European Health For All database⁵.

Surveillance creates health information that contributes to national and international databases^{5,6,7,8}, which are important sources for advocating for increased health resources at national level. But it can be differentiated from other types of regular statistical reporting by the fact that it is set up for the main purpose of vigilance for alert conditions, such as outbreaks of communicable disease, or unexpected changes in the occurrence rates of chronic diseases. Vigilance for the unexpected often requires interpretation and judgement – epidemic intelligence⁹ – which is conceptually distinct from simple monitoring of expected results within a statistical normal range. Surveillance is itself an 'open' system, i.e. open to alert signals coming from the wider environment which do not have to be completely defined *a priori*. However, most systems contain 'closed' systems of monitoring health-related event reports against a statistically defined threshold. The clinical specialty of anaesthetics provides a good analogy. The anaesthetist monitors the patient's blood gas levels and regulates artificial ventilation in order to keep them within the normal range; whereas he or she is vigilant for electrocardiographic signs of arrhythmia, making an emergency response if necessary.

Public Health Surveillance (PHS) can be defined as:

'The ongoing, systematic collection, analysis, interpretation, and dissemination of data about a health-related event for use in public health action to reduce morbidity and mortality and to improve health'¹⁰

Its main functions include supporting case detection and public health interventions, estimating the impact of a disease or injury, portraying the natural history of a health condition, determining the distribution and spread of illness, generating hypotheses and stimulating research, evaluating prevention and control measures, facilitating planning and detecting outbreaks of communicable diseases. The characteristic that PHS is 'ongoing', often over a period of many years, means that it is particularly suited to tracking trends and advocating increase and/or reallocation of resources for public health. It is clearly differentiated from one-off pieces of research, which must be justified according to the precise state of knowledge applying at the time of proposal.

The characteristic that PHS relates to data 'about a health-related event' means that surveillance entails a broad range of sources of information, not just official notification of disease occurrence. Sources include various levels within the 'clinical iceberg' from asymptomatic infection or pre-morbid pathology through presentation to clinical services, diagnostic confirmation and treatment, to death; the prevalence of risk and protective factors; the effectiveness of modifying conditions such as susceptibility to pharmaceutical treatment, efficacy of vaccination and impact of health promoting policy; and signals that are of use in early warning such as symptoms, syndromes, drug sales, rumours and media reports (the latter

being the subject of the WHO GPHIN¹¹). The broad scope of surveillance gives opportunities for triangulation of data sources, and interpretation should be carried out by specialists with a broad awareness of general public health practice.

The characteristic that it is 'for use in public health action' designates its purpose as response – either acute (epidemic-type) or planned (management-type) – and this has led some countries to institutionalise PHS of biological, chemical, radiological and nuclear threats within a named 'health protection' system¹². Viewing surveillance as part of a national health protection system implies that surveillance should 1) yield information relevant to the national capacity for public health action, such as food safety inspectorates, water quality assurance, vaccination coverage and disease control programmes, and 2) its impact should be assessed not only at the level of outcome (attributable reductions in morbidity and mortality); but also process, in terms of its successful advocacy for improvements in capacity for action. The impact of surveillance information on food borne diseases could, for instance, be evaluated in terms of numbers of successful applications of food safety legislation.

The characteristic that PHS is 'systematic' refers to the fact that information is produced by planned, orderly, systems which are 'human organisations of interacting components, which are carriers of numerous complex operating procedures and organisational structures'¹³. A surveillance system may therefore be thought of as a dedicated human and technological resource set up primarily for gathering intelligence for health protection, disease prevention and bio-security. This intelligence contributes to the broader enabling process of changing or coping with the environment, which is defined as health promotion in the Ottawa Charter¹⁴:

'Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being.'

PHS enables people themselves to take better control of their health by providing accurate risk information and health education messages; and it enables policy makers to advocate for resources and allocate them optimally for preventing disease, prolonging life and promoting positive health.

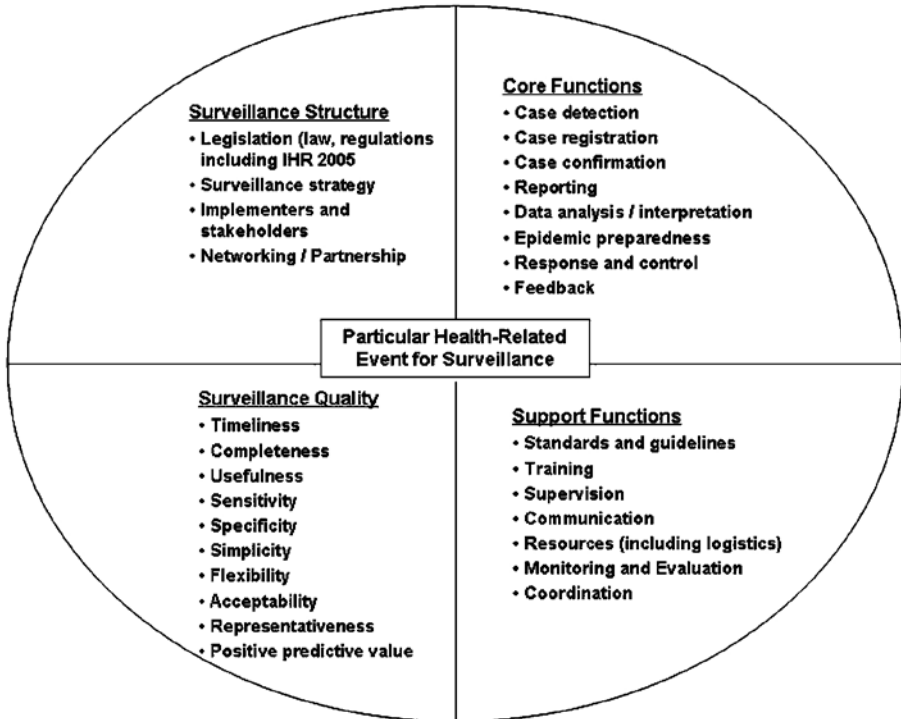
As well as having a broad range of sources of data, an optimal system for a particular health-related event tends to contain a mix of surveillance types. These types include, in order of increasing specialisation: syndromic surveillance; active data collection (contrasted with passive notification); enhanced surveillance; sentinel networks; planned, repeated, standard surveys of risk groups, e.g. behavioural surveillance of groups at high risk of HIV. Syndromic surveillance refers to the reporting of cases which meet a definition based solely on clinical symptoms and signs, not laboratory confirmation. The advantages of syndromic surveillance (e.g. for sexually transmitted diseases)¹⁵ include: gaining information where laboratory confirmation is not available or affordable; improving sensitivity at the expense specificity in order to estimate overall burden of illness; and widening the population base for early warning. It also has clear application in detecting unusual health-related events which may be

of unknown cause, such as may occur in bioterrorist attacks. In active surveillance, the registry actively contacts practitioners, requesting them to provide information in a standard form on any cases which meet a case definition. Surveillance of the congenital rubella syndrome by paediatric professional societies¹⁶ is a good example of this. Enhanced surveillance refers to combining extra information with the data required by statutory notification, such as case based information on risk-group membership, route of infection, markers of recent infection etc., or organism related information such as anti-microbial susceptibility. Sentinel surveillance refers to the designation of a sub-population for surveillance in which evidence of infection can provide early warning of a threat to wider populations. Examples include the use of 'sentinel chickens' for sero-surveillance of some vector borne viral diseases¹⁷, and primary health care networks for early warning and intensity prediction of seasonal influenza epidemics¹⁸. The use of the word 'sentinel' is a military metaphor, a sentinel is a look-out who watches for approaching enemies in order to alert defence to the urgent need for action. The best known example of planned, repeated, standard surveys of risk groups is second generation surveillance of HIV/AIDS^{19,20,21}. Repeated standard surveys are difficult to institutionalise because they require dedicated resources and project management capacity, competing with other priorities in ministries' annual plans. In order to be approved as projects, they are usually required to have statistical power similar to that of epidemiological research.

The essential feature of any system for detecting outbreaks of CD is the ability to determine epidemiological linkage. The daily or weekly occurrence of sporadic cases may fluctuate and unless they can be linked in person, place and time, outbreak investigation is unlikely to be fruitful. The majority of outbreaks come to light because an unusually large number of cases present to clinical services over a short time, raising suspicion. It is important therefore to scan local media for reports of outbreaks that may not have been notified to the proper authorities. Where a disease is more widespread in the population, or an outbreak develops over a long time-scale, epidemiological linkage can usually only be detected through case-based electronic registers.

Figure 1 presents WHO's conceptual framework for communicable diseases surveillance, which was first described in 2002²² and continues to be elaborated through a series of guidance documents^{23,24,25} issued by WHO/CSR office in Lyon²⁶ (for a summary of the activities of this office see reference aa). It contains four domains, describing a set of 29 topics in total, each of which can be represented by one or more indicators defined at the national level²⁴. The domains define the organisation and performance of a system for the surveillance of a particular health-related event in terms of its structure, core and support functions, and its quality¹⁰.

Figure 1. Components of surveillance and response systems for monitoring and evaluation



CD Surveillance and Control Policy Development in Europe

The financial crisis in European welfare systems, especially in the former communist countries, has slowed progress toward targets and reduced the resources available to public health²⁸. The need for a ‘new paradigm’ for PHS was clearly stated by WHO in the year 2000:

‘some surveillance systems have lost momentum, are poorly maintained or have virtually collapsed...Outdated surveillance systems, in which new surveillance targets have been added but old ones never removed, often lead to central bodies collecting huge amounts of data with little or no analysis and use of the corresponding information. Feedback to the data collectors is rarely provided. The surveillance system becomes driven by the need to collect and move data while scant attention is given to using the data at each level of the health service for decision-making.’²⁹

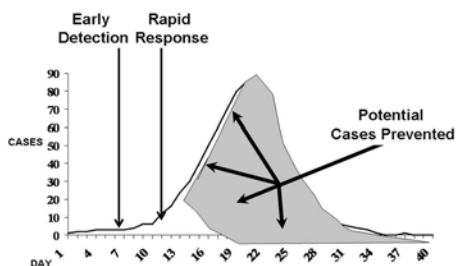
An essential understanding of surveillance can be promoted through the slogan ‘Information for Action’. Figures 2 and 3 illustrate that public health decision making for communicable disease control should result in two types of response²²:

Figures 2 and 3: Public health response:

Fig 2. Acute (epidemic-type)



Fig 3. Planned (management-type)



Acute responses are analogous to secondary prevention, reducing the overall population impact; whereas planned responses may be aimed at primary prevention of spread and eventual disease elimination. WHO's 2000 paper goes on to describe a surveillance policy solution to the problems of obsolescence, duplication, fragmentation and disconnection from public health action in terms of a strengthened, streamlined system of 'integrated communicable disease surveillance', defined as:

'the sum of all surveillance activities which add up to the national surveillance system. The various surveillance activities become integrated into one system within the broader national health information system.'²⁹

It is further described as exploiting opportunities for synergy between existing surveillance systems in order to carrying out the core and support functions defined in Figure 1; seeking to maintain surveillance and control functions close to one another organisationally and geographically; and being best approached by developing and strengthening surveillance networks.

In Europe, there are two main drivers of surveillance policy: the International Health Regulations (IHR)^{30,31,32} and the body of EC legislation relating to CD surveillance, early warning and response³³. The IHR specifically request member states to develop and implement national plans of action following an initial assessment of the existing national structures and the resources to implement minimal core capacities for surveillance and response:

Detection at community / primary health level:

- (a) to detect events involving disease or death above expected levels for the particular time and place in all areas within the territory;
- (b) to report all available essential information immediately; and
- (c) to implement preliminary control measures immediately.

Detection at intermediate public health levels:

- (a) to confirm the status of reported events and to support or implement additional control measures; and
- (b) to assess reported events immediately and, if found urgent, to report all essential information to the national level.

Response at national level:

Assessment and notification.

- (a) to assess all reports of urgent events within 48 hours; and
- (b) to notify WHO immediately when the assessment indicates the event is notifiable.

Public health response.

- (a) to determine rapidly control measures to prevent spread;
- (b) to provide support through specialized staff, laboratory analysis of samples and logistical assistance;
- (c) to provide on-site assistance as required to supplement local investigations;
- (d) to provide a direct operational link with senior health and other officials to approve rapidly and implement containment and control measures;
- (e) to provide direct liaison with other relevant government ministries;
- (f) to provide, by the most efficient means of communication available for communication of WHO recommendations to the field;
- (g) to establish, operate and maintain a national public health emergency response plan, including the creation of multidisciplinary/multisectoral teams to respond to events that may constitute a PHEIC; and
- (h) to provide the foregoing on a 24-hour basis.

The IHR were adopted by all 52 member states of WHO's European Region in 2005 and will enter into force at the end of 2007, unless member states specifically opt out. A three phase approach to implementation has been suggested³², beginning in 2006, providing assistance in assessment 2007-2009, and continuing support and monitoring progress until 2012. The IHR no longer contain prescriptive requirements for international notification of certain diseases but are based on an algorithm requiring the member states to notify a potential Public Health Emergency of International Concern (PHEIC) within 48 hours of its occurrence. A potential PHEIC should be notified when 1) an unusual or severe health-related event has occurred, which 2) may have a significant public health impact, which 3) may spread across borders and 4) may affect free the movement of goods or people. In order to meet these requirements, member states must have an efficient means of confirming or ruling out certain causes of health-related events in order to know whether they meet any of these four criteria. In particular, laboratory services must be adequate for this purpose. It is generally not feasible to maintain laboratories capable of meeting the demands of the IHR under quality assured, or preferably accredited, conditions unless they are integrated into routine health services and CD surveillance. In addition to arguments of economy of scale, maximum return on sunk capital and minimal marginal cost per test, laboratories must maintain proficiency to act in an emergency through routine practice. The same is true for Port Health services. The WHO Regional Office for Europe³⁴ contains a department for Communicable Disease Surveillance and Response (CSR) with a staff of approximately 10 people and a regular (WHO) budget of \$1.4m plus \$1.0m from other sources in the biennium 2004-5³⁵. However, many other WHO departments contribute to CDS&C and the total number of technical staff in EURO was 310, with a total budget of \$155m in 2004/5.

The body of EC legislation³³ relating to CDS&C commenced with a framework decision of the European Parliament and Council (2119/98/EC) establishing Community networks for CDS&C:

‘As regards epidemiological surveillance, the network shall be established by bringing into permanent communication with one another, through all appropriate technical means, the Commission and those structures and/or authorities which, at the level of each Member State and under the responsibility of that Member State, are competent at national level and are charged with collecting information relating to the epidemiological surveillance of communicable diseases, and by establishing procedures for the dissemination of the relevant surveillance data at Community level.’

The framework has then been elaborated in an ongoing series of Decisions of the European Commission, beginning with 96/2000/EC, which defines ESCON (the Epidemiological Surveillance Component of the Community Network), in terms of a list of diseases for progressive coverage by member states. The scope of this list is necessarily narrower than the IHR, which by implication also cover chemical, radiological and nuclear threats. The operative word ‘progressive’ means that the EC takes into account members states’ current conditions in assessing their progress to harmonization. EWRS (Early Warning and Response System³⁶) was established (57/2000/EC) and has similar attributes to WHO GOARN⁸. It defines three phases of activation according to public health risk in a way which is compatible with the IHR algorithm (a useful conceptual overview of early warning and response is available from US CDC³⁷). 253/2002/EC sets case definitions for the list of notifiable diseases which was subsequently extended and updated by 534/2003/EC. These case definitions are intended to ensure that the data from member state surveillance systems are ‘comparable and compatible’. There are some differences from the case definitions recommended by WHO³⁸. The main reason for this is that the EC definitions are intended to achieve comparability and compatibility of national surveillance data by increasing the specificity of diagnoses through laboratory confirmation, whereas the WHO definitions lean more toward sensitivity, in order to estimate burden of disease. The EC case definitions are currently under review by ECDC jointly with the WHO Regional Office for Europe. Given the difference in aim, however, it is not clear that they can be unified into a single system. 542/2003/EC concerns the operation of the Community networks. At the time of writing there are thirteen named disease specific networks plus a basic surveillance network covering all notifiable health conditions on the list^{am}. In parallel with the IHR’s requirement for member states to produce plans of action, this Decision requires members of the surveillance networks to address a list of topics by submitting Standard Operating Procedures (SOPs) to the Community network, stating:

1. The coordinating structure and decision-making process.
2. Project management administration and supervision.
3. Case definitions, nature, and type of data to be collected.
4. Data management and protection, including data access and confidentiality.
5. Ways in which data are made comparable and compatible (quality requirements and data validation).
6. Appropriate technical means and the procedures by which the data are to be disseminated and analysed at Community level (data dissemination and reporting).
7. Proposed public health action, infection control procedures, and laboratory procedures.

In particular, 542/2003/EC requires the creation of a national point of contact, which could be the same as the IHR ‘focal point’, and which is in permanent communication with

the European Commission with regard to EWRS. A report of actual notifications to EWRS can be found in 394/2005/COM, and 605/2005/COM gives further guidance in preparing public health emergency plans, covering: information management ; communications ; scientific advice ; liaison and command and control structures; preparedness of the health sector; and preparedness in all other sectors and inter-sectorally. The last major Decision to be published by the end of 2006 (the time of writing), 851/2004/EC, is the founding regulation establishing the European Centre for Disease Prevention and Control (ECDC³⁹). It envisages the participation of third countries (who are not member states of the EU) ‘which have concluded agreements with the Community by virtue of which they have adopted and apply legislation of equivalent effect to Community legislation in the field covered by this Regulation.’ In 2006, ECDC had a budget of €16 million and was set to have 100 staff. The Centre’s budget will grow to over €50 million by 2010, and its staff to 300, over the coming years. During the period of its development, the EU Health and Security Committee will continue its responsibilities in relation to IHR at least until 2008 (according to 699/2006/EC), in coordination with the EC, member states and ECDC. The ECDC website contains the membership of its technical Advisory Forum and Managing Board, its work plan, draft framework for an EU surveillance strategy⁴⁰, technical programmes and minutes of Managing Board meetings. ECDC is an agency of the European Commission which works in partnership with the national health protection institutes of member states in the areas of: surveillance; scientific advice; identification of emerging health threats (“epidemic intelligence”); training; communications; providing technical assistance (“country support”). Its main activities are:

- Evaluating existing Community networks and reviewing the surveillance objectives for the diseases covered, including:
 - (a) providing quality assurance by monitoring and evaluating surveillance activities to ensure optimal operation;
 - (b) maintaining the databases for such epidemiological surveillance;
 - (c) communicating the results of the analysis of data to the Community network; and
 - (d) harmonising and rationalising the operating methodologies.
- Determining the functional specifications of the IT infrastructure.
- Reviewing and updating the case definitions for EU surveillance.
- Integrating laboratory support into surveillance; by:
 - (a) encouraging cooperation between expert and reference laboratories, the Centre shall foster the development of sufficient capacity within the Community for the diagnosis, detection, identification and characterisation of infectious agents which may threaten public health.
- Prioritising surveillance needs in collaboration with stakeholders.

In addition to these activities, ECDC is gradually taking over the functions of several ongoing surveillance related projects funded through the EC framework programmes for public health⁴¹, which together with disease specific and basic surveillance networks comprise what is known as the Community network. Eurosurveillance⁴² is a peer reviewed, on-line, weekly, monthly and quarterly journal that has archives going back to 1995. It contains outbreak alert notices and investigation reports as well as original articles on epidemiological topics and developments in surveillance methodology. The on-line archive is searchable and it represents the most important single body of professional reflection on surveillance practice within the EU, and presents many practical examples that are relevant to its neighbours. It is available in English and French since 1995, and more recently the quarterly version has been

available in several other Latin languages. Articles from Eurosurveillance are a good source of material for presentation in journal clubs and workshops, because they raise and discuss real world problems and inconsistencies in surveillance.

EPIET⁴³, the European Programme of Intervention Epidemiology Training, was launched in 1995, based on the lessons learned from field epidemiology training in the Epidemiological Intelligence Service of US CDC⁴⁴. A cohort of ten to twenty field epidemiologists has graduated each year after spending two years as a fellow at one of the accredited training centres in a country other than their own. Most of the EPIET fellows who have been trained so far, approximately 120 in number, have taken up senior posts in European CDS&C, and they are members of the voluntary EPIET Alumni Network (EAN) which provides informal communication between these professionals who speak a common technical language. Younger candidates are selected at competitive interview to give a good representation across EU member states from individuals who intend to pursue a career in field epidemiology, and who have both prior experience and previous epidemiological training, such as a master's degree in public health. The stated mission of EPIET is to:

- Develop a European network of intervention epidemiologists.
- Develop a response capacity inside and beyond the European Union.
- To strengthen communicable disease surveillance and control in the European Union.

EPIET has close links to the European Field Epidemiology Training Programmes (FETPs) in Spain, Italy and Germany that were designed to increase national capacity in field epidemiology. National FETP programmes tend to operate a similar two year fellowship to EPIET but based in their own countries. To be recognised as an FETP, a national training programme must apply for membership of TEPHINET⁴⁵, which has over thirty members globally including WHO and US CDC.

IRIDE⁴⁶ (Inventory of Resources for Infectious Diseases in Europe) was created in 1997 for fifteen EU member states plus Norway and Switzerland. The project resulted in a computerised database in three languages on CD-ROM, an international workshop, a technical report with an overview of the major collected information translated into 11 languages and printed in 10,500 copies for distribution across Europe. In the year 2000, the web version was created as an updatable European inventory on resources for Infectious Diseases Control, expanding the coverage to accession countries. Results from the inventory are part of the EU-IDA EUPHIN (European Union Public Health Information Network) and HSSCD (Health Surveillance System on Communicable Diseases). ECDC plans further active data collection to refine the inventory and fill in gaps.

Strengthening CD Surveillance and Control and EU Accession Partners

Figure 4 illustrates WHO's recommendations for a planning and management cycle that includes the production of a national plan of action every five years and annual operational plans that coincide with the budgetary cycle of ministries of health.

Although the guidance was not published until 2006, the main concepts were already well established informally in early 2000's, and they informed the writing of terms of reference for surveillance strengthening projects by ministries in WHO European Region, often through the networks created by the Integrated Capacity Development Programme for Laboratory Specialists run by WHO Lyon Office⁴⁷. The third cohort of this two year programme commenced in 2004 and included Georgia, the Republic of Belarus, the Republic

of Bulgaria, the Republic of Moldova, the Republic of Turkey, Romania, the Russian Federation and Ukraine. This programme focused on strengthening disease detection and response activities in home countries through the elaboration and implementation of a plan of action and specially tailored field training and support.

Figure 4. Cycle illustrating surveillance systems strengthening activities²³



WHO guidance on systematic assessment of CDS&C systems was published in 2001⁴⁸, and a standard questionnaire and methodology for district public health laboratory assessment is available on request from the WHO Lyon Office. A combined team of approximately ten international and national experts is assembled for one to two weeks of desk-top study and field work in a number of locations in the country. Several country assessments are available on WHO websites. TAIEX⁴⁹, EC DG SANCO and EC member state national health protection institutes have also collaborated to produce ‘peer reviews’ of the accession country CDS&C systems, although these reports are confidential. A standardised method is also recommended for achieving consensus in setting national priorities, based on a modified Delphi method²⁵. This method requires a national steering committee to produce an overall explanation and specific fact sheets for each of the health-related events for prioritisation, including information on up to eight criteria: 1) burden of disease; 2) case fatality rate / severity; 3) epidemic potential; 4) potential threat / changing pattern; 5) health gain opportunity; 6) social and economic impact; 7) international regulations or programmes; 8) public perception. Participants then score each of the criteria for each of the health-related events against a five point ranking scale of importance. Where possible, scale points are given defined meanings in the overall explanation e.g. for burden of disease: 1 is defined as incidence < 1/100,000 per year; 2 is defined as incidence 2 to 10 /100,000 per year, etc. Where clear priorities emerge with a strong consensus, they can be accepted, but where there is a large distribution of scores, a second round of prioritisation may be necessary. Individual’s scores are fed back

to them according to their position in the whole distribution of scores, which often prompts them to revise their judgements toward the median.

In addition to the actions of national governments, professional bodies, NGOs and others to strengthen CDS&C, many externally funded projects have been dedicated to this topic. Strengthening complex human and technological systems involving large scale public investment and coordinated action in the private sector, requires a Management and Organisational Development (M&OD) approach. Organisational Development (OD)⁵⁰ is understood here to mean a social and behavioural science approach to improving working efficiency, quality of outputs and the quality of life of individuals at work. It is the branch of management science best placed to develop structures, relationships and human resource establishments that optimally discharge surveillance functions within their political and economic settings. It arose simultaneously from the post-WWII 'socio-clinical' studies' at London's Tavistock Institute and the group dynamics 'training laboratories' at the Massachusetts Institute of Technology and other US institutes. Writings on OD tend to stress the importance of the 'psychological contract' between the organisation and its employees, covering areas such as clarity of mission, team working, openness of communication, job security and career pathways. These topics are difficult for externally funded projects to address directly because of the lack of local knowledge and engagement of international consultants, and the location of local consultants in projects 'outside the system'. A fatal but common mistake is to imagine that there was no history before the project began and no relevant future after the project is over. M&OD theory suggests that this mistake can be avoided by considering the project to be a 'temporary parallel learning organisation' of the national system. In other words that the project seeks to engage the thinkers and innovators of the system in an enabling and empowering project environment, giving them the mental space to reflect and plan.

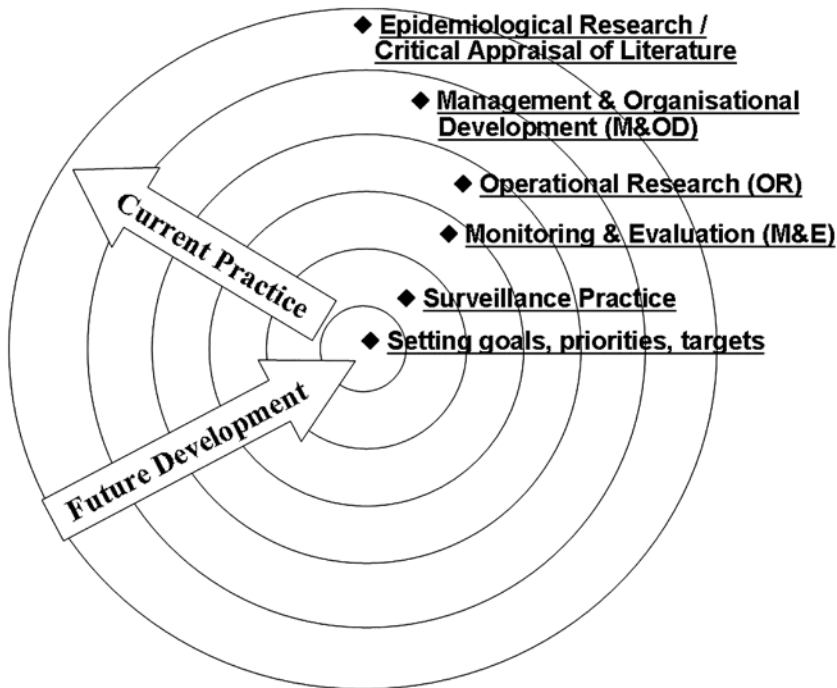
A key M&OD methodology is 'action research', which consists of 1) a preliminary organisational diagnosis 2) data gathering together with working groups of the system 3) data feedback to the working groups 4) exploration of the data by the working groups 5) action planning by the working groups 6) action taking by the working groups 7) evaluation and assessment of the results of actions by the working groups⁵⁰. The project's consultants act as facilitators and technical resources for action research, which differs conceptually from hypothesis-driven research in that it is usually an iterative process of defining and re-defining the research problems, often spiralling into, rather than directly approaching, the solution.

The author was team leader of two substantial EC funded projects on CDS&C strengthening^{51,52} which had very similar terms of reference. The Romanian project was preceded by a national conference on public health in the context of EC accession which selected communicable disease surveillance as a topic for which EC funding would be sought. This stimulated a WHO assessment of the system in order to support the preparation of the EC terms of reference. The Romanian project terms of reference were subsequently used as a model for the Turkish project terms of reference, both of which were broad strategies aimed at achieving both institutional reform and large scale capacity building, in implementation periods of only two or three years, respectively. Both projects covered review and harmonisation to EC legislation, guidance and SOPs; human resource development, budgetary assessment and strengthening of administrative arrangements; prioritisation of health-related events for surveillance; development of a new information technology and management system; preparation of a national plan of action; epidemiology training at

basic and post-basic levels (including an EPIET-like three week residential course for 30 people); training in laboratory management, quality assurance and practical public health microbiology; training through applied and operational research; study tours to EC member state institutions; review of biosafety and biosecurity; improvement of biological specimen transportation; technical specifications for supply of laboratory equipment and information technology. The main differences in design were that the Turkish project 1) was intended as an actual transformation of the entire system rather than a pilot implementation, 2) included an assessment of the surveillance and public health laboratory systems, 3) did not include construction work, whereas the Romanian project contained redesign of the national reference laboratory (NRL), 4) included formal training of the trainers in adult education techniques for the delivery of epidemiology and laboratory training cascades down to front-line level, 5) upgraded the biological safety level III capacity of the NTL.

Figure 5 illustrates the increasing levels of sophistication of evidence relevant to decision making in CD strengthening projects. By putting epidemiological research evidence in the outer ring, the diagram is intended to show that the overall territory of CDS&C should be informed by good quality epidemiological studies – those which address the occurrence and determinants of health-related events through hypothesis driven research with adequate statistical power to conclude, and with freedom from serious bias.

Figure 5. Disciplines relevant to strengthening CD surveillance and control



Epidemiology provides the highest level of relevant evidence, and the basic science of all public activity, however epidemiological research generally requires very specific expertise,

considerable financial resources and ethical approval. In developing country settings, it is not generally feasible without external support, and the results of critical appraisal of foreign epidemiological literature should be applied with caution after considering the local context.

Below, and within the domain of epidemiologically justified designs, lies evidence derived from M&OD. There are many differing institutional models of CDS&C in Europe, and to the best of the author's knowledge there are no comparative studies that are methodologically adequate to differentiate the effects of structural design from context. CDS&C tends to evolve from national historically determined health care services, environmental and veterinary practice, vital statistics etc., which in turn reflect specific social and cultural values related to health. Generally applicable M&OD theories related to human resource development and finance, performance management and change management are therefore most relevant conceptual basis for development; and accurate data concerning actual structures, staffing, capital assets and activities are essential.

By operational research (OR), what is meant is 'an investigation carried out, by scientific method, on actual operations, current, recent, or impending, at the request of those responsible for the initiation or conduct of the operations, and explicitly directed to the better, more effective and more economical conduct of similar operations in the future'⁵³. It has its own learned societies and journals⁵⁴, and is often divided into 'hard' techniques involving mathematical modelling and 'soft' techniques based on social sciences⁵⁵. OR tackles 'messy and complex' problems, often entailing considerable uncertainty, to examine assumptions, facilitate an in-depth understanding and to decide on practical action. It is included in EPIET's description of suitable training activities for fellows⁴³, may not require ethical approval if it only requires consideration of routine data⁵⁶, and its typical applications in surveillance include: assessment of factors affecting timeliness; completeness and accuracy of data; relative performance of diagnostic tests; outbreak 'signal detection' in novel data sets e.g. ambulance dispatch data; developing decision making algorithms; and logistical studies concerning the organisation of laboratory networks and rapid response teams. In terms of the management dictum concerning quality 'Do the right thing, and do the thing right', OR represents an appropriate way of determining the right technical approach to a given problem; whereas M&OD, especially action research, points the way to the best way of implementing it.

The WHO guidance²⁴ defines monitoring and evaluation as follows:

'Monitoring of surveillance systems is the ongoing tracking and analysis of routine measurements aimed at detecting changes in the surveillance system. Evaluation is a process that attempts to determine as systematically and objectively as possible, the relevance, effectiveness, and impact of activities in light of the objectives. Several evaluations can be distinguished, e.g. evaluation of structure, process, output, outcome and impact. Impact is the extent to which the overall goal of the surveillance and response systems is being achieved, e.g. reduction in the case-fatality rate of epidemic-prone diseases, changes in the morbidity pattern of targeted communicable diseases or changes in behaviours of health staff and of the general population'²⁴.

The guidance contains 95 suggested indicators covering the four domains of Figure 1 to aid the monitoring of progress towards established targets. The list is intended to be adapted

to country settings and, if necessary, additional indicators to monitor implementation of the national plans of action should be identified. Indicators should be pre-tested for usefulness, clarity, availability of denominator and numerator data, ease of collection and calculation of measurements. The planning and development activity alone that is required to introduce and test such a broad range of new indicators is a considerable task. Furthermore, over half of the indicators relate to infrastructure and training that would require a major investment programme in order for the 'poorly maintained' and 'virtually collapsed' systems to catch up with the EU average. Where an investment programme is contemplated, restructuring of the surveillance system should move away from the vertical systems of formal notification to integrated systems which build capacity for surveillance at lower levels, close to where control activities take place. Figures 6 and 7 are intended to illustrate the necessary integration of systems.

Figures 6 and 7: Restructuring Surveillance Systems:

Fig 6. Vertical Notification System

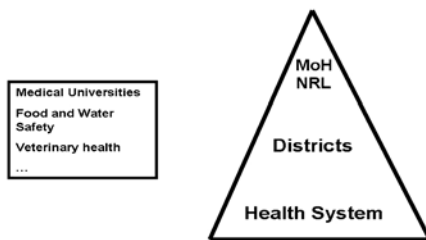
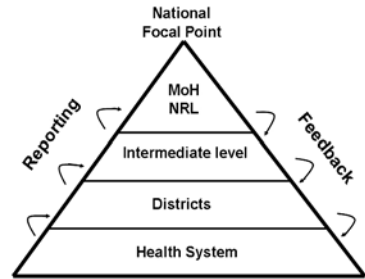


Fig 7. Horizontally Integrated Intelligence System



All national CDS&C systems need to be hierarchically organised in order to operate the clear lines of command necessary to respond to a national emergency and to cover the entire territory with qualified field epidemiological input. However, the pyramid needs to be broad enough so that intelligence can flow through personal networks operating at all levels. A major goal of training activities should be to establish these networks though through case studies and simulation exercises. Routine management cycles between levels, i.e. reporting of data to the level above and feedback of interpreted action-reports to the level below, make data consistency checking, validation and quality assurance feasible. It is not practically possible for staff in distant ministries of health to change the data collecting behaviour of individual laboratories and clinicians. Providing sub-national staff are well trained, experienced and committed to quality, their local knowledge can be harnessed to develop a national health intelligence system that may not require great investments in information technology. The software component of a national electronic surveillance system was established in Germany for just €170,000 initial development cost plus €150,000 per year for maintenance and ongoing improvement⁵⁷. Another crucial issue that Figure 7 is supposed to illustrate, however, is that a broadening of the base of the pyramid requires also a broadening of the mid-sections and the top. Staff with the ability and training to run epidemiological intelligence systems cannot be created overnight. Again, Germany provides a cost-effective model for training high quality professionals through a national FETP⁵⁸

Prospects and problems in CDS&C

The greatest problem for the weaker CDS&C systems in WHO's European Region is the scale of investments and activities required to meet the legally required international standards. Despite the potentially disastrous consequences of mishandling a major epidemic, in terms of human suffering, damage to trade and political repercussions, both the absolute and relative amounts of domestic funding directed to public health systems are far too low. Donor funded projects can act as a catalyst for change, and can provide targeted investments, but medium to long term national capital development programmes are required to institutionalise change and to create sustainable development. In countries where the public health laboratory infrastructure has been allowed to deteriorate, the costs of re-establishing a modern dedicated network can be high. Where there are good quality laboratories in state and university hospitals, it is tempting to utilise some of this capacity by contractual agreement with the ministry of health. There are few national examples, however, where ministries of health have been prepared to rely solely on the capacity of clinical laboratories. A good compromise may be to maintain a national reference laboratory for policy development, training, specialised testing, quality assurance and consultancy, with a small sub-national network of public health laboratories that each coordinate the public health activities of hospital / university clinical laboratories in their region, and provide confirmatory testing.

Perhaps the second greatest problem for weaker CDS&C systems relates to the organisation of trained medical and technical labour. Where real salaries and benefits are much lower in public health than clinical practice, and where the private sector offers more attractive remuneration, recruiting, training and retaining professional staff can be problematic. Like the need for capital investment referred to above, the only solution to this problem is a properly resourced policy commitment. The scope for development within existing institutions is often very limited because overall health sector strategies and restructuring plans prohibit the creation of new posts or departments, and public sector employment law may establish mandatory pay norms and protect staff positions, even though they are no longer required. Primary legislation may be necessary to create new institutions and, in any case, there is often more scope for developing non-financial incentives, including: high levels of training professional, academic interest and professional recognition; a well described progressive career pathway; joint academic posts; and opportunities for international representation.

Overall, however, the prospects look good for strengthening of CDS&C in Europe. Greater awareness of the potentially disastrous consequences of emerging and re-emerging diseases and bio-terrorism has resulted in a steep increase in the availability of international development funding. ECDC, and the ongoing development programmes that it has inherited, look set to improve the standardisation of national systems across the EU, which will also positively influence its neighbours. Technical advances are rapidly making CDS&C not only more effective, but also more professionally interesting. Automation of data collection and processing frees professional staff to interrogate databases and to interpret information rather than simply preparing tables of data. Improvements in nucleic acid test diagnosis and genetic typing of micro organisms are bringing CD epidemiology closer to its basis in population biology, and with the aid of insights from mathematical modelling, it is becoming possible to ground policy on a more scientific evidence base.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
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Module: 5.2	ECTS: 0.75
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Key words	Health, health promotion, health education, non-communicable diseases, intersectoral cooperation, healthy lifestyles
Learning objectives	After the completed module students and professionals in public health will broaden their knowledge and understanding in respect to: <ul style="list-style-type: none">• role of health education in promotion of health and prevention of non-communicable diseases;• recognizing the role of all players (participants) in health education activities in a network of multisectoral co-operation and integrated interventions;

Abstract	<p>A number of internationally recognized studies directed to prevention of the leading non-communicable diseases (NCD) showed evidence of enormous importance of precise defined priorities (population groups and diseases), community based measures of prevention and health intervention organizational and network promotive activities including media involvement and support.</p> <p>Promotion of healthy lifestyles and elimination of the common risk factors for NCD should be considered as high priority in the broad scope of measures of health care.</p> <p>Integrated programs for preventive health care of chronic non-communicable diseases directed to life style changes, scientific work with monitoring and evaluation, creating supportive environments, multi-sectoral approach in solving health problems and inter-sectoral cooperation within the community with active involvement and participation of the population and developing personal skills are summarizing all principles of organization, integration and overall activities of health care services within the contemporary health care systems.</p>
Teaching methods	Lectures, focus group discussion, nominal groups, case studies
Specific recommendations for teachers	<p>The following teaching methods are recommended:</p> <ul style="list-style-type: none">-lectures,-focus group discussion,-case studies on risk factors for non-communicable diseases,-individual work, consult literature, written reports, preparation of project, preparation of poster <p>participation in realization of health education activities directed to prevention of non-communicable diseases.</p>
Assessment of Students	The final mark should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work and final discussion, and quality of the seminar paper

HEALTH PROMOTION IN PREVENTION OF NON-COMMUNICABLE DISEASES

Doncho Doney, Vladimir Lazarevik, Valentina Simonovska

Introduction

The greatest disease burden in Europe comes from non-communicable diseases (NCD), a group of conditions that includes cardiovascular disease, cancer, mental health problems, diabetes mellitus, chronic respiratory disease and musculoskeletal conditions. No less than 86% of deaths and 77% of the disease burden in the WHO European Region are caused by this broad group of disorders (1). This broad group of diseases is linked by common risk factors, underlying determinants and opportunities for intervention.

Gaining better health for the people of Europe is achievable. It is possible to significantly reduce the burden of premature death, disease and disability in Europe through comprehensive action on the leading causes and conditions. Investing in prevention and improved control of NCD would improve the quality of life and well-being of people, communities and societies.

NCD have a *multifactorial etiology* and result from complex interactions between individuals and their environment, including their opportunities for promoting health and countering their vulnerability to risks. *Individual characteristics* (such as sex, ethnicity, genetic predisposition) and health protective factors (such as emotional resilience), together with social, economic and environmental determinants (such as income, education, living and working conditions), determine differences in exposure and vulnerability of individuals to health-compromising conditions. These underlying determinants, or “causes of causes”, influence health opportunities, health-seeking and lifestyle behaviour as well as onset, expression and outcome of disease. A person’s genetic make-up is likely to be important in the probability of developing certain diseases, such as diabetes, cardiovascular disease, cancers, schizophrenia and Alzheimer’s disease. Although patterns of inheritance are not clear-cut, gene-environment interactions may play a major role (1).

Dying young or living with long-term illness or disability has economic implications for families and society. Employers and society carry a burden of absenteeism, decreased productivity, and employee turnover. Families and society carry a burden of health care costs (direct and indirect), reduced income, early retirement and increased reliance on social care and welfare support.

Health promotion and the prevention of NCD have a relatively small share of the health system budget in most of the European countries. According to the Organisation for Economic Co-operation and Development (OECD), on average only 3% of total health expenditure in OECD countries goes toward population-wide prevention and public health programmes, while most of the spending is focused on “sick care.”

Effective interventions already exist for the prevention and control of NCD. It is already possible to: improve the life style, prevent or modify risk factors; prevent the onset or progression of disease; prevent disability; and prevent early or painful death. Health outcomes can be improved by early detection, appropriate treatment and effective rehabilitation.

Cardiovascular disease (CVD) is the number 1 killer in Europe, causing more than half (52%) of all deaths across the Region, with heart disease or stroke the leading cause of death

in all 52 Member States (1,2). High blood pressure is one of the leading risk factors for coronary heart disease (CHD) and stroke, with prevalence of 15-30% of adult population having blood pressure 160/95 mmHg or higher.

The greatest potential for gain lies with prevention. Taking the example of CHD, altogether 80% of the reduction in CHD mortality in Finland during 1972–1992 has been explained by a decline in the major risk factors. Similarly, in Ireland, almost half (48.1%) of the reduction in CHD mortality rates during 1985–2000 among those aged 25–84 years has been attributed to favourable trends in population risk factors. In both countries, the greatest benefits appear to have come from reductions in mean cholesterol concentrations (from 6.9 to 5.8mmol/l, smoking prevalence (from over 50% to about 30%) and the diastolic blood pressure levels for about 8%.

Malignant neoplasms (cancer) have growing trend in all parts of the world, which mainly relate to the ageing of the population and an increase of the cancerogenic risk factors, especially tobacco smoking, much more widespread in developing countries. Each year about 15 billion in total, and 7 billion new cases of cancer have been registered in the world, a half of them in developing countries. The number of deaths caused by cancer in the world is about 5 billion per year. It means that treatment and cure are limited for most of the cases (60% in developed and much more in developing countries), especially in cases when the cancer has been diagnosed too late. About 70% of all malignancies are connected with the life style and the environmental risk factors, and at least one third of them might be prevented. Lung cancer is one of the most frequent malignancies, with upward trend in men and women, and with strong correlation with the number of smokers in the population and the intensity of smoking (number of cigarettes smoked per day). Lung cancer is the most common cause of death for adult male population in the European Region (1,2).

There is a major gap in implementing cancer related effective interventions. For example, 30 000 women die each year from cervical cancer in Europe, with death rates between two and four times higher in countries of central and eastern Europe than in western Europe: these deaths could be largely prevented through early detection and treatment. It is effective to screen individuals for early detection of breast (mammography) and cervical cancer (Pap-test) in women and colorectal and prostate cancer (digital examination of rectum and prostate) in men, particularly if this takes place through organized, population-wide screening programmes. It is very important to motivate people to cooperate and accept those procedures, either during their visits to health institutions or within the population-based organized screening.

Chronic respiratory diseases (CRD) are very common diseases (chronic bronchitis, emphysema, asthma and chronic obstructive pulmonary disease) with prevalence of 300-600 billions or 8-20% within the world population. CRD are cause of death for almost 3 billion people per year in the world. Cigarette smoking is the main risk factor for CRD, as well as air pollution.

Diabetes mellitus upward trend relate to urbanization and ageing of the population worldwide. It is estimated that the number of adult population with diabetes in the world is almost 60 billion. The prevalence of diabetes in Europe is from 2-5% of adult population, and in USA about 20% of elderly population. Patterns of disease differ by ethnic groups: type

2 diabetes mellitus is up to six times more common in people of South Asian descent and up to three times more common among those of African (Fiji, Mauritius, South Africa) and African-Caribbean origin, for instance.

The main risk factors for diabetes are obesity, inappropriate nutrition and insufficient physical activity, which means it belongs to the group of preventable diseases. Fifty per cent of people with diabetes mellitus may be unidentified; in those that are, 50% of patients may have unsatisfactory metabolic, lipid and blood pressure control, even though it is known that up to 80% of people with diabetes will die of cardiovascular disease.

Mental and neurological disorders belonging to the group of NCD, too. The number of people suffering from these diseases in the world is about 300 billions. Within the group of NCD might be included ***injuries and violence***, with big number of handicapped persons, deaths and suicides, as well as ***dental and oral health disorders***.

Risk Factors Related to Non-communicable Diseases

Almost 60% of the disease burden in Europe, as measured by DALYs, is accounted for by seven leading risk factors: 1) high blood pressure (12.8%); 2) tobacco (12.3%); 3) alcohol (10.1%); 4) high blood cholesterol (8.7%); 5) overweight (7.8%); 6) low fruit and vegetable intake (4.4%); and 7) physical inactivity (3.5%). It should also be recognised that diabetes is a major risk factor and trigger for cardiovascular diseases. In 37 of the 52 European Member States of WHO, the leading risk factor for deaths is high blood pressure; in 31 Member States, tobacco is the leading risk factor for disease burden. Alcohol is the leading risk factor for both disability and death among young people in Europe (1).

These leading risk factors are common to many of the leading conditions in Europe. Each of these seven leading risk factors, for instance, is associated with at least two of the leading conditions and, in return, each of the leading conditions is associated with two or more risk factors. Furthermore, in many individuals, particularly the socially disadvantaged, risk factors frequently cluster and interact, often multiplicatively.

Diseases also cluster in individuals, so that several co-morbidities can exist at once. At least 35% of men over 60 years of age have been found to have 2 or more chronic conditions and the number of co-morbidities increases progressively with age, with higher levels among women. There are strong interrelationships between physical and mental health, with both related through common determinants such as poor housing, poor nutrition, or poor education, or common risk factors such as alcohol.

Poverty

There is an uneven distribution of chronic conditions and related risk factors throughout the population, with higher concentration among the poor and vulnerable population groups. People in low socioeconomic groups have at least twice the risk of serious illness and premature death as those in high socioeconomic groups (3).

Inequalities in health between people with higher and lower educational level, occupational class and income level have been found in all European countries where measured. The increasing concentration of risk factors in the lower socioeconomic groups is leading to a widening gap in future health outcomes.

When improvements to health do occur, the benefits are unevenly distributed within society, with few exceptions. When all groups in society are exposed to some extent to health

interventions, those in higher socioeconomic groups have tend to respond better and benefit more. Mortality rates are declining proportionally faster in the higher than lower socioeconomic groups, particularly for CVD, widening further the differences in life expectancy between the two groups. Treatment may not be accessible, available or affordable, and the burden of costs can push families further into poverty.

Given the cluster of co-morbidities among the poor, and the potential number of drugs needed for effective treatment, it is no wonder that adherence to long-term therapy can be a challenge. Further, stigma and discrimination associated with certain diseases such as diabetes and mental health problems can close employment opportunities for some and further compound the interrelationship between poverty and ill-health.

International Health Promotion and NCD prevention and control movement

Health promotion began to gain acceptance worldwide after the launching of the Ottawa Charter for Health Promotion at the first international health promotion conference held in Ottawa, Canada 1986. The Charter was based on the Health for All Strategy, the Alma Ata Declaration and inspired by the Canadian Health Minister Marc Lalonde's 'health field concept'. It introduced a focus on health and its determinants into a debate that so far was dominated by a biomedical approach to health.

The Charter proposed a revolutionary shift in perspective that underlined the contribution of other policy sectors in health creation as well as the central role of individuals and communities in contributing to health. Health promotion was defined in the Charter as a 'process of enabling people to increase control over, and to improve their health'.

The process of the Ottawa Charter was scientifically facilitated by a document on concept and principles and an intensive debate before and at the conference from which emerged the five action areas of the Ottawa Charter (4):

- Build healthy public policy
- Create supportive environments for health
- Strengthen community action
- Develop personal skills
- Reorient health services.

In doing so, it brought together both existing and new ideas in one document, and gave them currency and status by being part of the WHO movement towards health for all. It proposed a salutogenic view on health which focuses on strengthening peoples' health potential and which is aimed at whole populations over the life-course. It underlined that all people have their individual health potential, even if living with severe disease or disability. It reinforced the directions set by the Health for All Strategy to view the goal of health policy and health programmes as *"providing people with the opportunity to lead a socially and economically productive life"*, as well as by the statement in the preamble of the WHO Constitution - *"The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition."*

Since the adoption of the Ottawa Charter, health promotion has become a leading and vital component of modern public health and at the beginning of the 21st century it is a major concern of both developing and developed countries. It engages local communities, politicians, decision makers, lay people, popular movements and voluntary organizations,

business and numerous other actors. Twenty years after the adoption of the Ottawa Charter its basic values, principles and strategic action proposals remain valid.

While both developing and developed countries are facing a growing proportion of elderly and a population with more chronic conditions and non-communicable diseases, many developing countries are in addition still faced with infectious diseases, and increasingly injuries and violence as their economies grows. Changing living conditions and lifestyle bring more stress and thus a threat to mental health of those in both developed and developing countries alike. Billions of people are also undernourished and starving, causing millions of premature deaths and avoidable suffering. The story could be continued. In almost all cases children and young people are the prime losers. Much stronger efforts to promote health must be made for and by developing countries.

There is overwhelming evidence showing that most of the global burden of diseases and health inequalities are caused by wider social determinants. This interdependence is also recognized by the Millennium Development Goals. Without significant gains in poverty reduction, food security, education, women's empowerment and alleviated living conditions in slums, no improved or reduced inequalities in health.

The dynamics of globalization affects health in many ways: trade, tourism, physical and cultural environment, economic transactions, transports, production of goods and working environment. Like the communication revolution it has both positive and negative effects, and the opinion is split about its advantages and disadvantages.

The Ottawa conference was followed by a series of WHO global health promotion conferences which also led to regional, national and even local and community initiatives in health promotion:

- In Adelaide, Australia 1988;
- In Sundsvall, Sweden 1991;
- In Jakarta, Indonesia 1997;
- In Mexico City, Mexico 2000; i
- In Bangkok, Thailand, 7-11 August, 2005.

In Bangkok were identified actions, commitments and pledges required to address the determinants of health in a globalized world through health promotion. The Bangkok Charter affirms that policies and partnerships to empower communities, and to improve health and health equality, should be at the centre of global and national development. The Bangkok Charter complements and builds upon the values, principles and action strategies of health promotion established by the *Ottawa Charter for Health Promotion* and the recommendations of the subsequent global health promotion conferences which have been confirmed by Member States through the World Health Assembly. The Bangkok Charter reaches out to people, groups and organizations that are critical to the achievement of health, including:

- governments and politicians at all levels
- civil society
- the private sector
- international organizations, and
- the public health community.

Health promotion is based on the critical human right that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without

discrimination. Health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improve their health. It is a core function of public health and contributes to the work of tackling communicable and non-communicable diseases and other threats to health.

General principles for prevention and control of NCD

The most of the NCD might be prevented. Personal behaviour related to unhealthy life style and societal (cultural) factors are closely connected to high prevalence and upward trend of NCD. The personal risk of developing disease can be dependent on the interaction between the individual, his or her life style and personal susceptibility and the wider environment. Reduction and control of the more modifiable risk factors and wider determinants remain the cornerstone of action in prevention and control of NCD (*primary prevention*). Although difficult, risk factors associated to unhealthy life styles might be reduced successfully if favourable social awareness and mobilization for such changes would be created.

Interventions built on the implementation of policies tackling the wider health determinants like economic growth, income inequalities and poverty, as well as education, the working environment, unemployment and access to health care, represent the main options for substantial health gains. This broad range of population-wide measures requires broad societal efforts, with both health and non-health sectors working together. The health sector needs to reach out to different sectors of society to make them more aware of the role they play in determining certain conditions and the responsibility they bear for their improvement. By their nature, efforts to reduce social inequalities in health should mainly be regarded as integral in social and economic policies, rather than separate activities targeted at health inequalities.

Medical screening can prevent disability and death and improve quality of life, if it is effectively implemented in early pre-clinical stage of disease while the first symptoms haven't appeared yet, and if effective, affordable and acceptable treatment is available to those who require it (*secondary prevention*). The number of proven screening tests to identify individuals at high risk of disease is limited, and those that do exist require sufficient health systems capacity for effective implementation. Screening, and then treating, individuals for elevated risk of cardiovascular disease using an overall or total risk approach, which takes into account several risk factors at once, is more cost-effective than focusing just on individual risk factors or on those based on arbitrary cut-off levels of individual risk factors.

The most accessible intervention measures for achieving the goals of the primary and secondary prevention of NCD are:

- Legislative and regulatory measures (actions against smoking, promotion of healthy food and nutrition, safe environmental conditions and healthy work-place environment);
- Education of the population to avoid risk behaviour and to accept healthy life styles;
- Identification of health risks among population and implementation of appropriate measures for risk reduction;
- Screening of diseases at early stages in order to provide more efficient treatment and cure, etc.

European NCD Strategy Directives

Population-based prevention is the most sustainable strategy in the long term, and it is a means of addressing a number of NCD and their common risk factors at the same time. Examples of effective interventions to reduce the overall prevalence of risk factors in the population include taxation of tobacco products or lowering the fat, salt and sugar content of processed foods. Multiple risk factor interventions at the population level can bring about changes in risk factor profiles which, while modest at the individual level, can lead to significant impact on NCD mortality at that scale.

Both population-based and high-risk approaches are relevant in Europe in the 21st century, although their potential for further gain and applicability is likely to vary by country and over time. For those European countries where relatively simple and cheap strategies, such as tobacco taxation and replacement of saturated with unsaturated fats, have yet to be widely implemented, population strategies are likely to have the greatest impact, although individual strategies targeting patients at high risk should be introduced in parallel. On the other hand, in those European countries where there have been decades of population-level strategies to tackle risk factors with successful outcomes, an increasing potential for additional health gain may now lie with individual strategies targeting patients at high risk, although population-level approaches should continue.

Preventive interventions need to be combined with efforts to strengthen health protective factors which can enhance people's resilience and improve their resistance to risk factors and disease. Promoting a good start in life with early attachment and adequate support to parents and young children is an important investment in physical and emotional development, with lifelong consequences. Belonging to a social network, and feeling connected with others, can have a powerful protective effect on health. Good social support can help give people the emotional and practical resources they need, particularly for coping with difficult life transitions. The people that receive less emotional and practical social support than others, more frequently suffer from depression, the level of incapacity due to chronic diseases is greater, and in women during pregnancy, the risk is higher for complication of the pregnancy. The availability of the emotional and practical social support varies with the social and economic status. The poverty can lead to social exclusion and isolation. The social cohesion - presence of mutual trust and respect in the local community and wider in society - helps protect the people and their health against the cardiovascular diseases and mental disorders (2,5).

Focus on prevention and the wider determinants of health to improve the health of the whole population and reduce health inequalities is considered essential in both, low income and high-income countries struggling to contain spiralling health care costs.

In summary, overall the greatest potential for health gain lies in a comprehensive strategy that simultaneously promotes population-level health promotion and disease prevention programmes and actively targets groups and individuals at high risk, while maximizing population coverage with effective treatment and care. Tackling the wider determinants of health and reducing inequalities within and between countries has the potential to contribute to major improvements.

Five key principles of European Strategy on NCD Prevention and Control which should guide policy development at all levels are as follows (1):

1. The ultimate goal of health policy is to achieve the full health potential of everyone;
2. Closing the health gap (i.e. solidarity) is essential for public health;
3. People's participation is crucial for health development;
4. Health development can be achieved only through multi-sectoral strategies and Inter-sectoral investments that address health determinants;
5. Every sector of society is accountable for the health impact of its own activities.

In line with the Health for All vision and the definition of health in the WHO Constitution, health is a positive state of well-being and “not merely the absence of disease”, and health policy is much more than just patient care. Health as a right extends not only to timely and appropriate health care but also to the underlying determinants of health. A government has the responsibility to act on the social determinants of health and to translate this responsibility into policy, providing the enabling conditions that make health opportunities, and ultimately good health outcomes, available to all, regardless of age, gender, ethnicity, etc. Therefore, in line with the Health for All approach, this strategy addresses all four types of programme efforts needed for health improvement: addressing health determinants; promotion of healthy lifestyles; prevention and early detection programmes; and health-centred patient care.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Cardiovascular Diseases Prevention and Control
Module: 5.3	ECTS: 2.0
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Key words	cardiovascular diseases, health promotion, disease prevention, epidemiology, health belief model
Learning objectives	<p>After completing this course the attendants should be:</p> <ul style="list-style-type: none"> • acquainted with the dimensions of the overall CVD problem; • acquainted with the epidemiological methods and surveillance of CVD; • capable for creative thinking for new approaches and programmes for CVD prevention and care improvement in their environment; • coordinate market-oriented strategies and activities with the Health For All ideologies; • teaching new highly effective and inexpensive methods i.e.: self-control, self-management, home therapies of chronically ill and difficult patients, teams, volunteers, family, neighbours; • inventing activities and programmes for strengthening intersectorial cooperation and cooperation with the Government; • able to manage activities at PHC level for CVD prevention; • acquainted with the new technologies in CVD: diagnosis, treatments, trends, imaging, invasive, surgery, genetic, molecular epidemiology, self-regulation of risk factors; • envisioning the future: new methods in teaching, information diffusion, mass detection and diagnosis of CVD, decreasing the costs and the mortality, prolonging the life and improving the quality of life.

<p>Abstract</p>	<p>The CVD (heart disease and stroke, atherosclerosis, high blood pressure) today are the cause of the greatest public health pandemic globally in the history of the world ever, with very high morbidity and death rate, and economical and social consequences. CVD are the number one killer and cause more than 50% of all deaths. CVD are a major cause of disability, health and human suffering. Social and economic losses are high and CVD cause 25-30% of all medical expenses.</p> <p>The risk factors for CVD are well known and largely preventable through health education and health promotion. The medical knowledge for effective prevention is available and health promotion programmes for prevention of CVD have a huge public health potential leading to increased productivity among the working age population, to improved functional capacity among elderly, to diminishing health inequalities, to a reduced needs for health and social services, and to an increased quality of life to everybody.</p> <p>The resources needed for CVD prevention and heart health promotion are modest in relation to the huge health service costs to society caused by CVD. There is a marked divergence between the advances in the expensive clinical medicine management and the much lower costs for prevention of the CVD. The output is a condensed informative, educative and action programme encompassing the following aspects of the CVD: epidemiology, social medicine, economics, information, clinical aspects, quantization, “home medicine”, research, and the future.</p> <p>There is a significant weakness and under-motivation of the CVD prevention in many countries. The action for CVD prevention should be comprehensive encompassing health education and health promotion activities toward healthy life styles, capacity building and strengthening, monitoring and evaluation of the policy and programme interventions impact, advancing public health policy, and engaging relevant stakeholders and sectors in partnerships in order to reverse the CVD epidemic.</p>
<p>Teaching methods</p>	<ol style="list-style-type: none"> 1. A modular approach: ten modules with appropriate and flexible sub-modules are as follows: <ul style="list-style-type: none"> • epidemiology of the CVD; • social aspects and economics of the CVD; • financing and other resource finding for the CVD; • elementary clinical aspects; • prevention; • “home medicine” related to the CVD; • future: science, technologies, strategies, optimizations. 2. For the practical action programme, one or more modules could be chosen. It will be performed in individual or small group basis. 3. Accessories: For the purpose of the education, the following facilities will be used: medical and nursing schools, clinical centres, public health schools, hospices, libraries, personal computers, additional written materials, etc. 4. The programme is designed for postgraduate students and professionals in: medicine, public health, health management, health administration, other interested profiles.

Specific recommendations for teachers	<ol style="list-style-type: none">1. Interactive modes of teaching are preferable. Students should take part in the teaching.2. All modern technologies should be applied, but also terrain discussions will be practiced thoroughly. Constructive and heuristic improvisations are welcome.3. Two groups of attendants should be identified by the basic approach and responsibility: Public health and clinical practice providers.
Assessment of Students	<ol style="list-style-type: none">1. Very quick tests will be designed before and after the sessions.2. Students might design questions as well (desirable).3. The assessment should give an esteem of general knowledge, special subject knowledge, teaching abilities, propagandistic abilities, creativeness (innovativeness in new methods), practical abilities, enthusiasm, the area of greatest interest and particular abilities.4. The professor (or a commission) might decide on whether a final examination is needed for individual attendants.

CARDIOVASCULAR DISEASES PREVENTION AND CONTROL

Samuel Sadikario, Doncho Donev, Lijana Zaletel Kragelj

Introduction

The miracle of the 20th century in the medical world has attained few outstanding, and we would say almost-magical effects on modifying the nature of being. Such are the basic solutions of the treatment and the prevention of the infectious diseases, the exponential decrease of children mortality, doubling of the average human life from 40 to 80 years, novel surgeries, the DNA structure and gene manipulation, and inception of life in artificial conditions. However, it opens the door for other life-related problems and complexities to be solved in the future.

There are four imminent plagues in the 21st century:

- Non-communicable diseases
- Weather changes and other natural phenomena
- Poverty and other scarcities
- Wars

The two entities that cause the greatest problems including life threatening and unstoppable rise of the costs are the cardiovascular and the malignant diseases. The first will remain on the top of the list at least in the next few decades. Cardiovascular diseases (CVD) are related to about half of the deaths, 80% of the burden of disease, and 10-30% of the overall health care costs in the world. The main factors for the increase of the frequency of the CVD are the arteriosclerosis, aging, the metabolic syndrome, and the lifestyle.

Aims

There is no a single way of solving the CVD problem. Public health (PH) will certainly not bring the problem to the final solution, but it is a fundamental approach, which is expected to bring it to a considerable reduction. This chapter is a part of an advanced and ambitious course in PH, intending to provide up to date and high quality information, as well as qualification of the students in a very narrow specialized subject. The text is related to the CVD as a leading PH and medical problem, recognized as such from very recently. Because of its enormous consequences, we insist on the urgency of spreading the information related to the CVD to both the expert community and the general population. Therefore, the orientation of this course should meet the following requirements: high quality, inventiveness, information and action.

Historical overview of the epidemiological transition

About a hundred years ago, there has not been such an entity as epidemiology of CVD, or even the more distant public health (PH) of the CVD. The three historical stages of the epidemiological transition as defined by Gaziano and Omran (1) are:

1. Pestilence and famine (before 1900, expected life 35 years);
2. The Receding pandemics (until around 1960, decrease of famine and infections, and increase in rheumatic and ischemic heart diseases, expected life 50 years);
3. The Degenerative and man-made disease (until 1980, CVD, cerebrovascular diseases, malignancies, expected life over 60 years). There are two additional phases appearing in the literature:

4. Delayed degenerative diseases (after 1980, CVD, and cerebrovascular disease, with life expectancy over 70 years);
5. The epidemic of obesity and diabetes (after 2000, in the world one billion people are obese, and 200 millions have diabetes).

It is actually after the 1948 period when the notion of the epidemiology of CVD has appeared in the major textbooks and journals, while the PH of CVD appeared very recently as a part of the PH of the non-communicative diseases. Presently, parts of South Asia, South America and Africa are at the phase one, parts of Northern Asia and Europe are at the peak of the third or fourth phase, while Northern America and parts of Europe are in the fourth and fifth phase (1-4).

Modules

The achievement of the highest quality of learning (HQL) implies the following assumptions: information selectivity, efficient information provision, experience integration, and task qualification provision, the most simple approach is the modular system. The future editions of this manual will certainly contain “constant knowledge” (CK) and “variable knowledge” (VK) quantities.

The course is designed of 10 modules.

1. CVD entities and risk factors;
2. epidemiology of the CVD;
3. the social aspects and the economics of the CVD;
4. resource finding, including financing of the CVD prevention;
5. the private sector and the public health (PH) of the CVD;
6. prevention;
7. “home medicine” and the prevention of the CVD;
8. information and health communication;
9. CVD in the rural medicine and in the developing countries;
10. future: science, technologies, strategies, optimization and information.

Altogether, they cover a wide range of the problem, which by the nature of the subject, are inter-connected between them. The student should be able to perform a specific practical task, and may choose one or more modules. According to a wide experience, the best approach is the candidates to prepare a lecture or lectures, using this manual, information research, and supervision. A feedback from a valuable work will provide high quality improvements of the mentioned VK and even the CK. Each module is divided in sub-modules.

CVD entities and risk factors

The Public Health and the clinical aspects of the CVD are related to several entities (listed on table 1), which in general could be divided in two categories: atherosclerotic and non-atherosclerotic diseases (3-5).

Sub-modules

Sub-module A

This sub-module is a list of CVD entities. A brief listing of categories of CVD is given in Table 1.

Table 1. Categories of cardiovascular diseases (CVD).

Category
1. Coronary heart disease (CHD) including: myocardial infarction, unstable angina, stable angina, and sudden death syndrome (SDS);
2. Cerebrovascular disease (CVD or stroke);
3. Peripheral vascular disease (PVD);
4. Dissection and major vessel aneurysms;
5. Diabetic angiopathies;
6. Hypertensive heart disease;
7. Heart failure (HF);
8. Cardiomyopathies;
9. Rheumatic heart disease;
10. Congenital heart disease.

Sub-module B

Second sub-module is a list of the risk factors. A brief listing of the risk factors for CVD is given in Table 2 (3-5):

Table 2. The identified risk factors for the CVD.

Modifiable	Non-modifiable	Other
Diabetes	Heredity	Inflammation (markers)
Hyertension	Age	CRP
Insulin resistance	Previous CVD events	TNF
Obesity	Gender	sICAM
Hyperlipidemia	Ethnicity	IL 6
Smoking		IL 18
Alcohol		Metabolic
Drug addiction		NO (def.production)
Hyper-coagulation		D-Dimer
Stress		Fibrinogen
Physical inactivity		Homocystein
Depression		
High altitude		
Dietary habits:		
salt intake		
water hardness		
processed food		
high thyramine content		
Other co-morbidities		
endocrine disease		
hyper-uricemia		
renal disease		
rheumatic disease		
vasculitis		
connective tissue disease		
trauma		
hyperviscosity syndromes		
Indirect factors		
poverty, culture		
pharmaceuticals		

LEGEND: CRP = C-reactive protein; TNF = tumor necrosing factor, IL interleukin; NO = nitric oxide

The main risk factors are aggregated in the entity of “metabolic syndrome”, including smoking, hypertension, diabetes, insulin resistance, obesity, hyperlipidemia and low physical activity. This needs discussions, experience, classifications, practical work with physicians, nurses, patients and media professionals. Introduction of quantifiers (Framingham index, SCORE) in everyday practice and epidemiological studies is mandatory. Lemma: any kind of prevention of the CVD and modification of the outcome of the CVD (disease outputs) depend on the modifications of the risk factors (inputs) (3-5).

Epidemiology

The epidemiology is both “anatomy”, “pathology” and “patho-physiology” of the PH. Any strategic, economic, or preventive project should be built up over a previous epidemiological study. In our case, it includes the epidemiology of the CVD and the risk factors. The mortality rates have declined in the developed countries, but in the developing countries, they increased or remained the same. The prevalence and the incidence rates have increased in all countries, which is due to the increased survival, the aging population, and the increase of the frequencies of most of the risk factors (3-6).

The “discovery” of the epidemiology of the CVD is an achievement of the second half of the 20-th century (1,2). It started with the models of the epidemiology of some risk factors, i.e. diabetes, hypertension and rheumatic diseases, and it was recognized as a problem after noting the enormous mortality rates and the increase of the costs. The CVD today pause greater problem than the tuberculosis and the syphilis together in the former centuries. Looking at the history of medicine, until 200 years ago, less than 10% of the population would have died from heart diseases, with the life duration being less than 40 years. They have not even had the “opportunity of becoming old”. People would have mostly died either during the birth, or soon after that by infection, or by the consequences of wars. The tasks of the CVD epidemiology are the detection of occurrence, surveillance (trends of changes), natural history studies, etiological hypotheses (risk factors), comparisons (meta-analysis) and prevention programmes contribution. Those are concentrated in three categories of CVD epidemiology as revealed on the table 3 (3-6):

Table 3. Categories of CVD epidemiology.

Category	Description
Descriptive epidemiology	incidence rates, prevalence rates, mortality rates according to entity, age, sex, geographical gradient
Analytic epidemiology	estimating relationships between CVD and risk factors, actuarial analyzing, risk model development, meta-analyses, econometric analyses
Experimental epidemiology	interventions: studies, prevention strategies

The sub-modules

Sub-module A

The first sub-module: an elementary and encyclopaedic review of the basic epidemiological notions which are important for the CVD - mortality rates, prevalence rates, incidence rates, trends, gradients, study design, collection of data, data representation, and some simple mathematical modelling. It is worth noting the peculiarity that very simple mathematical concepts pause rather difficult performances in the practical executions, such are finding

prevalence rates, incidence rates, mortality rates and avoiding biases. Why? The student should be acquainted with as many biases as possible, since they are so massively present in the clinical studies, population research, and the dissertations. This is particularly the case in the developing countries, where public health institutions are either at their inception, or do not exist at all. Very serious research works have been harmed by various biases, which is followed by inevitable financial losses. Even the meta-analyses when non-including data from underdeveloped countries or regions could be considered as “damaged” or biased. There are two possible remedies for those problems:

1. The first level solution is obligatory consultation of an epidemiologist or at least a qualified medical statistician for each CVD study.
2. The second level solution is as we propose: a networking of public health schools (PHSN), which would enable high level of information flow, high level of quality control, real validity of the information, reducing expenditures, and international affirmation of each valid research work from any medical centre.

Sub-module B

The second sub-module: real figures. 50-60% of all deaths in the world are due to CVD (3-6).

1. The coronary heart disease.

In the US 1.680.000 persons are reported annually with ACS (acute coronary syndrome), 1.5 million/y with myocardial infarction (MI), which is 600/100.000/y. There are 500.000-700.000 deaths/y in the US. In the world there are 12 million deaths from MI per year, and that is 50% of all deaths. One third of the STEMI (ST elevation myocardial infarction) die within the first 24h, and more than half of those deaths are in the pre-hospital phase. In hospital deaths from STEMI are 10%, and another 10% during the first year. The factors to prevent those still high mortality figures include: transportation, and risk factor modifications (hypertension, hyperglycemia, hyperlipidemia, hypercoagulation and smoking). Age: most of the cases are before the age of 45, and more in males until 70. The pre-45 MI incidence is increasing, with the main risk factors being the cocaine use, diabetes, renal disease, hyper-cholesterolemia, and family clustering. The infant death rate from MI is $< 0.2 / 100.000/y$ for one year old or less, and $0.2/100.000/y$ for 15-24 year old. Age, sex and heredity explain approximately 50% of the deaths. Generally, angina pectoris is more frequent in females, while MI in males. MI frequency and prognosis worsens in the postmenopausal period. Unregulated diabetes increase the death rate by 30%. Each 10 mmHg increase of blood pressure above normal (130/80) double the risk of coronary heart disease.

2. Stroke.

In the US 500.000 cases per year have the first time stroke. It is estimated to increase to 1 million by the 2050. About four million people (4.3 million in 1990) die from stroke per year in the world. In the US stroke accounts 7.1% of all deaths. The incidence is higher in males, mainly over 65. However, 25% of the cases occur before 65. It is estimated that before the age of 70, 1 in 20 persons will suffer a stroke. A sharp decline of mortality rates were registered between 1972 and 1980, which reflects improved diagnostic criteria and facilities, and the increased awareness. The main risk factors include: age, hypertension, smoking, heart disease (atrial fibrillation, MI), diabetes, hyperlipidemia, and oral contraceptive use (especially in smokers).

The socio-economics of the CVD

If you want to do something for your country, do something for the social medicine. This expresses the importance of the social medicine in modern life. There is a diversity of opinions on whether the socioeconomic status (SES) influence on the outcome of the CVD is a “direct” or “indirect” factor or complex of factors (7-9). It is unanimously accepted that there is a correlation between the SES and both the incidence and the mortality of the CVD.

The “rule of 3’s” is as follows: one third of the population does not feel healthy; the poor population feels ill three times more frequently than the wealthy and the educated; the poor are three times more frequent than the wealthy in the developed countries; the three levels of SES consist of: material, behavioural and psychological status.

In-deep evaluation of the SES, including quantification originates from very recent dates with the important works of Kunst, Mackenbach and Regidor (10-12). Inequalities in health care make a very sensitive and painful issue in the developed countries. They are found to influence strongly the incidence and the outcome of CVD. In the next few decades it will be very important to develop further the quantitative instruments for measuring the socioeconomic inequalities in a given society or state.

Lemma: It is more beneficial to engage or educate the local intellectual resources in planning and organizing the social medical and PH programmes in your country, rather than engaging foreign experts. The experiences in the developing countries, and the cost-benefit estimates reveal that in most developing countries, especially the former socialist states, have achieved considerable amount of high education, experience, motivation and infrastructure. Cultural disparities and high costs are frequently the background factors of those “tutoring” approach inappropriateness. The solution is in the more efficient and cost-benefit inter-cultural communications (12), and improved expert communications i.e. the case of PHSN.

The sub-modules

Sub-module A

The parameters of the SES: defining and evaluating. There is considerable level of subjectivity and self-estimation on the quantification of the SES. The SES parameters that have been considered in the studies of the CVD include: the income of the patient, the income of the patient’s parents, the education of the patient or the parents, ethnicity, the neighbour context, unemployment, risk factors related to the SES – smoking, alcohol, obesity, diabetes, nutrition, stress, and hypertension (3-5, 10-12).

Sub-module B

There are a variety of mathematical models and calculators of the socioeconomic status of a given population as determined by Kunst, Regidor, Mackenbach, Lorenz etc. (10-12). Those models are useful in the determining of the impact of the social strata, education, poverty, education of the parents, social status of the parents and other related factors, on the incidence and mortality of a chronic disease, in particular the CVD. It has been found that lower social class is more frequently associated with CVD, mortality, and the risk factors such are diabetes, hypertension, stress, smoking, alcohol, and hyperlipidemia.

Resource finding financing of the cvd prevention and public health

As mentioned previously, the direct costs of the treatments of the CVD are from one fourth to one third of all overall health care costs (1-5). In the US the annual expenses for the curative CVD management are near 400 billion dollars. The US costs of diabetes mounted to

130 billion dollars per year. There are no data on the costs of the CVD prevention. Thus, how are we going to make the budgeting, let alone the finance finding of the CVD prevention? Hoping that those needs signify the “transition period” for the overall CVD management (from predominantly “curative” to equally “preventive”), a flexible and innovative complex of interventions has to be undertaken (13-14). It is very important that the pursuers of this module and this professional orientation should have some previous knowledge in medical financing – best to hold a Masters Degree on medical financing, general financing, or economics.

A highly creative approach spectrum is needed to be developed, which should create “symmetry” of seemingly divergent realities – market economy, health provision inequality gap, and rapid development with the non-linear increase of the expenses (13-14).

The sub-modules

Sub-module A

Sub-module A is a review of general financing:

- consulting services (i.e. accounting, tax, management, finance planning, forensic, business valuation, fraud prevention and detection, litigation, and technology consultation),
- banking basics,
- stock marketing basics,
- portfolio models,
- derivative pricing,
- option trading,
- cash management,
- regulatory and tax issues, and
- financial instrument application.

How they function in your country? Although at “encyclopaedic” level, this knowledge should be discussed and performed with the assistance of financial experts (13).

Sub-module B

The content of this sub-module is tackling the meaning of the prevention and the PH financing (14). There are three reasons for medical compulsory insurance of prevention and PH of the CVD:

1. to avoid later treatments and their large bills;
2. optimization of the prevention, and
3. on-time detection.

Compulsory CVD prevention is a direct investment in mortality decrease and lifespan increase. There is an enormous amount of offered insurance packages on the market, as opposed to the vast majority of uninformed individuals (including the most educated), which in a given situation might not meet the best condition of coverage. The increase of the prevention and PH related insurance on the CVD should be at least parallel to the rise of the health care costs, which in the developed countries is 10-15% per year. So, individual instructors for prevention insurance packages are needed. In the US, only 32% of the Hispanics have any health care insurance (including prevention), while among the white population it is 53%, which is below the rates in other developed countries (14).

The private sector and the public health of the CVD

There is a tendency of intense growth of the private sector in the developing countries. Although mainly high performance “curative” oriented (15), there is a considerable tendency of preventive orientation of the private institutions. Because of the lack of financial resources at the national levels in those countries, they are being forced to the transition from state-managed medicine to a private medicine. Most of the private practitioners (GP, family doctors, internists, and paediatricians) are very much interested in CVD practice. The CVD investments become very high, consisting of equipment investments, and pharmaceutical expenses which a large portion of the overall health-related expenses. In the developing countries, the private sector is mostly concentrated in the outpatient centres, while in the developed countries a considerable portion of the in-patient institutions are in the private sector (15). It is conceivable that the private sector will grow in the next few decades. It is also a good source of medical education financing (self-financing). Although the ideal mode of practices would be those related to the preventive medicine, there are still very few programmes and activities oriented to private-medicine-based prevention. The most probable reason for that is the curative-medicine-oriented education of the medical doctors and the nurses, as well as the high-level investments required for the CVD practice. However, the cost-benefit complex of the preventive medicine and the high performance private sector is a noticeable opportunity of the recent future (15-16).

The sub-modules

Sub-module A

This sub-module is about advantages and disadvantages of the private sector concerning the CVD. High performance private sector centres have large advantages over low performance centres in the quality of care and the mortality reduction (15). On the other hand, the costs in the high performance private centres are much higher than in the relevant state hospitals. In the developing countries, the private sector has the advantage in the low cost interventions, which might be covered even on out-of-pocket basis. Although they can be adapted for emergency cases, in those countries they are still better managed in the state hospitals. Home therapies are still under the state institution coverage, although there is a high potential for the private sector. The private sector is slow growing and very difficult to develop in very poor and low income countries (i.e. less than 1000 US \$ per insurance recipient per year).

Sub-module B

Establishing the predominantly preventive CVD private centre is a challenging paradigm, and a requiring for the strategists. In theory, there are not such narrow-specialized private centres. However, in the practice there are cost benefit units whose incomes are predominantly coming from CVD patients. Regarding the aging population rise and the high frequency of the risk factors, as well as the high frequency of post-event patients, there is a need of such centres – either strictly specialized, or at least 50% engaged with CVD patients. Good examples of specialized centres (both private and state-owned) are the diabetes centres, hypertension clinics, neurological centres (stroke) etc. Prepare a concept of a specialized private CVD prevention clinic.

Sub-module C

This sub-module is about the position of the nurse in CVD prevention, especially in the preventive private sector.

The nurse can be engaged individually or in a team in the preventive CVD programmes on private basis. A very good example is the experience the cases on home preventive care. The specially educated nurses can perform screening, control and education related to the risk factors (i.e. smoking, diabetes, obesity, hyperlipidemia, hypertension, exercising, screening and CVD detection, etc). In rural environments, or quarters with poor people, nursing might be the only cost-approvable or affordable PH providers.

Prevention of the CVD

This is a very difficult subject. Why? The answer to the question why is, because the plethora of the questions which are fundamental, and the answers which are superficial. Few of those questions are:

- How to improve the finances (they are not even at the starting point in most of the countries);
- How to find final solutions (such as the example of the smallpox and other infective diseases);
- If the consequences and the aim of the CVD prevention are to prolong the life of the population, how are we going to deal with the problem of the aging population (without ideas of restructuring the society, with no paradigms both individual or collective for the increasing mass of that population which tends to become the half of the world in the next decades);
- How to integrate the leading clinical minds in the public health community (the great majority of the medical intellectual capacities are concentrated in the clinical wards, challenged by the rapid advances in the field of the clinical medicine) (2-5, 17-20).

The goals of the CVD prevention are to decrease the incidence and the mortality from those entities as revealed on table 4 (3, 4, 17, 19):

Table 4. The goals of the CVD prevention at all levels.

Level of prevention	Tasks/activities
Primordial	Social Legal, ethical, human rights Economic Cultural, social marketing etc.
Primary	Risk factor control i.e. <ul style="list-style-type: none"> • education; • counselling (diabetes, hypertension, diet etc); • check ups (risk populations, women, professions); • treatments (diabetes, hyperlipidemia, alcoholism etc.).
Secondary	Symptomatic patients: <ul style="list-style-type: none"> • screening, detection; • proper treatment (proper medicaments); • risk factor elimination (rigorous); • regular control; • invasive and operative approach (if indicated); • self-control and home therapies.

Prevention should mean adding ages to healthy organisms and minds. Prevention of the CVD is not a the domain of medical doctors only, but it is a structure made up of almost all profiles of professionals and researchers dealing with the most fundamental laws of nature and the laws of society. The approach in all levels can be: individual, collective, and mass (i.e. social marketing, media, schools, regulative). Few examples of community-wide CVD prevention programmes are given on the table 5:

Table 5. Community based programmes – examples

Community based programmes
1. Framingham Heart Study (1948-). USA. Framingham risk scoring
2. Stanford Project (1972-5, 1980-6). USA
3. Minnesota Cardiovascular Health Programme (1980-8). USA
4. Multiple Risk Factor Intervention Trial (1972-9). USA
5. North Karelia Project (1972-). Finland

Sub-modules

Sub-module A

This sub-module is dealing with the atherosclerosis, the risk factors and the metabolic syndrome. Atherosclerosis is a complex biological process leading to arterial wall thickening of the large and moderate muscular arteries, leading to haemodynamic and oxygenation insufficiencies of the peripheral tissues (heart, brain, extremities, kidneys, etc), ending with tissue and organ insufficiencies and death (3-4). At the turn of the 20-th century, the Russian researchers (Anitschow, Ignjatovski, Chalатов, Sarkisov) showed that cholesterol fed rabbits increase the rate of atherosclerosis, but it was not until the fifties that recognition was given to the “possibility” of hyperlipidemia associated with atherosclerosis. The first classification of the hyperlipidemias appeared as defined by Fredrickson in 1956. Then the Nobel Prize in the field was awarded to Bloch and Lynen (1964), and Brown and Goldstein (1985) (18) for the lipid metabolism research and the atherosclerosis. In 1976 for the first time the cholesterol was proved as being an “independent factor” for atheromatosis, and in 1980’s appeared the first intervention study showing that pharmacological lowering of cholesterol leads to significant decrease of the CVD incidence, while in 1988 appeared the first detailed description of the chemistry and physiology of the “statins” (HMG-Co A reductase inhibitors) (1-2). This was important for the conclusion that interventions are important factors in all phases of prevention of the CVD. Then followed the phase of the “good cholesterol” and the “bad cholesterol in the 1990’s, reacting with the haemostatic complexities, followed by the era of infection, inflammation, cytokines, and inflammation markers in the 2000’s, which continues now entangled with the research findings on genetic markers, mechanical factors, nitric oxide production/inhibition, endothelial hormone interactions, and the insulin resistance. Those factors are of utter importance to understand the directions of the present and the future preventive interventions. Then followed a spectrum of multi-centre clinical and intervention studies, which the involved student will have to investigate and analyze. Mathematical models and quantitative approach have been experimented recently, based on epidemiological and longitudinal data. Introducing mathematical models in clinical practice is a slow process, but simplification will lead to very useful quantitative tools. However, equation parameters might vary between populations, due to geographical, genetic and other gradients, therefore adjustments become a necessity (1-6, 17-20).

Sub-module B

This sub-module is on the levels of prevention. At the beginning there was a “simple” division of primary and secondary prevention, according to actions undertaken in the “pre-event” (before MI or stroke), or “post-event” (after MI or stroke) periods. However, in such oversimplification few very basic questions arise i.e.:

- If diabetes is MI-equivalent, then the prevention is primary or secondary in all diabetics;
- When is the period when the “primary” prevention should start;
- Is it ethical not to give the same advice to the “primary” case as to the “secondary” one, even if he/she is at mild risk? Recently, all CVD events have been considered for “secondary” prevention (3-4, 9, 19, 22);
- What about the non-event case at high risk (using calculator or SCORE systems, or assumption on heredity basis, or even empirical).

Thus, some universal model is needed. The student should collect the data from all recent major studies, as well as the guidelines, and make a report. The preventive interventions can be divided in three groups:

1. Behavioural: diets, exercise, ceasing smoking, alcohol, and regimes for eliminating the controllable risk factors; those are safely recommended for all who are at any risk, or even to the “non-risk-period”; children with risk factors are also included;
2. Pharmacological: regulation of hypertension, hyperlipidemia, hyperglycemia, antiaggregation – for all who are at high risk and/or post-event, and selected cases that cannot achieve the target values of the risk factors with the measures under point 1;
3. Invasive and surgical interventions: in high-risk pre-event and post-event cases, according to the specific guidelines and the decisions of the cardiology specialists.

Up-to date levels of target values of the risk factor indicators at the present time are given in table 6 (3-4):

Table 6. Risk factors target values.

Risk factor	Target value	
Smoking	0	
Blood pressure	120/80 mmHg	
LDL	<2.5 mmol/l (<1.5 after CVD event)	
Total cholesterol	<4.5 mmol/l	
Triglycerides	<1.1 mmol/l	
HDL	>1.1 mmol/l	
HbA1c	<6.5 %	
Glycemia (IDF)		
Fasting	<6.5 (100 mg%)	
2h postprandial	<7.2 (135 mg%)	
CRP	<0.6	
BMI	25-29.9 kg/m ²	
Abdominal circumference		
Europoid	<94 cm (males)	<80 cm (females)
South Asian	<90	<80
Chinese	<90	<80
Japanese	<85	<90

Source: American Heart Association, 2004

Sub-module C

This sub-module is about assessment of cardiovascular risk using “calculators”. The most popular simple quantifiers of the outcome in CVD are the Framingham calculator and the SCORE (3-4). Although they are recommended as routine procedures in all general practitioners’ and relevant specialist outpatients, they are still not a routine, at least in the developing countries. On the other hand, there are some recent critics of certain inaccuracies, and inconsistencies of those systems, therefore modifications or new quantifiers are to be expected in near future. A practical work with those calculators is recommended to the candidates, on real or simulated cases as recommended by the supervisor.

Sub-module D

This sub-module is about childhood, adolescence and CVD (3, 4, 17, 19, 22). There was an increase of obesity, hyperlipidemia, and diabetes in children and adolescents in the last decades, both in the developed and the developing countries. The obesity prevalence rates mounted up to 14% of the children. The hyperlipidemias are mostly multigenic, risk factor associated, and secondary. Primary prevention measures are necessary in this population.

Sub-module E

This sub-module is about public health actions in prevention of the CVD (3-6, 17-22). Develop a community based CVD primary prevention plan. Develop screening programmes for all individuals over the age of 40, and for the vulnerable populations - elderly, rural, poor, post-menopausal women, diabetics, patients on chronic dialysis, and drug addicts. Despite the well-known and well defined problems related to CVD, and the recent preventive guidelines, the efforts remain more on the theoretical ground. The practical problems stem mainly from the following factors: insufficient awareness both in the population and among the authorities, conflict of interests (i.e. food and cigarette industries), and the financing of prevention problems as mentioned above. The SES, the social and the cultural differences play a considerable direct and indirect role. The few suggested short-term improvements for the PH ground are related to the rise of the population and the professional awareness i.e.:

1. education of the health professionals, special for-credit and non-for-credit curricula in the medical, PH and nursing schools;
2. education of the population (mass media, persistent health communication, courses, volunteer educators, school programmes);
3. education of the patients: thorough insisting on behavioural and pharmacologic therapies; self-control and regular check ups in chronically ill and those at high risk should be conducted intensely;
4. continuous improvement of the prevention – control of the measures, and creative approaches;
5. PH institutions should insist on governmental and other resource funding of periodic minimal examination of schoolchildren, young people, and the risk populations on mandatory basis.

Prevention of the CVD is a duty of the whole population (individually and collectively) – viewed the same as the elementary education or the personal and communal hygiene. Which are the measures that you are going to undertake in your country for the improvement of the CVD prevention?

Sub-module F

This sub-module is about private sector and prevention of the CVD (15). Orientation on prevention is of great interest for the private practitioners, to turn to low-expense highly profitable practice, consisting on the above mentioned measures related to the education, control, and follow up of both healthy population, risk population and the chronically ill. Private-based annual group check-ups (companies, regions) in a form of “un-expensive packets” for CVD and malignancy screening, appears a feasible, high cost-utility, and a profitable business. Make your innovative project on improvement of the prevention on cost-effective private practice based system.

Sub-module G

This sub-module is about nursing and prevention of the CVD. High performance nursing is an ideal opportunity for cost-benefit promotion of the CVD prevention (16). With special curricula and training, nursing had already become a major factor in the above-mentioned goals of the CVD prevention. High performance and low-to-moderate cost nursing home therapies are feasible and affordable for the mass of the middle class population. It appeared feasible also for the poor people in the cases of charity organizations and trusts support (i.e. Caritas, Hope, Sue Ryder Care, Lady Fatemah Trust etc.).

“Home medicine” and the prevention of the CVD

“Home medicine” has emerged not as a product of science, but rather as a derivate of a necessity and the health care pragmatism (23). In a presently empirical basis, we state that the “home medicine” is the best mode, possibly the unique one, to achieve lowering of the costs to the supportable level, in a setting of high performance in both preventive and curative medicine. Of course – a lot of work has to be done.

Lemma: the experiences of the success in the home treatments and preventive measures on individuals can be extended to populations.

This maximum should be expanded continually. This does not represent an idealism, but rather a very real necessity (23). In the underdeveloped and the developing countries, there is a “culture” of institutional (hospital) detection and treatments of all patients, including the screening of the healthy population. It was a specific paradigm in the former socialist countries, regarding the health system as an instrument and morphology of communism. That brought to enormous unnecessary expenses to the weak health care budgets of those countries, which consequences resulted in reduced-resource practice, decline in the quality of medicine, impossibility of mass prevention, and a significant fall of the economical status of the doctors and the medical staff. “Home medicine” existed in the Middle Ages both for the high class, and the rural middle class, while institutions were rather “isolation formations” or later army institutions. They have grown in France in the post-revolution period, as a part of the simultaneous growth of the civil-right system and the diagnostic medicine, while preventive medicine (institutional only) came on the stage much later. In contemporary times, the medical institutions are fortifications of the huge technological machinery, and the advances of the operative medicine, and there is an increasing feed-forward mechanism of technology proliferation stimulated expensive medicine. Home prevention oriented less expensive technologies are the forthcoming counterpart emerging slowly but surely. Again, the accumulation of unrealizable financial gaps, the insufficient infrastructure effectiveness, and the increased prevention awareness are the stimulating factors for “home medicine” and prevention expansion.

In each family, there is at least one old person, or one who has a CVD related problem. Thus, medicine is in your home. Unwillingly you are a “home medicine” performer.

Sub-modules

Sub-module A

Make an elaborate of the needs and the cost-benefit of the transition from institutional to “home medicine” in your country.

Sub-module B

This sub-module is about description of the successful existing modes of home therapies in cases of: diabetes, hypertension, stable angina, rehabilitation therapies, post-stroke patients etc.

Sub-module C

This sub-module is about self-control and safe treatment experiences, as the fundamental basis of home therapies. Case studies of elaborate examples.

Sub-module D

This sub-module is about nursing. There are two modes of home nursing: a complementary care to the chronic therapy programme,

Sub-module E

This sub-module is about Paradigms of home prevention programmes introduced by family doctors, general practitioners, nurses, patients and volunteers. There is an increasing interest of the healthy risk population (patient’s families, surrounding, and well-informed individuals) for individual screening, with a tendency of preferring home laboratories (mobile) to the institutional ones.

Sub-module F

This sub-module is about Partial transforming of the institutional outpatient’s departments to private communal centres or home prevention and treatment medical groups (nurses, or even educated volunteers). The home prevention paradigm (HPP) is a key for affordable and profitable market oriented prevention of the CVD. The HPP is a complex transformation, which includes:

1. Increasing the “culture” of the population for the home prevention and follow up (self-control, self-care, technological and medical culture, interaction with doctors, media, schools, religion, social marketing, nursing, volunteering, patient-to-patient and patient-to-family information and help, prevention oriented associations etc);
2. Achieving high performance home activities: institution-home interactions (emerging preventive packages contracts, including the private sector), teaching self-management and self-screening, community aid, family aid, home practitioners (nurses, doctors, defectologists, versatile volunteers), and special prevention services development (23).

Changing markets means comforting human needs – home based detection and therapies will follow the fate of the microchip – it will open a huge and demanding market. Think of the transformation from patient associations to patient corporations.

Information and health communication

This is also an important (24), yet insufficiently exploited tool of CVD prevention. In our experience, just few TV popular programmes had caused a significant interest and clinical visits of patients with CVD, hypertension and diabetes. The prevalence of detected diabetes is doubled when considering the “unknown” cases. Which are the frequencies of the “silent” CVD events? Which are the frequencies of the “known” CVD events, who do not or cannot take appropriate care of their disorder? How much the environment influences the increase of the morbidity and the mortality from the CVD? Those are not problems, which can be solved by the medical practitioners only, but rather by the joint actions of the entire population.

Education is high performance information processing, institutionally controlled, quality controlled, with feedback information return. It is certainly the most efficient mode of information delivery, however its weak sides are the always the limited number of recipients and the cost containment. Multi-level CVD education programmes are required, to promote the growth of qualified educators from community to highly specialized levels. The experts and the expert institutions of CVD are the “think tanks” of the education, information, management and prevention strategies.

What is the difference between information and health communication? Information only cannot change conviction and behaviour. Health communication is a systematic change of perceptions (individual and collective), causing action (24). Propaganda is “information times motivation”. Artificially we can distinguish three levels of information processing for the purpose of medicine:

1. Education: a programmed training of professionals or patients and amateurs in performing medical manipulations or assistance; a feedback from each individual is evaluated; this is for a limited number of individuals.
2. Information: denotes providing facts to a larger population, expecting a positive effect, but without any systematic control of the effects.
3. Health communication: increased efficiency of the information, using technologies that can increase the number of the informed individuals and their positive reaction. Health communication is “information quantity” multiplied by “diffusion force”. The “aggressive” media programmes have influenced the epidemics of the HIV infection, and the information system networks were the critical factor of it’s discovery. They have certainly influenced the awareness of the risk factors i.e. diabetes, hypertension, hyperlipidemia, and smoking.

Mass media are instruments of the politically active groups. Thus the rate of media development is proportional to the political group dynamics. Lemma: media development in health means influence of the medicine on politics and vice versa. Information flow multiplied by health equals health policy multiplied by economics.

Sub-modules

Sub-module A

This sub-module represents an introduction to the module: elementary knowledge on CVD, socio-medical aspects, and prevention of the CVD, from the previous modules.

Sub-module B

This sub-module is an introduction to a medical journalism and information: public relations foundations, the news media and the CVD, the “power” of prevention, the need of

early detection, specialized reporting (research, conferences, economic aspects), strengthening health journalism in the developing countries, training journalism to cover news and reports on CVD subjects, analysis of media covering, improving reporting, the global impact of the CVD reporting, public relations theory and practice, gaining audience, database and web research, writing, reporting, and psychology of communication (24-25).

Sub-module C

This sub-module is about mass communication ethics (24-25): law in mass communication and journalism (legal research, critical reading, question generating), elements of ethics in journalism (consequences, norms, changing life of the readers), management in journalism, Nuremberg Process (Boston university curriculum in PH).

Sub-module D

This sub-module is about social-marketing impact on the masses. Session are prepared on the following topics:

1. How the health communication has succeeded to influence the smoking reduction in the developed countries;
2. Why it failed in the developing countries;
3. Social marketing process planning related to the CVD for the next decade.

Sub-module E

This sub-module is about how to use the Public Health School Network (PHSN) to spread the information, and to receive information. PHSN is an ideal structure for information gain and information spreading. Students are supposed to learn to establish a collaboration relation, and learn to use the most recent telecommunication systems and software.

Sub-module F

This sub-module is about health communication in elementary and secondary schools:

- how to organize health communication (e.g. health education) process,
- how to overcome the children disinterest on “serious” themes (use the positive and negative experiences from similar programmes),
- how to select the topics,
- how to prepare programmes and practical work,
- how to build a prevention culture.

Sub-module G

This sub-module is about new models of information design and information flow.

Rural medicine and CVD prevention

Rural medicine is a relatively novel programme of an old profession (26). It is based on the recognition of the medical provision “gap” between the developed and the underdeveloped areas, either between the countries, or within the countries. The “objective” reasons for that “gap” is expected to cause increase in the incidence and the mortality from the CVD. International postgraduate programmes have been developed on rural medicine. However, there are no special programmes on the CVD in rural medicine. In the developing and underdeveloped countries the larger part of the prevention and the PH are on the level of the rural medicine.

Sub-modules

Sub-module A

This sub-module is about prevention of the CVD in the rural environment. In the developing countries, there is a considerable reduction of the average life span, an increase of the infant death, and increased frequency of deaths assigned with “unknown cause”, which we do consider to be due to CVD. In those environments, the “prevention culture” is very low, and there is an “inertia” and “passiveness” in terms of prevention and management of the CVD, as well as other entities (26).

Sub-module B

This sub-module is about evaluation of the level of CVD prevention and care in a given region: medical professionals, experience, technologies, transportation, awareness of the population, indicators or data on frequencies and mortality, awareness of the risk factors, and other indicators (life length, SES, family histories).

Sub-module C

This sub-module is about how the situation in the country can be changed and improved:

1. opportunities to improve the conditions in the country;
2. opportunities to improve the communication with the advanced PH centres;
3. opportunities of training the local medical staff on CVD prevention.

Sub-module D

This sub-module is about information and health communication. Information providing is probably the most important instrument of CVD detection and prevention in the rural places and the developing countries. Some of the activities include:

1. how to use the mass media, the modern technologies, and the direct contact for increasing the population awareness of the CVD;
2. information in schools and in working places;
3. organizing and training the local non-professionals and volunteers for the purpose of the effective health communication.

Future science, technologies, optimization and information

This module is appropriate for health system planners, future private care providers, or in conjunction with the other modules. Development is going more rapidly than ever in both predictive and un-predictive directions (27-29). Why this module? In the CVD medicine, the rates of the changes are rapid enough to unable predictions even within a decade. The present expertise becomes “out of date” within such periods. The last few decades the CVD practice has evolved from physical examination to invasive procedures. The future of the CVD could be divided in the following four phases:

1. present: dominantly clinical phase (high performance imaging technologies, combined with the interventional and cellular procedures);
2. future: predominantly preventive phase (Human Genome Project as a basis for prevention, detection and treatment, new pharmacies for CVD prevention, aging modifications (29), environmental and psychological modifications, prevention market modifications, and general PH transformations.

Predictions of those and other innovations are the key to the “survival” of the future PH and medical practitioners.

Concluding remarks

1. The CVD are considered the most important subject in the present public health spectrum, since occupying the highest position in terms of the epidemiological indicators including mortality, morbidity, disability, and overall costs.
2. The tremendous success of the clinical management of the CVD and the medicine in general resulted in “three nonlinear functions”: increase of lifespan, increase of the population, and increase of the health-related costs. There is also an evident increase of the awareness about the CVD, but it is still bellow the “critical point” of what is needed for collective self-control of the occurrence and the consequences.
3. The impact of the tremendous increase of the costs results in the social status related reduced accessibility to preventive and treatment facilities, disparity of the possibilities of performance and the possibilities of provision, and eventually the divergence of the incidence of the disease and the requirements for proper prevention and follow up.
4. The prevention, although theoretically well conceptualized, resides still at the bottom of the expected level. The social and the financial aspects remain a good rhetoric, with a pronounced lack of action.
5. The ten modules capture the framework of the public health problem, some of them being at the “embryonic” phase of development, requiring thorough engagement of the professionals, the students and the whole population.
6. We stress the importance of the “home medicine” and the information providing as fundamental instruments of the future PH and management of the CVD. The basic principles of the strategies for CVD management and prevention as monitored by the PH institutions should consist of the following:
 - population health;
 - effective CVD services;
 - evidence based decision making;
 - community participation;
 - health-oriented public policy;
 - holistic approach;
 - multilevel information diffusion.

Exercise

Epidemiology of CVD

Task 1:

Which are the mortality rates of the CVD in your country? Do you know the prevalence and the incidence rates of MI and ACS in your country? Which are the epidemiological data on stroke in your place? Which are the prevalence rates of diabetes, hypertension, and other risk factors? What can you do to improve data collection related to CVD in your country? How long is the average life in your population (why)? In which phase of epidemiological transition is your country?

Task 2:

Make a small terrain study, with the help of the mentor. This represents a rather difficult task, since it reveals the real difficulties of data collection, which are related to the following:

- poor registration and administration in the rural and developing regions (including some quarters in the world metropolises),
- absent motivation for such research in the remote places and the private medical institutions,
- insufficiency of relevant cadres, and
- poor “epidemiological and PH culture” in that region.

Consider an elaborate of how are you going to overcome those problems in your country?

Task 3:

Join an international group. Some enthusiasts have managed to contact with world authorities and institutions in data exchange, information exchange, participation on international conferences and congresses, and even obtaining research grants. Ideally, that would be a task of the PHS network, but individual initiatives are mostly valuable.

Task 4:

When will you perform a screening: blood cholesterol, glycemia, blood pressure, ECG and neurological screening?

Socioeconomic aspects of CVD public health

Task 1:

The student should perform research on the possible data and the articles on the CVD related to the SES in his/her country.

Task 2:

He/she should become acquainted with the quantifiers and the formulas related to the SES as presented by Regidor and other authors.

Task 3:

Find the parameters of the socioeconomic status of your country (as listed by the World Bank, IMF and CIA which can be found on the Internet).

Task 4:

Learn about the Lorenz curve, and the Gini index and the income inequality indices.

Task 5:

Make a plan how to collect data related to the SES in your country. How do you plan to improve the status of your population? How will you make a plan for a strategy on the improvement of the social and economic performances in your country as mirrored by the CVD indicators?

Task 6:

How will you be able to activate the political and the public opinion about the weakness of the social system in your country using data related to the CVD?

Task 7:

Take the individual and the collective interests, think of the superposition theory, game theory, and the competitiveness development.

Task 8:

Hospitals are and will be “sociological monads” in the future. Lemma: social health inequalities (H) are mappings of the general social inequalities (G): $H \rightarrow G$. Therefore interventions on H imply interventions on G. Make your own thought experiments considering improvements in social medical inequalities, with parameters of the CVD (please look at the papers of Margaret Whitehead and the related papers (10-12).

Task 9:

The task is on cost-benefit, cost-effectiveness and cost-utility analysis (CBA, CEA, CUA). We always have some benefits (B) from the health prevention and the health care actions, which can be calculated. Those benefits require investments which means they cause some costs (C). From economical point of view $(B - C) > 0$ is an approvable action. However sometimes actions are undertaken despite the equation being < 0 . In that case, the benefits are greater than they can be estimated with economical indicators only. Perform a CBA for the prevention of the coronary heart disease and stroke from the data in your country. Is there a difference? Are the interventions on the same risk factors giving the same benefits in different entities (differential risk factor CBA)?

Financing the CVD related prevention and public health

Task 1:

The student should investigate the advantages and the disadvantages of the various compulsory health insurance systems and the universal health care. The oldest systems are in France, Italy, then Australia, Norway, Ireland and Canada. How much prevention is being considered? Which proportion of the compulsory health insurance would you consider for prevention of the CVD and/or general? How would you design a compulsory CVD prevention insurance programme?

Task 2:

The student should become acquainted with some compulsory systems i.e. AMA (American Medical Association) compulsory health insurance programme, or the Massachusetts programme. There is a dichotomy between the just and the possible. The needs for medical financing are increasing, in particular for the CVD, while the resources are limited.

Task 3:

Which are the other possible (non-insurance) sources of financing the PH of the CVD?

Task 4:

Design your own “ideal” system of financing the CVD prevention.

Home prevention medicine

Task 1:

Think of the creativeness in the design of “home hospitals” (architectural, art-like, game-like, tourism-like, or economy). There are some examples of famous personalities on complex home treatments, yet building an “institution” of intellectual work in their home (i.e. Steven Hawking or Howard Hughes). Make a research and short case studies of examples you choose.

Task 2:

How can nurses and the family take part in the home prevention?

Information and health communication

Task 1:

Write a report for a popular journal, on a CVD problem. Prepare (or simulate) a popular TV show on CVD. Develop methods to draw the attention of the population on the problem of the CVD pandemic.

Task 2:

Propose new innovative models of information spreading (apart from the TV and journalism) i.e.: toys, mobile phones, internet, posters, camps etc. Focus your efforts more on the psychology, rather than the technology.

Rural medicine and CVD prevention

Task 1:

Visit a rural place with a good CVD practice. Visit a place with a poor CVD practice. Write a report.

Task 2:

Give some examples (case studies) of a good rural PH on CVD.

Future of the CVD prevention and the PH

Task 1:

Discussions and elaborates on the future technological developments: novel biomaterials, markers, artificial organs, proteomics, genomic therapies, the Human Genome Project, cellular treatments, molecular imaging, multidimensional imaging, robotic surgeries, stem cell and progenitor cell technologies, chromosomal surgeries, embryonic surgeries and genomic therapies, etc and how they can be used in prevention.

Task 2:

There are few serious and very exciting research projects going on in the field of aging (29). Although in the last century the average life almost has doubled, it would be not appropriate in the present time position to discuss about the possibilities of the future aging treatments. From the social medicine aspect, it would be most appropriate for this generation to prepare for the forthcoming “old age wave” with programmes for decent housing, “home medicine”, activities, and most of all – programmes for becoming realistically useful in the group and the society. Achieving recognition of the high values and the wisdom of the aged people will be a revolution. Make your (fictive) programme of integrating old people and the handicapped in the society and the economics.

Task 3:

Future institutional and home therapy models: modern mobile units, home-monitoring and telecommunication systems, future home nursing, self-diagnosis, automated diagnosis, and self-management procedures, complex-care systems kits, home care kits, “home-micro-hospitals”, novel constructions and architectures, novel patient-doctor associations, novel models of companies and trusts. Contribute with new ideas to this short list.

Task 4:

Develop a CVD surveillance system for providing data on an ongoing basis in your country and on the global scale. That will provide the possibility of monitoring, evaluating the quality of service, the introduction and appropriate use of the recent discoveries in the area, upgrade the clinical and prevention guidelines, and evaluate the econometric parameters related to the CVD.

Task 5:

Discuss the future educational and information models: home learning and tuition, telecommunication information about the status of the CVD spread and the supervision of CVD patients (“telecommunication clinics”), online permanent information systems, visual facilities, new propaganda break-through, new school programmes, new feed-back models of education and treatment supervision.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers and Health Professionals and Decision Makers	
Title	General Objectives and Methods in HIV/AIDS Surveillance
Module: 5.4	ECTS: 0.5
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Key words	AIDS, HIV, surveillance, assessment, risk, method, indicator
Learning objectives	After completing this module students and public health professionals should (for example): <ul style="list-style-type: none">• Be aware of the importance of HIV/AIDS surveillance;• Recognise the menace of epidemics;• Increasing knowledge of all levels of professional and trainees;• Identifying the weak points and improving them;• Improving the steps in organizing behaviour surveillance studies;• Improving the quality of care in HIV/AIDS field.

<p>Abstract</p>	<p>Preventing transmission of virus is still the single intervention known as effective in limiting the spread of HIV infection. So, the epidemiological surveillance of HIV/AIDS is an important tool used by public health specialists in controlling epidemics. Epidemiological surveillance is a continuous process of collecting, analysing, interpreting and disseminating data in order to plan, implement and assess public health interventions. The objectives of HIV/AIDS surveillance should be specific, measurable, transformed into actions, realistic, planned to be done in due time. The main methods used by HIV/AIDS surveillance in collecting the data are biological surveillance, behavioural surveillance, other sources of information. The main indicators recommended for any HIV/AIDS programme components include the fields of politics, condoms availability and quality, social stigmatism & discrimination, knowledge, vertical transmission, sex negotiation and attitude, sexual behaviour, especially in youngsters, injection with drugs, safe blood and derivatives, STI treatment and prevention, care and social support, social & health impact. Data collected by public health surveillance systems guide the responses to the events, measure and monitor the burden of the disease, assess public health politics, etc.. Integrated approach in epidemiological surveillance takes into account, generally, the integration of all activities that have to do with epidemiological surveillance into a single service with multiple functions using the same structures, procedures and personnel. Second generation HIV/AIDS surveillance is a WHO concept developed on modular systems. The methodology in risk behaviour surveillance studies includes: justifying, behavioural risk, methods for collecting data, behavioural data value, steps in organizing behavioural surveillance studies.</p>
<p>Teaching methods</p>	<p>Teaching methods could include lectures, exercises, individual work, interactive methods such as small group discussions, seminars etc. The teaching process should be organised in courses including interactive sessions of questions and answers, epidemiology, clinical, and laboratory practice.</p>
<p>Specific recommendations for teachers</p>	<p>Work under teacher supervision (abovementioned) 70% / Individual students' work 30%. Powerpoint presentations, experts in practical issues, access in epidemiology, hospital and laboratory facilities, course and practice books, target audience composed by students and trainees.</p>
<p>Assessment of students</p>	<p>Assessment could be based on:</p> <ol style="list-style-type: none"> 1. multiple choice questionnaire (MCQ), 2. structured essay, 3. interview, 4. case problem presentations.

GENERAL OBJECTIVES AND METHODS IN HIV/AIDS SURVEILLANCE

Adrian Tase, Luminita Titu

The acquired immunodeficiency syndrome (AIDS) epidemic is one of the greatest challenges facing the medical community today. Infection with human immunodeficiency virus (HIV) (1) is a dynamic process characterized by intense viral replication, CD4 lymphocyte depletion, and profound immunodeficiency (2).

HIV/AIDS infection is fatal. In 2004 there were recorded 3.1 million deaths because of AIDS all over the world. Among them, 500.000 cases were children under 15 years old.

Since the first reports of AIDS published in 1981, the vast majority of cases worldwide has been caused by HIV-1(3,4) Another retrovirus, HIV-2, is a prevalent cause of AIDS in Western Africa (5)

Improved understanding of HIV pathogenesis has led to rational drug development, sound treatment principles, and decreased morbidity and mortality due to AIDS (6,7). There is an interesting risk model, that simulates coronary heart disease, in order to predict some therapeutic effects (8)

Surveillance and therapeutic strategies evolve rapidly, and errors may have dire and irreversible consequences. It is therefore recommended that HIV infection be managed only by practitioners with specific and expertise in surveying and treating the disease.

Reasons in Supporting HIV/AIDS Surveillance

The antiretroviral therapy developed a lot in the recent years, but there hasn't been found yet an effective treatment against AIDS infection. However, efforts have been made in order to discover an efficient way of immunisation for the individuals against the risk of catching the infection. Though in advanced phase, no vaccine acquired yet the licence for use in medical practice.

The single intervention known as effective in limiting the spread of HIV infection is preventing the virus to be transmitted.

HIV infection and AIDS disease develop a pandemic evolution. The magnitude of the pandemics is growing incrementally in some geographical areas - South Saharian Africa, South-East Asia and Eastern Europe , (9, 10, 11).

The magnitude of the AIDS epidemics impacts the medical services, social and family life, demography and economy of each country burdening both individuals and society.

HIV/AIDS pandemics consists in many epidemics with various dynamics. Moreover, across different countries, the dynamic of the epidemics changes during the evolution, modifying the natural history of the disease.

Regarding this continuous threat, the humankind should involve a bigger amount of resources and should adapt the answer at all times. The global expenses for HIV/AIDS reached 8.3 billion USD in 2004, about 12 billion USD in 2005 and about 15 billion USD in 2006.

Epidemiological surveillance of HIV/AIDS is one of the most important tools used by public health specialists in controlling HIV/AIDS epidemics.

Epidemiological surveillance is a continuous process of collecting, analysing, interpreting and disseminating data in order to plan, implement and assess public health interventions.

The main principle of the epidemiological surveillance is „info for action” – i.e. gathering the necessary information and using this to control the disease.

The basic features of epidemiological surveillance are (12):

- spotting the events;
- recording the events;
- confirming the diagnosis;
- reporting the events;
- analysing the reported data;
- disseminating the results.

The HIV/AIDS surveillance data allow monitoring the evolution of epidemics and the understanding of changes that might appear during the dynamic or the natural history of the disease.

The HIV/AIDS surveillance data are useful in:

- knowledge of the infection spreading among population, and
- estimate the burden of the disease.

In the specific case of HIV infection, the behavioural description of vulnerable people for catching the infection allows anticipating the ways of spreading the disease (13).

This information is used by the specialists in identifying and planning the intervention as well as by the political stakeholders and fundraisers in decision making concerning the medical and social resources.

The surveillance data are also used to assess the success of the interventions which limit the disease spreading.

Main Goals and Types of Surveillance in HIV/AIDS field

The objectives of HIV/AIDS surveillance should meet the following criteria (SMART):

- Specific – to serve the purposes of the surveillance, i.e. to understand and to explain the evolution of HIV/AIDS epidemics and to identify, plan, implement and assess interventions;
- Measurable – for each objective there might be defined a set of indexes which monitor the changes;
- transformed into Actions – for each objective there might be identified specific actions (knowledge, intervention, behaviour, morbidity);
- Realistic - i.e. they might be done using the resources provided;
- planned to be done in due Time – the changes aimed by the objectives should be projected during a certain period, taking into consideration all the data and knowledge at the moment of elaboration (14).

To establish the goals of a surveillance programme (see table 1), we must take into account the phase of the epidemics, the need of explaining the evolution or/and the natural history of the disease, the available resources as well as the objectives of the intervention schedule to reduce HIV infection. Each type of surveillance is due to a certain phase in the natural history of the disease, as it is shown in chart 1. (to be inserted)

Table 1 - Objectives of HIV/AIDS surveillance and types of surveillance

<i>Objectives</i>	<i>Types</i>
HIV cases estimation at national/local level	Surveillance of the women who address to prenatal clinics (sentinel) Serological studies (HIV tests) among population in general Serological studies among special groups of population - high risk of HIV infection
Describing the behaviour in case of risk	Behaviour studies (quality / quantity) <ul style="list-style-type: none"> • general population • special groups of population with high risk of HIV infection classifying the cases of HIV / AIDS in groups of risk behaviour
AIDS morbidity assessment	AIDS surveillance <ul style="list-style-type: none"> • universal AIDS reporting (passive / active) • sentinel AIDS reporting (passive / active) • using the data from the antiretroviral therapy (16) programmes • Surveillance of Accidental Infections • Accidental Infections reporting
AIDS mortality assessment	Revising the data from the death records

Source: World Health Organisation Guide (15)

Methods of gathering the data used in HIV/AIDS Surveillance

The methods used by HIV/AIDS surveillance in collecting the data could be classified in three categories:

- Methods for biological surveillance
- Methods for behavioural surveillance
- Using other sources of information

Biological surveillance

Biological surveillance uses the following methods: serological surveillance sentinel type, regulary screening, transversal and repeated serological studies.

Serological surveillance sentinel type

Serological surveillance sentinel type means watching over the HIV infection cases among target groups population - *sentinel population* and institutions that they address to - *sentinel institutions*.

Examples of sentinel populations:

- Women that need prenatal control;
- Sexual Transmission Infections patients;
- Drug users;
- Prostitutes;
- Homosexuals, with some particular points of race / ethnicity (17).

Examples of sentinel institutions:

- Prenatal consulting clinics;
- Dermato-Venerological clinics;
- Rehabilitation clinics.

Obviously, the serologic tests are mandatory. When blood is collected in other purpose, it must be used *anonymous* HIV tests for the rest of the serum, after erasing all personal data. This can work together with before and after testing advising. When these samples enter the system without personal data, they are called *voluntary anonymous testing*.

Interpretation of the results must take into account if the population in the sentinel institutions is representative.

Regular screening:

- of donated blood = cheap and useful to estimate the infection level among general population, and
- of occupational groups = young men recruits have a good representativity; employees from certain industries may differ considerably from the general population - *healthy employee effect*

Transversal and repeated(18) serological studies

- in high risk population groups with unidentified sentinel groups;
- in general population - large studies.

These include Ac anti-HIV testing of individuals from selected groups, at a certain period, from target population, following certain rules. The consent of the person selected to be tested is mandatory. They are complicated and expensive. The access to the group population of high risk is difficult, that's why the scientific accuracy of the methods and, respectively, of the results, is limited.

Behavioural surveillance

Qualitative behavioural studies

This type of studies are led with small group of persons, using direct methods (experimental, observational), or indirect methods (focus groups, experts analysis, case studies). They allow a deep approach of the problem in order to get the meaning, but cannot assess the changing behaviour during the time.

Quantitative transversal repeated behavioural studies

This type of studies is conducted in:

- general population;
- populational groups with high risk of HIV transmission.

They include transversal behavioural studies in representative groups of target population at high risk at a certain time. They follow the same methodology when repeating for comparing the results. For a good representativity, the randomisation is highly recommended.

Behavioural studies provide informations about the level and the distribution of behavioural-related risk among the population, the surveillance of these evolving features, as well as the assessment of success in some interventions, if they aim changing behaviour in risky cases.

Connecting behavioural and biological data helps understanding the dynamic of HIV/AIDS epidemics. Connecting behavioural studies with HIV testing for the same individuals is not recommended, because they are likely to refuse participation.

Using other sources of information

This includes: new HIV/AIDS reported cases, death records, surveillance of STI and tuberculosis, data from therapy programmes.

New HIV/AIDS reported cases

There are two types of AIDS reporting:

- universal (complete), and
- sentinel type.

Each of them can be:

- passively led (cases are introduced into the system as they are reported by the clinics), or
- actively led (cases are introduced into the system through a periodical checking of clinic records made by specific personnel).

The features of the system depend on case definition and correlation with diagnosis resources.

A common problem of the systems based on reporting is the delay. Moreover, the passively led systems underestimate the cases.

AIDS reporting has a peculiar importance in pediatric HIV/AIDS surveillance, because the serological diagnosis has no relevance under the age of 18. That's why this should be strengthened. There are some countries that have already introduced the HIV-positive reporting system.

Death records

There are countries where the monitoring system of the vital data gathered from death certificates provide information on AIDS dying cases (19). Checking the distribution of death cases on age groups and causes can indicate an increase of the number of deads at young ages without catastrophic causes or can indicate an increase of this number because of tuberculosis or non-Hodgkinian limphoms, both suggesting an overmortality that might be caused by AIDS. The mortality data could underestimate AIDS as a death cause, because incomplete reporting.

Surveillance of Sexual Transmission Infections (STI) and Tuberculosis, other respiratory and non-respiratory diseases

STI is an important feature of a potential exposure to HIV both for having a role on HIV infection and for spotting unprotected sexual contacts with accidental partners.

STI shows a risky sexual behaviour in the recent past. The increase of STI cases can work as an alarm system against the risk of HIV spreading before the virus circulation among people.

That's why it is highly recommended STI to strongly survey STI and integrate this into HIV surveillance. Testing the patients with tuberculosis directly implies the treatment of patients with double infection, but there was also noticed a connection between the increasing number of seropositive cases among tuberculosis patients and HIV cases in general population. Therefore these patients might be sentinel population. When tuberculosis is associated in AIDS patients, there are years of HIV infections.

Concerning other respiratory infections, we can mention *Pneumocystis pneumonia*(20), or *Pneumocystis jirovecii* (21). We also mention fungal opportunistic infections in HIV disease(22).

Generally, children are more vulnerable to opportunistic infectious, even when treated with antiretroviral therapy(23).

We mention some non-respiratory comorbidities in HIV/AIDS patients: hypothyroidism¹, Crohn's disease (25), depression (26), non-Hodgkin lymphoma (27), colorectal cancer (28).

Data from Therapy Programmes

Taking into account that, nowadays, there is an active antiretroviral therapy, we consider that AIDS surveillance should include persons access monitoring to this therapy (29), as well as the impact of antiretroviral agents on disease evolution.

Surveillance Assessment & Major Indicators in HIV/AIDS Surveillance

Epidemiological surveillance is a scheduled activity that should be periodically assessed to guarantee quality, efficacy and usefulness. The assessment of the epidemiological surveillance systems includes a number of activities which purpose is to analyse the main features of a surveillance system.

The recommendations of CDC - Center for Disease Control and Prevention Atlanta for the assessment of a surveillance system, include the following tasks:

- A. Responsible involvement into the assessment procedure;
- B. Description of surveillance system to be assessed:
 - the importance of the event under surveillance for public health;
 - the purpose, objectives and operating method;
 - the resources used in system operating.
- C. Specific assessment schedule:
 - the purpose of the assessment;
 - the beneficiaries;
 - the way of using the results;
 - the items in the questionnaires;
 - the standards for an effective assessment of the system.
- D. Documentation for the effective system:
 - availability – actions generated by data analysis;
 - system features: simplicity, flexibility, quality of data, tolerability, sensitivity, positive predictable value, representativity, punctuality, stability;
- E. Conclusions & Recommendations – definitions and supports;
- F. Pragmatism in using the results.

Epidemiological surveillance takes place within HIV/AIDS national programmes, as an instrument in monitoring and assessment of each public health programme.

The acquired knowledge on HIV spreading and the ten years experience, increased the interest of governments, funds donors and programme coordinators in monitoring and evaluation of HIV/AIDS programmes in order to provide documents for the success of these programmes and to use the resources more efficiently.

The final purposes of each HIV/AIDS programme are:

- reducing HIV spreading;
- improving care for infected persons;
- improving social & economical impact on communities.

¹ Bongiovanni M, Adorni F, Casana M, et al.. Subclinical hypothyroidism in HIV infected subjects, *J. Antimicrob. Chemother.*, 58:1086-1089, 2006.

To reach its investment purposes in the system (finances, human resources, time) a programme should generate interventions (surveillance data, informational support, services for the patients).

If the interventions are well thought and reach the target population, there can be expected positive effects on short term, like:

- condom using during the sexual intercourses with accidental partners;
- not using the same syringe for drug injection;
- first sexual intercourse at an older age;
- understanding the epidemics of the disease.

This short terms positive effects generate a long term positive impact reflected in:

- prevention strategies;
- decreasing the number of HIV infections;
- STI or decreasing the number of death cases because of HIV.

Monitoring consists in checking the prior information regarding a programme development and its results during the time. It also takes into account priority investments into the system and interventions generated by this one using records or reports, direct observation or studies among the benefit stakeholders. Monitoring could include short term positive effects and long term positive impact where information is generated by epidemiological surveillance systems.

Assessment is the procedure of regularly measuring the results, values and the impact on public health. This supposes connecting a result with an intervention.

Assessment could be done on three levels:

- process assessment (investments, activities, interventions);
- results assessment (if the activities were accomplished and interventions reached the target population, then we can take into account short term positive effects assessment, e.g. improving knowledge, behavioural changes, etc.);
- impact assessment (if the results assessment indicates knowledge progress, attitude and behaviour, then the assessment of positive impact on health status of the target population is justified).

Assessment belongs to public health programmes management and becomes objective through a periodical calculation of an indicators set and a comparison of pair indicators. For each level, there are clearly defined indicators that use data gathered by the administrative systems of the programme or the epidemiological surveillance systems.

Indicators used should be defined beginning with the stage of planning HIV/AIDS programmes to acquire a database necessary to compute it.

Indicators are:

- quantitative - absolute numbers, rates, reports, proportions, and
- qualitative statements of the activities and results predicted in the objectives of a programme.

In an evaluational purpose of assessment in the field where an indicator was defined, this one should have the following features:

- relevant for programme objectives, measuring important aspects for HIV spreading and interventions;
- experience showing that the necessary information is available and may be collected;
- sensitive – able to detect changes during the time, monitoring the aspect;
- available – to measure what is expected to do for a correct interpretation;

- specific - not measure any aspect that could generate bias in interpretation;
- reproducible - using the same methods in different moments and places, standard indicators for comparison of results;

Indicators measure both investments and interventions in the programme: educated persons, condoms distribution, services provided, surveillance data.

These lead to short term effects: better knowledge, behaviour changing, protective sexual behaviour, epidemiological understanding of the disease, which, in turn, generate long term impact programme: prevention strategies, reduced number of HIV and STI cases. So, the objective of the assessment is reached.

Result indicators measure relevant aspects for HIV transmission that can be modified by interventions: knowledge, attitude, concepts, practice, medical or social services, provisions of necessary condoms or medicines, funds for HIV prevention, etc.. Once changed, they have a sure effect over HIV epidemics and AIDS patients survival and life quality of HIV infected persons.

Taking into account the epidemiology of HIV infection the following aspects are relevant for HIV transmission and AIDS patients survival:

- risk of sexual/blood contact with a HIV infected person influenced by: HIV cases in general population; number of sexual contactors per person and their features (age, prostitution, etc.); using the same syringe for drug injection; getting infected blood (transfusion screening);
- risk of virus transmission during the contact with a HIV infected person influenced by: condom use, STI presence, age and gender of non-infected person, type of sexual practice, stage of infection, etc.;
- how old is the infection - influenced by: offer and access to therapeutical and care services for infected persons.

There is a set of indicators for any HIV/AIDS programme component - Table 2

Table 2. Indicators for HIV/AIDS programme fields

Field	Indicators
Politics	1. effort index of the programme 2. HIV prevention expenses
Condoms availability and quality	1. condoms availability at national level 2. condoms availability when sold 3. condoms quality
Social stigmatism & discrimination	1. accepting HIV positive persons 2. non-discriminatory attitude personnel
Knowledge	1. general knowledge of HIV prevention methods 2. no incorrect concepts on HIV 3. how to prevent HIV transmission among homosexuals 4. how to prevent HIV transmission among drug users 5. vertical transmission prevention

Advising and voluntary testing	<ol style="list-style-type: none"> 1. persons who asked for testing and got answer 2. county advising and testing 3. advising and testing quality 4. advising centers with minimum conditions 5. laboratory quality
Vertical transmission (31)	<ol style="list-style-type: none"> 1. pregnant women advised and tested 2. prenatal clinics for advising and testing 3. HIV advising quality for pregnant women 4. antiretroviral therapy
Sex negotiation and attitude	<ol style="list-style-type: none"> 1. women ability to negotiate 2. prostitution
Sexual behaviour	<ol style="list-style-type: none"> 1. sex with high risk of HIV 2. using condom at last sexual intercourse with high risk 3. prostitution in the last year 4. using condom by the customer at the last sexual intercourse with a prostitute 5. using condom by a prostitute with the last customer 6. homosexual sexual intercourse during the last year (32) 7. using condom at the last sexual contact by the homosexuals
Youngster sexual behaviour	<ol style="list-style-type: none"> 1. the age at the first sexual intercourse 2. yougers having sexual relationships before marriage 3. using condom at the last before marriage sexual intercourse 4. youngers with multiple partners 5. using condom during the last high risk sexual intercourse 6. using condom during the first sexual contact 7. sexual relationships among partners with various ages
Injection with drugs (33)	<ol style="list-style-type: none"> 5. using the same equipment by the drug users 6. not using the same equipment by the drug users 7. injectable drug users who used condoms during the last sexual intercourse
Safe blood and derivates	<ol style="list-style-type: none"> 1. blood units screening 2. low number of blood transfusions 3. blood banks at county level 4. accidental transmission in sanitary units
STI treatment & prevention	<ol style="list-style-type: none"> 1. STI diagnosis and treatment 2. advising regarding STI 3. STI care and medicine services 4. STI treatment requirement
Care and social Support	<ol style="list-style-type: none"> 1. AIDS trained medical personnel 2. sanitary units for AIDS patients 3. sanitary units with medicines storage 4. helping families with youngers care 5. helping families with orphans care
Social & health (34) impact	<ol style="list-style-type: none"> 1. HIV cases among pregnant women 2. syphilis cases among pregnant women 3. HIV cases in high risk population groups 4. cases among orphans 5. orphans education

Source: UNAIDS (30)

Technical details about the definition, the meaning of each indicator and the necessary instruments can be found in WHO/UNAIDS, MEASURE and FHI guides.

Major indicators coming from HIV/AIDS surveillance are:

1. biological:
 - HIV cases;
 - STI incidence;
 - TB cases;
 - Number of AIDS cases in adult people;
 - Number of AIDS cases in children.
2. behavioural:
 - sex with high risk in HIV transmission in the last year;
 - using condom during the last sex intercourse with high risk;
 - average age at the first sexual intercourse;
 - drug users who report common use of equipment;
 - number of customers reported by prostitutes in the last week.
3. socio-demographic:
 - age;
 - gender;
 - educational and socio-economical status;
 - residential or migratory status;
 - parity (for pregnant women);
 - marital status.

Using surveillance data

The coordinators of the epidemiological surveillance programmes should be sure that the data collected are due to reach the purpose of preventing and controlling the disease.

Data collected by public health surveillance systems can be used to:

- guide the actions as an answer/response to the events that are important for public health;
- measure the burden of the disease and identify urgent public health problems;
- monitor the evolution of the burden of disease and spot the epidemics or pandemics;
- measure the distribution of the comorbid factors, spot the changes of their distribution and identify the population with high risk;
- document and guide the planning, implementation and assessment of the prevention and controlling programmes of the disease, accidents or harmful exposure;
- assess public health politics;
- spot the changes of medical services offer and their effects;
- facilitate resources for healthcare;
- draw clinical description of the disease;
- serve as a base for epidemiological research.

For HIV/AIDS surveillance to reach the purpose of identifying and implementing prevention measures on target population in order to limit HIV spreading, there should be taken care that the results will be communicated to all potential partners in the preventing and controlling programmes.

Messages should be adapted to the audience (politicians, funds donors, community leaders, risk population) in order that these should understand both the necessity of the intervention and the role of the strategy.

Messages should be brief and clear. Communication should be done by imaging (tables, charts, pictures) that draw attention on the messages.

In order to go on financing the programmes there should be underlined the results that support the success of some previous interventions and there will be recommendations on correcting the aspects that limited the success of other interventions.

The sensitivity of mostly of the data used by HIV/AIDS surveillance systems makes necessary a special attention on confidential aspects. Professional should avoid a social stigmatus when the results are communicated, otherwise the participation of people in surveillance actions is compromised.

Responsibility for services which should diminish the disease burden in afflicted communities is a moral duty for public health services that lead HIV/AIDS epidemiological surveillance. The purpose of the surveillance is to serve the community without touching human rights.

Gathering the data irrelevant in preventing and controlling the disease is not warranted. Thus, collecting the data should be followed by educational, medical and social interventions.

Strong points and weak points of HIV/AIDS surveillance systems

Surveillance systems that have been used by now focused on the measurement of HIV infection cases and AIDS morbidity. That allowed epidemics description and successful assessment in national programmes, but without refinements of epidemic dynamics.

The experience of the last decade allowed to identify some strong and weak points, respectively. Thus, the systems still focus their attention on biological surveillance and HIV/AIDS cases reporting, allowing to document the disease burden, resources providing and successful monitoring.

The major limitations derive from the measurement of infection / disease in general population. They do not provide the information to the stakeholders which influence the transmission of HIV in high risk population, warning against the risk of spreading. These populational groups could benefit the most of the interventions made for limiting the spreading.

The strong and weak points are intabulated below:

Table 3 - the strong and the weak points

Strong points	Weak points
Help in generating the public answer on HIV	Ignore useful information from other sources (STI, reproduction health)
Help in aiming the preventing activities and in planning the answer	Neglect resources providing in risk population
Can monitorize the success of the national answer	Do not explain the modifications in mature epidemics
	Interpreting AIDS cases is hard (35) because of therapeutical success
	Are not flexible
	Surveillance data are not always used efficiently

Source: World Health Organisation Guide (15)

Principles of an integrated approach in HIV/AIDS surveillance

Integrated approach in epidemiological surveillance takes into account, generally, the integration of all activities that have to do with epidemiological surveillance into a single service with multiple functions using the same structures, procedures and personnel.

The advantages of this approach are:

- the developed vertical systems can be used as a support and stimulus in less developed systems;
- synergical procedures can use resources in common, improving the efficiency of using them.

The final purpose of the integrated surveillance is to offer:

- complete and high quality information regularly and in time;
- forecasting and spotting epidemics;
- objective assessment of the interventions;
- efficient monitoring of interventional programmes.

The integrated surveillance of diseases has the following features:

- conceives surveillance as an unitary service;
- maintains the control functions of disease together with surveillance;
- recognizes that certain diseases need systems with a higher level of specialization;
- uses a functional approach in disease surveillance;
- does not miss the opportunity of simultaneous development of *essential functions* (collecting, reporting and analyzing the data as well as the answer) and *supporting functions* (training and supervising /coordinating of personnel, improving laboratory capacity, communication, resources management);
- does not need a solution *single system*;
- include the development and improvement of present surveillance networks.

HIV/AIDS is one of the medical conditions that need high specialized systems.

The experience of the last decade in HIV/AIDS surveillance showed on one side the need of a better utilization of outcomes from HIV/AIDS surveillance in order to explain the continuous dynamic of epidemics, and, on the other side of the coin, the need of a better utilization of resources.

Thus HIV/AIDS surveillance uses the concept of integration in a double sense:

- the integration of some elements belonging to HIV/AIDS surveillance in other systems (catching disease surveillance, demographical and national health studies, health reproduction studies, mother and child health programmes, behaviour risk factors studies) with the purpose of taking advantage of synergy; yet, the complexity of the data necessary in HIV/AIDS surveillance is over the informational capacities of a reporting system in catching disease, so that for HIV/AIDS surveillance we need a modular approach;
- the integration of some elements belonging to additional surveillance in the structure of classic HIV/AIDS surveillance systems (behavioural surveillance, STI surveillance, TB surveillance, data about deads, treatment quality and care services audit) with the purpose of increasing the accuracy of surveillance data.

The integration of some additional elements of surveillance, in the structure of surveillance systems used by now represents the strategy recommended by WHO to develop a second generation of systems in HIV/AIDS surveillance for a better use of surveillance data.

The success of antiretroviral therapy in prolonging life for HIV infected persons showed a new dimension of the surveillance data utilization, by estimating the offer for services and the access of HIV positive persons to these services, taking into account clinical and biological criteria in a right way.

Nowadays, the specialists can think over the value of HIV/AIDS cases surveillance defined by unitary criteria on a global scale.

Second generation HIV/AIDS surveillance

What is second generation surveillance?

As we already have mentioned, the weakness of HIV/AIDS surveillance systems nowadays generated the need of developing more accurate systems.

Second generation HIV/AIDS surveillance is a WHO concept meant to resolve this weakness and includes the development of modular systems, whose elements can be combined depending on the epidemics stage in each country.

Second generation surveillance does not replace the present surveillance system, but builds up its structures by integrating the already existing systems.

The flexible combination, adapted to the epidemics stage in each country, assures a more efficient use of resources related with needs.

Purposes of second generation surveillance

The new systems have the following purposes:

- Understanding the dynamics of major indicators;
- Understanding behaviour that generates the spreading of epidemics within a country;
- Focusing on high risk population surveillance;
- Assuring flexible systems adjusted to actual needs and epidemics stage;
- Improving surveillance data utilization in order to understand the epidemics, respectively plan the prevention and treatment steps;
- Efficient utilization of resources, stocking them in the right places for acting to reduce HIV spreading, respectively improving patients access to treatment.

Methods recommended in second generation surveillance

Second generation surveillance can be built up on the structure of already existent systems, using all the current methods and adding new ones.

The methods used by mostly of present systems are of biological surveillance:

- sentinel serological surveillance;
- regularly screening of blood and occupational groups, respectively;
- transversal repeated studies in high risk and, respectively general population.

The methods proposed to be added to the present ones in order to increase accuracy and alarm and answering capacities:

- behavioural surveillance studies, quality behavioural and quality transversal repetitive, in general or high risk population, respectively.
- other sources of information: HIV/AIDS cases reporting, STI and TB surveillance, death records.

Principles in leading second generation surveillance

Second generation surveillance is led following fundamental principles with general applicability.

Thus, second generation systems should be adapted to HIV epidemics stage, i.e. to adjust the surveillance model to epidemical situation in each country.

Second generation systems should be dynamic and flexible according to epidemics stage. They should use the resources which could generate the most useful information. For example, aiming high risk population is convenient for a superior impact of interventions.

Second generation systems compare biological data with behavioural data in order to improve the explicite power. Behavioural data play an important role in second generation surveillance representing the key element which adds value in HIV/AIDS surveillance. These can be used to coordinate the process of gathering biological data, explaining the trend noticed in biological surveillance and in reciprocal availability together with biological data.

Second generation systems should integrate information from other sources as STI surveillance, to spot groups with risk in HIV and TB transmission – a possible sentinel population in HIV testing. They should use collected data to improve the national answer to HIV/AIDS epidemics. In this purpose, second generation systems should be used in:

- identifying risk population;
- identifying risk behaviour;
- planning interventions to prevent risk behaviour;
- planning and providing resources necessary in healthcare services;
- measuring national progress in limiting HIV spreading.

Owing the epidemical situation in each country, there are specific recommendations.

HIV/AIDS stages in different countries

To adjust second generation surveillance systems to epidemical situation of each country, firstly we must define the epidemical situation, using specific criteria.

Following criteria based on dynamic of HIV epidemics, WHO specific guide classifies the epidemical situations of each country in:

- *low epidemic level* - Principle: HIV infection evolves within population during years but does not reach significant levels in any populational group. The recorded cases are for individuals with high risk behavioural type suggesting that this is not largely spread in the population or the virus recently entered the population. Numerical approximation: HIV cases > 5% in any populational group;
- *concentrated epidemics* – Principle: HIV infection spreads rapidly into a populational group, but it is not largely spread into general population. This suggests the existence of a network of individuals with behavioural risk. The evolution of epidemics depends on the nature and frequency of relationships among affected and general population, respectively. Numerical approximation: HIV cases > 5% in a population group, HIV cases < 1 % among pregnant women in urban area;
- *general epidemics* - Principle: in this stage HIV circulation within general population reaches significant levels. High risk population in HIV transmission maintains its contribution. However, the frequency of sexual behaviour risk remains high enough to transmit virus independently from the contribution of high risk population. Numerical approximation: HIV cases among pregnant women in urban area is constantly over 1%.

These criteria are flexible, allowing each country to evolve from a stage to another.

Surveillance types depending the epidemical stage

Related to HIV epidemics stage in each country, WHO recommends a certain surveillance methodology. These recommendations play an informative role, methodology being adjusted to epidemiological and economical realities of each country.

In some countries, the surveillance systems could be used as alarm systems in HIV spreading.

In these situations, HIV/AIDS should answer the following questions:

- Is there any risk behaviour that could generate an epidemics?
- Which populational group is most exposed?
- How large is this population?
- What behaviour is most risky and how frequent is it?
- What is the relationship between risk population and general population?

HIV surveillance in risk population implies a bundle of ethical aspects. Thus, in reaching the surveillance purpose without harming dignity and fundamental rights, there should be taken into account the following aspects:

- understanding their situation (e.g. social stigmatus);
- assuring access by the agency of community mediators;
- obtaining consent of each individual;
- assuring confidentiality;
- avoiding publicity of results.

The methods recommended for countries with low epidemic level are:

- transversal repeated studies;
- STI surveillance;
- sentinel HIV serological surveillance in risk population;
- HIV/AIDS case reports;
- blood screening.

In countries with concentrated epidemics, we recommend all the abovementioned methods, adding the following:

- transversal repeated behaviour studies;
- sentinel HIV serological surveillance.

During epidemics, HIV circulation is well-known in general adult sexual active population, and heterosexual way of transmission is dominant. In these countries, it is possible that small increase of HIV cases to have a bigger impact on epidemics evolution than a big increase in risk population.

In these countries, HIV/AIDS surveillance systems should answer the following questions:

- Which is the trend in HIV infection?
- How can behavioural trend explain HIV trend?
- Is there any modified behaviour?
- Which behaviour maintains HIV epidemics?
- What impact could have epidemics at individual, familial and national levels?

In these countries, second generation surveillance purposes could be:

- identifying risk behaviour that maintains epidemics through repeated behavioural studies;
- explaining HIV trend, taking into account the risk behavioural trend through sentinel serological surveillance;

- planning interventions which focus on young populational groups, and improving morbidity and mortality data.

The surveillance methods used for countries with general epidemics are:

- sentinel serological surveillance among pregnant women from urban and rural areas;
- transversal repeated behavioural studies in general and young populations, respectively;
- sentinel and behavioural surveillance in high risk population;
- HIV/AIDS case reports;
- AIDS mortality data.

Introducing second generation HIV/AIDS surveillance (15)

Second generation surveillance systems are built up on the structure of already existing systems, taking into account the needs of improving the efficacy of the existent systems, and the background of each country.

In a practical way, organizing activities within a national plan, in coherent steps like:

- assessment of the existing surveillance systems;
- national consent on HIV/AIDS surveillance priorities;
- national plan regarding the development of HIV/AIDS surveillance systems;
- surveillance protocols;
- implementing the activities established in surveillance protocols;
- monitoring and assessing the surveillance activities.

Methodology elements in risk behaviour surveillance studies

Justifying

All over the world, HIV/AIDS epidemics is generated by certain behaviour, that exposes to the risk of HIV transmission. The success of prevention depends on changing this behaviour.

Risk behaviour

This concept means the behaviour that generates a probability for:

- a non-infected person to get in touch with an infected one, and
- HIV infection to be transmitted during the intercourse.

Examples of such behaviour are:

- sexual contact with multiple partners;
- prostitution;
- common use of drug injection.

Examples for HIV infection to be transmitted during the contact:

- condom use;
- presence of other STI;
- anal sex intercourse;
- non-sterile drug injection.

Risk behaviour can be met in special population, being defined by:

- job (prostitutes);
- sexual orientation (homosexuals);
- age (youngsters);
- habits (drug users).

Using the behavioural data

Behavioural data proved to be useful for:

- alarm in HIV spreading in population;
- elaborating and aiming the interventions meant to limit HIV spreading;
- assessment of interventions;
- explaining the trend in HIV infection.

HIV transmission in a population is generated by individual behaviour. Identifying this behaviour as well as its distribution within population helps understanding the mechanism of transmission. Spotting the behavioural changes within a population can warn against the risk of HIV transmission having the chance of intervention before spreading get larger.

Behavioural data can demonstrate:

- what population is on risk;
- which way is transmitted;
- which is the risk for general population;
- which behaviour connects the risk population with general population.

These information can lead the intervention programmes through:

- identifying specific intervention;
- focusing the intervention on risk population;
- aiming the behaviour that expose individuals to HIV.

Interventions assessment is necessary to justify the financial aspects of the programmes. During monitorization, a decreased behavioural risk allows successful documentation for protective behaviour.

Changing behavioural risk leads to a lower number of new infections. We can correlate the efforts in reducing the behavioural risk with reduction of the number of cases. If the behavioural trend has no relationship with the number of cases, then the dynamic of cases cannot have anything to do with interventions, but other factors are involved (36):

- AIDS increased mortality;
- Changes in population dynamics (37);
- Selection and measurement errors.

Methods for data collecting

Gathering of data is done supported by various behavioural studies, qualitative and quantitative.

Qualitative behavioural studies allow risk behaviour identification within a population, and helps understanding the way of spreading among the members. They allow a deep approach of the problem on a small, non-representative group of persons, through direct methods - experimental and observational, or indirect methods – focus groups, experts analysis, case studies, but it cannot help measuring the trend.

Quantitative behavioural studies are transversal studies of risk behaviour on representative groups from target population, regularly repeated. They are led on representative trade groups belonging to general population, and provide standard data that could be compared during the time. The patients are, generally, compliant. However, the high costs limit their repetition.

They are recommended for countries with general epidemics. In countries with low level of resources, they are integrated in HIV / sexual behaviour modules, in larger demographic or national health studies.

Behavioural surveillance studies are transversal and repeated. The frequency of data aquirement depends on prevention programmes implementation.

The main feature of these studies is consistency, i.e. using standard methods, assuring comparison of data.

Surveillance studies focus their attention on populational groups and behaviour that have a definitory contribution in HIV spreading. These are useful in epidemics concentrated in risk population.

Behavioural data value

The value of data depends on their availability. The availability of data regarding behavioural risk reported by a subject is still doubtful (38).

Recent experience proved that, as a rule, people do not lie. However, when it is about a stigmatized behaviour, this is expected to happen. Thus, the honesty of the reporting person depends on how much attention pays to the following aspects:

- confidence;
- personal qualities and interviewer attitude;
- the way to ask questions.

To make data available, we should compare them with data from other sources. Nowadays, there are lots of studies that demonstrates the similarities between sexual behaviour data and biological indicators of sexual activity (pregnacy, STI).

To conclude, though reporting cannot be eliminated, behavioural data remain useful for behavioural risk trend surveillance.

Data availability is, in turn, influenced by the gathering manner. Thus, there is recommended to avoid collecting data from individuals selected for serological testing. Yet, to guarantee the comparison of results – studies versus biological surveillance, there is recommended that the groups should be selected from the same population. However, a minimal socio-demographic variation is recommended in comparing groups features.

Using data to justify how a behaviour changed because of an intervention is another precious element of behaviour surveillance. Nevertheless, finding a single change does not allow a causal link between this one and the intervention. But behaviour change, together with indicators of intervention allow the deduction of a plausible effect, because of the intervention.

Steps in organizing behavioural surveillance studies

Managing behavioural surveillance studies needs to follow some steps to succeed - Family Health International Guide cited by WHO.

Choosing partners. All stakeholders should be identified, as a technical working group that meets periodically in order to establish purposes. Such partners could be: public health and other governmental institutions officials, non-governmental organizations which deal with risk communities, risk communities and the ones that get in touch with their members, funds donors in order to prevent HIV, etc..

Agreement. This time, the identified partners from the previous step should agree with the following aspects: what population groups will be taken into account, what kind of information will be collected, who will collect and analyze data, which way data security will be provided and how they will be used in people interest.

Choosing population groups. Ideally, population is chosen following these technical and practical criteria: contribution in HIV transmission, existence of an intervention plan, political stage, resources, accessibility. There is recommended this to be followed by a rapid assessment of behaviour in the population they have chosen.

Defining objectives, indicators. This time, the organizers should establish clearly: what aspects do they want to know to establish the objectives, how do they want to measure these aspects to define the indicators that will be used in progress assessment, etc..

To reach the HIV transmission prevention purpose a programme should have three categories of general objectives:

- intervention should aim the population;
- intervention should reach the individuals in the population;
- individuals should change their risk behaviour.

There are defined indicators for each category. The first two are to assess the process of HIV/AIDS prevention programmes.

The indicators of behavioural surveillance focus on risk behaviour assessment impact in HIV transmission because, finally, the success of prevention depends on risk behaviour changing.

Behavioural changing is made gradually. Having a new behaviour means:

- having knowledge regarding HIV infection;
- having a correct concept and attitude.

Thus, in order to monitor risk behaviour and assess behaviour indicators, there should be measured both risk behaviour and generator factors (knowledge, attitude). In order to elaborate a behavioural indicator, we must define the following factors:

- numerator;
- denominator;
- time period;
- what is measured;
- explaining some terms (e.g. defining group affiliation).

To assure comparison of measurements during the time and in real tridimensional space, we recommend to standard the indicators used.

Defining populational groups to work with. This time, some groups from target population should be defined taking into account technical aspects in analyzing surveillance data.

Universe = population whom results can be attributed according to its representativity.

Field = segment of population for the indicators to be estimated. Into this respect, there is necessary to choose a group for each field, and to avoid an insufficient number of individuals.

There also should be defined the individual affiliation to the above mentioned groups.

There should be established geographical limits of target population (national, regional, territorial, local). There is recommended these to be the same with the ones where surveillance is organized.

Selecting places. Taking into account that special population groups are targeted, there should be identified access point to these groups. Once identified, these should be listed and spotted on the map. Moreover, investigators must estimate the number of individuals available in each place. Finally, the places will be selected taking into account the abovementioned data.

Building up the background for choosing groups. This step superposes on the previous one. It includes making up of a list with places and individuals from each site.

Establishing the way of choosing groups. The recommended model in the guide is choosing nests. This is a technical exercise that means:

- defining universe and field;

- how big is the group;
- how big is a nest.

This needs the following data:

- risk behavioural level;
- minimal magnitude that should be measured when behaviour is changed;
- measurement accuracy.

The model should include implementation instructions.

Protocol. As a consequence of the abovementioned cascade of steps, a protocol should be established. This includes all the methodology of the study, structured as followed:

- Purposes;
- Objectives;
- Methodology;
- Data collecting instruments;
- Guides for interviewers and supervisors.

Pre-testing the instruments for collecting the data. Concerning the data acquisition, there are recommended standard questionnaires, in order to compare the data. A pretesting is mandatory and should be followed by questionnaires adjustment according to the identified problems.

Interviewers training. When the final form of the questionnaire is ready, the interviewers should be trained. This aspect is very important for the quality of the collected data, because the attitude of the interviewer could influence the answers. When recording the answers, procedure codes should be followed.

Collecting data. During data acquisition, the interviewers should be watched over and the questionnaires should be verified to be filled correctly and accurate.

The main investigator should coordinate and supervise the whole process.

Addition of codes should be done rapidly, by a single person. When this is not possible, we recommended no more than three persons.

Data management. When collected data are available, they are transferred from paper to magnetic support, taking into consideration the following aspects:

- how accurate they are;
- if they respect the limiting values;
- if there are missing data.

Analyzing data. The value of data analysis depends on the previous steps. Actually, this step mainly spots:

- calculating the indicators;
- group importance;
- computing standard errors of estimated values;
- testing the trends' statistical significance, or the differences among various groups.

Using data – connecting HIV /AIDS cases trend with behavioural changing.

The whole effort of collecting the data should finalize with their utility in reaching the purposes of disease prevention and programmes control, including educational issues.(39) Into this respect, the responsibility belongs to the public health authorities. The trends and behavioural risk changes should be correlated with the number of HIV/AIDS cases.

Exercises

Task 1:

Students are required to present structured lectures about the general objectives and methods in HIV/AIDS surveillance. Particular attention should be paid to stories of success in this field.

Task 2:

Trainees and students are required to take part in debates, as protagonist/antagonist and in the audience, respectively. The lively yet balanced discussion on controversial issues concerning general objectives and methods in HIV/AIDS surveillance will generate ideas through progress.

Task 3:

Students are required to participate in how-to sessions, a unique opportunity for intense interaction between a limited audience and two or three experts in fields of HIV/AIDS surveillance.

Task 4:

Students are encouraged to interact closely with nurses and laboratory technicians, under the coordination of a specialist, in order to develop practical skills in HIV/AIDS surveillance field.

Recommended readings:

1. Topics in HIV Medicine, July/August 2003,11(4):140-4.
2. 2003-2008 HIV Prevention Community Planning Guidance, CDC Center for Diseases Control and Prevention.
3. Setting HIV Prevention Priorities: A Guide for Community Planning Groups, March 2005, AED, Center AIDS & Community Health.
4. HIV Prevention Community Planning: An Orientation Guide, January 2005, AED, Center AIDS & Community Health.
5. HIV Prevention Strategic Plan Through 2005, January 2001, CDC Center for Diseases Control and Prevention.

HEALTH PROMOTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title:	Situation Analysis of HIV/AIDS in Albania: Case-study
Module: 5.4.1	ECTS: 0.25
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Key words	Education, income, inequalities, health, socio-economic, HIV/AIDS.
Learning objectives	At the end of the module, students should be able to: <ul style="list-style-type: none"> • Assess the epidemiological situation of HIV/AIDS in their own countries; • Understand the health impact, as well as economical and social impact of HIV/AIDS; • Address the importance of national strategies for prevention and control of HIV/AIDS.
Abstract	Albania today is still a low HIV prevalence country, but major concerns exist that since the 1990s there has been an uncontrollable increase in the risk-behaviours coupled with spontaneous massive internal and external migration, and a lack of information about the causes and prevention of HIV/AIDS. By the end of 2004, there were 149 HIV cases in Albania, of which 48 cases of AIDS (with 25 deaths). Sexual transmission, both homosexual and heterosexual, accounts for over 90% of HIV cases in Albania and the age-group most affected is 30-40 years old. The majority of reported HIV cases were acquired outside Albania. According to projections of the National HIV/AIDS Program, in 2010, the number of HIV cases might reach 10,000-15,000 if the necessary prevention measures would not be taken. Thus, after 2000, there was an emerging need for a national strategy of control and prevention of HIV/AIDS in Albania. This was due to the increasing number of new cases every year as a consequence of risky behaviors especially among the risk-sexually active population. By the end of 2003, the Ministry of Health approved the National Strategy of Prevention and Control of HIV/AIDS in Albania: 2004-2010. As Albania has signed the Millennium Declaration, the approval of the National Strategy on HIV/AIDS confirms the commitment of the government to achieve the Millennium Development Goals.

Teaching methods	<ul style="list-style-type: none">• Introductory lecture;• Seminars;• Group discussions;• Presentations.
Specific recommendations for teachers	This module should be assigned 0.25 ECTS.
Assessment of Students	<ul style="list-style-type: none">• Group assignment (5-7 students): review of health promotion strategies to control and prevent HIV/AIDS in students' home countries.• Individual assignment: take home essay (up to 3000 words, references excluded). Students are expected to provide a comprehensive literature review about epidemiological situation, measures of control and prevention of HIV/AIDS in their own countries.

SITUATION ANALYSIS OF HIV/AIDS IN ALBANIA: Case-study

Enver Roshi, Genc Burazeri

Epidemiological situation of HIV/AIDS in Albania

By the end of 2004, there were 149 HIV cases in Albania, of which 48 had developed AIDS. Out of the 48 AIDS cases 25 have died. In 2004, 29 new HIV cases, 6 new AIDS cases and 1 new AIDS death were reported. Among the 29 new HIV cases in 2004, 19 were male and 10 female. Overall, the predominant mode of transmission is sexual (over 90%), and the most affected age group is 30-40 years (1). It is worth to be noted that the majority of reported cases were acquired outside Albania. The available data suggest that injecting drug use is increasing in Albania, and that more than two thirds of injectors share needles and syringes (1-2). In addition to injecting drug use, Albania faces other challenges with regard to HIV risk behaviours. It is estimated that thousands of Albanian women and girls have been working as sex workers outside the country (especially in Western Europe) over the past 15 years (1,3). Most of them are young (20-24 years old) and have not received any sex education (1). During the last decade there has also been a dramatic increase in the mobility of the Albanian population (4-5). According to estimates of the National Statistical Institute of Albania, the number of migrants is approximately 600,000 people, or about 20% of the population, the largest group being men aged 20-30 (5). Highly active antiretroviral therapy (HAART) became available in Albania in 2004 (1). At the end of 2004, 30 people were on HAART treatment (1).

Box 1. Selected facts about HIV/AIDS situation in Albania (as of December 2004) [1]:

HIV/AIDS situation in Albania, December 2004

- 149 HIV cases, of which 48 have developed AIDS
- 60% of HIV cases are females
- 70% of HIV cases were reported among migrants
- 5 children have developed AIDS
- Sexual transmission accounts for 90% of HIV cases

Source: WHO (2006). *HIV/AIDS in Europe: Moving from death sentence to chronic disease management.*

Disparities in spread of HIV/AIDS in Albania

- HIV/AIDS in Albania is unevenly spread in *geographical* terms due to higher rates of migration from selected areas of the country (6). Thus, Northern and Southern regions, with a high percentage of migrants, are at risk to suffer mostly the mobility-related vulnerabilities to HIV. As stated in the National Strategy for Health Promotion (2), given that HIV incidence in Greece and Italy is 1.25 and 3.16 per 100.000. Albania might experience sharp increases in HIV rates due to the high rate of mobility of workers towards these two countries.

Furthermore, Tirana, the Albanian capital city, faces a high risk for the spread of HIV due to the quick change of behavioral patterns among the risk-sexually active population.

- There is also a particular concern about the *economic disparities* of HIV infection in Albania (6). The poorest are expected to be the most vulnerable group for acquiring HIV infection. Poverty maybe linked to higher possibilities to get involved into commercial sex work, being trafficked or injecting drugs. However, the evidence from other transitional countries suggests that an increase in drug use and commercial sex work is not always linked to the level of poverty in absolute terms.
- As in other countries and cultures, women are more vulnerable to HIV for economic, biological and cultural reasons. Therefore, there is evidence for a pattern of *gender disparities* in the distribution of HIV/AIDS, with 60% of reported cases among women (1,6). The lack of power to negotiate the use of condoms and the lack of awareness among migrant's partners left behind in the towns of origin are issues to highlight, as they might face a risk of contracting HIV even though they do not engage into any other risk behavior than having sex with their husbands (6). STI/HIV related-risks associated to the trafficking of women for sexual exploitation is an issue of extreme relevance to be addressed.
- There are remarkable *age disparities* in the transmission of HIV infection, with young people being the group most likely to be exposed to risk behaviors for acquiring HIV (1,6). Besides, youth has a higher chance to be involved into migration processes. Thus, the age-selective migration exposes the young population sub-groups to a higher risk towards HIV infection (6). Nonetheless, the need for awareness rising of middle-aged individuals should not be neglected, particularly in the case of migrant workers and their partners.

The need for a national strategy for prevention and control of HIV/AIDS in Albania

According to projections of the National HIV/AIDS Program, in 2010, the number of HIV cases could reach 10,000 – 15,000 if the necessary prevention measures are not taken (7). Besides the sexual transmission of HIV infection, injected drug users (IDUs) pose a particular concern for the spread of HIV. According to UNAIDS, there are about 30,000 drug users in Albania, of which 70 percent are estimated to be IDUs (7). Thus, there is a particular concern about a potential epidemic among this high-risk group. Furthermore, KAP surveys carried out in Albania have identified low levels of knowledge about HIV/AIDS and low levels of condom use, especially among groups at risk, which could fuel a potential epidemic (7). The available data suggest a very problematic situation regarding HIV prevention. Thus, according to a survey, 47% of IDUs reported about 25 sex partners per year, and 62% of the sex workers reported about 50,000 sex partners per year (7). Also, only 33% of men report having ever used condoms, and only 12% of sex workers report always using condoms (7). According to another survey, the prevalence of constant condom use among 279 undergraduate students who reported being or having been sexually active was 35% (8). Although Albania has developed subsidized marketing schemes (9), condoms are not available in schools or universities, or restaurant and coffee shops. Access and affordability of condoms can, therefore, be assumed to vary in subgroups that differ in income status and/or background (e.g. education), (8).

Based on the available evidence and projections for the future, there was an emerging need for a national strategy of control and prevention of HIV/AIDS in Albania. Thus, by the end of 2003, the Ministry of Health approved the National Strategy of Prevention and Control of HIV/AIDS in Albania: 2004-2010 (7).

Objectives of the National Strategy for Prevention and Control of HIV/AIDS in Albania

The National Strategy for Prevention and Control of HIV/AIDS in Albania (NSPCHA) was designed to help the management, collaboration and coordination among the governmental institutions, non-governmental agencies and international organizations which operate in the area of control and prevention of HIV/AIDS in Albania. The aim of NSPCHA was to provide a comprehensive document regarding the control and prevention of HIV/AIDS in Albania in line with the best examples and practices in other countries. Protection of human rights and reduction of stigma and discrimination is the cornerstone of the strategy. The NSPCHA addresses the need for multi-sectoral collaboration in order to tackle a multi-dimensional problem such the issue of HIV/AIDS. The strategy addresses the need for enhancing the surveillance system of HIV/AIDS, improvement of blood safety, improvement of legislation, development of supporting and caring activities for people living with HIV/AIDS, enhancement of condom promotion among general population, as well as provision of counseling and testing for HIV infection (7).

The main objectives of the strategy are summarized in Box 2 (7):

Box 2. Main Objectives of the National Strategy for Prevention and Control of HIV/AIDS in Albania

- Overall objective: to keep the prevalence of HIV among the general population less than 0.1% by 2010.
- Increase the level of knowledge and promote safe sexual behaviors among the sexually active population sub-groups, especially so among adolescents (13-18 years old) and young adults (19-24 years old).
- Increase the level of safe behavior and, therefore, decrease the risk among sexually active women.
- Reduce the risky behaviors among the mobile populations towards HIV/AIDS and improve their health seeking behavior.
- Monitor and support programs that ensure blood safety.
- Reduce the number of injecting drug users and increase the percentage of users who attend harm reduction programs.
- Decrease the percentage of risky behaviors among men who have sex with men.
- Reduce the percentage of commercial sex workers with risky behaviors for transmitting HIV.
- Decrease the number of sexually transmitted infections and reduce the possibility of HIV transmission among those infected.
- Prevent the spread of HIV infection among prisoners.
- Prevent the spread of HIV infection among Roma community.
- Ensure full medical care and treatment for all persons living with HIV/AIDS.
- Ensure adequate counseling and testing services for all persons who seek such services.
- Reduce the mother to child transmission of HIV through preventive efforts.
- Ensure full social support for all persons living with HIV/AIDS.
- Establish effective systems of monitoring and evaluation based on epidemiological, behavioral and environmental factors.
- Strengthen and increase the quality of scientific research for assessing the behavioral risks on one hand, and the appropriate intervention to undertake, on the other.

Source: Ministry of Health of the Republic of Albania (2003). *The National Strategy of Prevention and Control of HIV/AIDS in Albania*.

As Albania has signed the Millennium Declaration, the approval of the National Strategy on HIV/AIDS in December 2003 confirms the commitment of the government to achieve the Millennium Development Goals.

Exercise

Task 1:

Students are required to perform a comprehensive review about the strategies for control and prevention of HIV/AIDS. Particular attention should be devoted to success stories (i.e. the best international examples on control and prevention of HIV/AIDS).

Task 2:

Students are required to provide a summary of their respective national strategies on HIV/AIDS. Each student should provide a list of *pros* and *cons* pertinent to the actual implementation of the respective strategy.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Promoting Mental Health
Module: 5.5	ECTS: 1.0
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Key words	concepts in health psychology, risk behaviours, stress, stressful events, coping strategies, health communication
Learning objectives	At the end of this topic students should: <ul style="list-style-type: none"> • be familiar with terms mental health, mental illness, mental disorders, positive mental health, and mental health problems; • understand the extent of the mental health problem; • understand basic concepts of mental health promotion.
Abstract	Mental health promotion is an umbrella term that covers a variety of strategies, all aimed at increasing internal capacity or having a positive effect on mental health. In praxis, the encouragement of individual skills and resources for improvements in the socio-economic environment are leading among them. But, defined by WHO in 1998 health promotion is action and advocacy to address the full range of potentially modifiable determinants of health. That means that mental health promotion requires multisectoral action, involving a number of government sectors such as health, education, employment/industry, environment, transport and social and community services as well as non-governmental or community-based organizations such as health support groups, churches, clubs and other bodies.
Teaching methods	Teaching methods include introductory lecture, small group discussions, self-learning, and case study. After the introductory lecture students need carefully to read the recommended readings on the subject. Afterwards they need to discuss the issue - first in small groups and afterwards in a whole group of students. They are also addressed to find a case of mental health promotion in their neighbourhood (if existent), and critically discuss with other students the situation discovered.

Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• training materials: recommended readings are available in the internet;• target audience: master degree students according to Bologna scheme.
Assessment of Students	Short written examination.

PROMOTING MENTAL HEALTH

Ognjen Brborovic

Nature and extent of the problem

To answer the question in title we should first discuss what is the *problem*? Is it a *mental health*? Or, maybe *mental hygiene*? Is it *mental diseases, ill-health, disturbances even mental health problems*?

One could look for an answer at respectable sources. In Encyclopedia Britannica mental health is mentioned in explanation of *mental hygiene* – as a science of maintaining *mental health* and preventing disorders to help people function at their full mental potential. Still they say little about mental health. The WHO World Health Report 2001 named *Mental Health – New Understanding New Hope*, begins with words of Director-General Dr. Gro Harlem Brundtland “Mental illness is not a personal failure...” and more or less continues with the same perspective of mental health. In a series of review articles published in British Medical Journal during 1997 named *ABC of mental health* you can find for clinicians quite important information, how to manage, assess or treat *mental illness*.

So logical conclusion could be *mental health* is about mental disorders, precisely omission of mental health, but we should look at other sources as well before final conclusion. In *Mental Health: A Report of the Surgeon General* by U.S. Department of Health and Human Services there is distinction between Mental Health and Mental Illness.

1. Mental health.

Mental health: the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity; from early childhood until late life, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience, and self-esteem.

2. Mental illness.

Mental illness: the term that refers collectively to all mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behaviour (or some combination thereof) associated with distress and/or impaired functioning.

In EU there is similar distinction yet little different. In *Public Health Action Framework on Mental Health* done by National Research and Development Centre for Welfare and Health, Finland Ministry of Social Affairs and Health and accepted by European Commission there is *positive mental health* as opposite of *mental health problems*.

3. Positive mental health.

Positive mental health includes:

- a positive sense of well-being;
- individual resources including self-esteem, optimism, and sense of mastery and coherence;
- ability to initiate, develop and sustain mutually satisfying personal relationships and
- ability to cope with adversities (resilience).

These will enhance the person’s capacity to contribute to family and other social networks, local community and society.

Mastery, coherence, resilience, etc. – there is no need to look further since these is clearly showing terminological chaos and by searching more one could get even more confused. What is important to distinct is that mental health in public health context could be both ease and disease. For practical reasons we should think of a *mental health* as *internal capacity* that allows person to act within individual and social boundaries with final aim to achieve freedom, financial/material independency and sense of well-being.

4. Mental health problems.

Mental health problems include:

- psychological distress usually connected with various life situations, events and problems;
- common mental disorders (e.g. depression, anxiety disorders);
- severe mental disorders with disturbances in perception, beliefs, and thought processes (psychoses);
- substance abuse disorders (excess consumption and dependency on alcohol, drugs, tobacco);
- abnormal personality traits which are handicapping to the individual and/or to others;
- progressive organic diseases of the brain (dementia);
- sexual disturbances not physiologically induced, and
- sleep disorders (that are not symptom of other mental disorder).

5. Mental disorders.

Mental disorders are defined in the classifications of diseases (International Classification of Diseases *ICD10* or Diagnostic Statistical Manual *DSM IV*) by the existence of clusters of symptoms. The criteria for disorders are met when the clusters of symptoms are relatively severe, long-lasting, and accompanied by reduction of functional capacity or disability.

Distinction between mental health and mental health problems is important for practical and contextual reasons. Practically it means that promotion of mental health is aiming to increase internal capacity while preventing mental health problems is aiming at decreasing prevalence and severity of mental diseases, distress and disturbances. Contextually, difference is important to understand linkage, but not predestination, between mental health and mental health problems and complexity of diverse factors that contribute to health. Mental health and mental illnesses are determined by multiple and interacting social, psychological, and biological factors, just as health and illness in general. The clearest evidence for this relates to the risk of mental illnesses, which in the developed and developing world is associated with indicators of poverty, including low levels of education, and in some studies with poor housing and low income. The greater vulnerability of disadvantaged people in each community to mental illnesses may be explained by such factors as the experience of insecurity and hopelessness, rapid social change or transition, and the risks of violence and physical ill-health. Also, physical activity and physical health are quite important determinants of mental health (1).

Mental health status

It is known that medicine could psychologically asses someone and find mental health problems if they exist (cynic would say that everyone has a mental health problem) but it is

easily to assume that it is impossible to assess mental health of an individual or population. From the end of 20th century we have some quite useful tools for assessing mental health in form of questionnaires. Some assess only components of mental health while other tries to assess generic mental health. Most prevalent (especially in US) questionnaire in use is SF-36 (Short Form 36 questions) that assess both mental health and physical health on scales from 0-100 (0 means total disease while 100 means complete health) (2). There are several shortened questionnaires derived from SF-36 and most common are SF-12 and MHI-5 (Mental Health Inventory with only 5 questions). A score of 52 or less on the MHI-5 scale is taken to indicate a psychological distress (3). Other questionnaires that are common are GHQ-12 (General Health Questionnaire) that could identify people with a probable mental health problem and CIDI (Composite International Diagnostic Interview) the only one mentioned here that could give a probable diagnose.

In almost all EU countries some of these questionnaires have been nationally surveyed but unfortunately in South Eastern Europe (SEE) surveys have been conducted occasionally. Consequences from the recent wars and conflicts, stress of transition and its enormous social costs, lack of the economic and political stability as well as the changes in family and social networks must have had important impact. Yet little is done to explore those changes and even less to empower health care and social systems to better cope with those. Hence we should look at EU to see what the state of mental health is there with the idea that in SEE region mental health is probably feebler. One of the components of mental health in SF-36 is *vitality scale* that is showing person's vigor and dynamism that is quite opposite of depression and anxiety. From surveys conducted in 11 EU countries analysis shows that Italy, Portugal, France and Sweden are in group with lowest score while Belgium, Netherlands and Spain are among group of highest average score. In all those studies males have consistently higher scores than females. The highest average score for man is 68.98 in Spain while the lowest is 61.66 in Italy. The highest average score for females is 63.36 in Spain while lowest is 55.12 in Portugal where is also found the biggest difference in MH-5 score between males and females with odds-ratio of 3.17 (source: Eurobarometer). Various possible factors are contributing to the differences in the mental health of men and women but it is mainly agreed that socio-economic gradient is single most important. In recent history Portugal is passing through tremendous changes, especially in social and economic area of life, so has much in common with countries in transition like SEE countries (4).

Mental health problems status

Describing mental health problem status in countries or region is like describing painting. Without seeing it (or living and working there) one could get only a partial picture. Two main reasons for that is traditional epidemiological mortality statistic and stigma of mental diseases. First is greatly neglecting existence of mental health problems since that group is seldom burdened with death as final outcome (except suicides; more than 850 000 people die by suicide every year worldwide) while mortality statistics still has predominant role. The other is reducing the number of clinically detected problems since people are ashamed of exposing them. One in four patients visiting a health service has at least one mental, neurological or behavioural disorder but most of these disorders are neither diagnosed nor treated, so it is said that detected mental health problems are like visible part of an ice berg (not exactly true but useful for illustration). Acknowledging a huge gap in existing methods, not only for mental health problems, World Bank has started with Harvard University in

1993 Global Burden of Disease study. The idea was to introduce universal measure that could describe burden of disease nevertheless is it with mortal outcome or not. That study introduced DALYs and in 1998 WHO accepted it as a meaningful measure of population ill health. DALYs express years of life lost to premature death and years lived with a disability, adjusted for the severity of the disability. One DALY is one lost year of healthy life. In 1998, an estimated 43% of all DALYs globally were attributable to non-communicable diseases. In low and middle income countries the figure was 39%, while in high income countries it was 81%. Neuropsychiatric conditions, accounting for 10% of the burden of disease measured in DALYs in low and middle income countries and 23% of DALYs in high income countries. Actually, Burden of Diseases study raised attention on mental health since one of main results were exposing until 1999 neglected scourge of depression and other mental health problems especially in high income countries (EU, USA, Canada, Japan). Eventually WHO published World Health Report 2001 *Mental Health – New Understanding New Hope* where among many conclusion experts put that 20-25% of all people at some time during their life will be affected by mental or behavioral problems and moreover, projection for depression within the next 20 years shows that it will become the second leading cause of disease burden in the world.

Table 1. Rank of selected conditions among all causes of disease burden (WHO)

Disease or injury	Rank		
	World	High income countries	Low and middle income countries
Unipolar major depression	4	2	4
Alcohol dependence	17	4	20
Bipolar disorder	18	14	19
Psychoses	22	12	24
Obsessive-compulsive disorder	28	18	27
Dementia	33	9	41
Drug dependence	41	17	45
Panic disorder	44	29	48
Epilepsy	47	34	46

Source: World Health Report, 2001

Depression and depression-related problems are today among the most pressing public health concerns in Europe. Estimates for total disease burden quoted WHO report indicate that they account for more than 7% of all estimated ill health and premature mortality in Europe, only exceeded by ischemic heart disease (10.5%) and cancer (11.5%) (5).

There are other burdens caused by depression, beyond the health systems. These include the loss of quality of life for the affected and their families, a loss of productivity for firms and an increased risk of unemployment for individuals. Depression can mean that people withdraw from family life, social life and work, and far too many people with depression commit suicide. Depression and depression-related problems directly affect about 2–10% of our European citizens. To illustrate the magnitude of the disorder, it is estimated that in any given year, some 33.4 million people in the WHO European Region suffer from major depression. About 15% of patients with severe depression commit suicide, whilst 56% attempt suicide and the majority have suicidal ideas during depressive episodes (6).

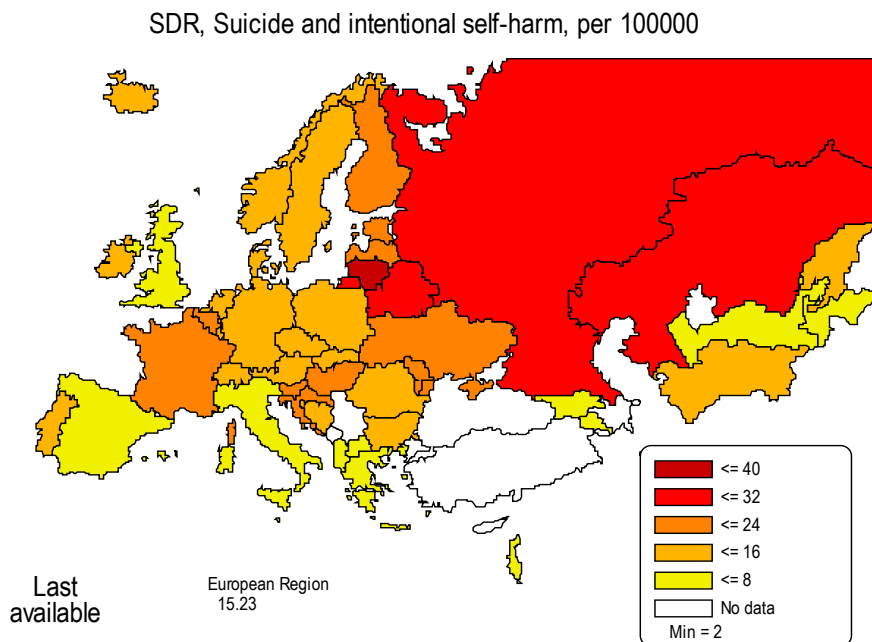
A vast number of working days a year are lost to depression affecting our economies and our social, community and family life. Depression affects quality of life more than most physical illnesses, and in some cases it even leads to suicide or suicide attempts. There are also well established links between physical illness and depression and vice versa.

However, without stating two very important issues less is said about mental health status in Europe. Suicides attempts and psychosis are the worst outcomes of any mental health disorders, one because of its acuteness the other because of its chronicity.

Mental health literature suggests that the prevalence of schizophrenia vary enormously between countries. Estimated average lifetime prevalence of schizophrenia in Europe would be about 1%, but pockets with very high and very low prevalence have been detected. Even in some countries differences in schizophrenia prevalence across regions could be twofold, even threefold higher. Also, epidemiologists are quite tactful to estimate schizophrenia prevalence since there is obvious gap between diagnosed psychosis and diagnosed psychosis symptoms. Although schizophrenia is rare, psychosis symptoms are rather common in the general population (some studies state prevalence of symptoms up to 20% during lifetime). These findings are quite important for mental health promotion since persons with prepsychotic states should be in focus for prevention of chronicity of psychosis (4).

Rates of suicide across Europe steadily rose after the 2nd World War so that during '80s suicide was one of the most frequent causes of death, especially among younger people. In '80 almost as many deaths yearly in the World were caused by suicide (about 800,000) as by traffic accidents (about 850,000) or as by war (about 320,000), violence (about 280,000) and HIV infection and AIDS (about 300,000) combined. Although in some countries Health for All policy managed to decrease rates of suicide, number of deaths in transportation is still comparable with the number of accomplished suicides. There are huge differences in rates across Europe and the differences are explained by tradition, culture, mentality etc. Traditionally low risk area is Mediterranean basin (Greece, Albania, Malta, Italy) while northern and eastern areas of Europe have higher rates of suicide (Lithuania, Russian federation, Belarus, Finland, Estonia). Although some countries have arguably low rate of suicides and quite high rate of deaths from undetermined events (like Portugal) suicide statistics is generally available (4). In contrast to the situation for suicide, statistics on nonfatal suicidal acts (attempted suicide) seldom exist. However, agreement seems to be that the frequency of attempted suicide would be about ten times the frequency of completed suicide hence area for suicide prevention seems to be enormously huge requiring great resources in human power as well as finance.

Figure 1. Standard Death Rates for suicides and intentional self-harm per 100,000 population in Europe (last available).



Source: WHO Health for All Database, 2005

Many more information about mental health problems one could easily find at *Health for All* database by WHO Regional Office for Europe. Second reliable source is Atlas for Neurological Disorders by WHO.

Promotion of mental health

Mental health promotion is an umbrella term that covers a variety of strategies, all aimed at increasing internal capacity or having a positive effect on mental health. In praxis, the encouragement of individual skills and resources for improvements in the socio-economic environment are leading among them. But, defined by WHO in 1998 health promotion is action and advocacy to address the full range of potentially modifiable determinants of health. That means that mental health promotion requires multisectoral action, involving a number of government sectors such as health, education, employment/industry, environment, transport and social and community services as well as non-governmental or community-based organizations such as health support groups, churches, clubs and other bodies.

Research has shown that mental health is affected by non-health policies and practices as well, for example in housing, education, and child care (1). Despite some uncertainties in the evidence, link between social experience and mental health is clear and serves as compelling case to apply locally appropriate policy and practice interventions to promote mental health. A climate that respects and protects basic civil, political, economic, social, and cultural rights is fundamental to the promotion of mental health. Without the security and freedom provided

by these rights it is very difficult to maintain a high level of mental health. This accentuates the need to promote mental health through policy and practice interventions in diverse health and non-health areas.

Multisectoral linkage is the key for mental health promotion. Mental health is everybody's business. Particularly important are the decision-makers in governments at local and national levels whose actions affect mental health in ways that they may not realize. The promotion of mental health must have focus on both the individual and the environment. This calls for the involvement of a much broader array of interventions and actors than does the traditional model of medicine, which centers on specialists trained to return function to individuals.

In many fields of life, well-designed interventions can contribute to better mental health and well-being of the people. Over the last two decades, numerous studies in mental health promotion have proven that such interventions can be effective and lead to improved mental health.

Depression is excellent example of well studied mental health promotion interventions. Focus here is on positive mental health promotion and the prevention of the secondary consequences of depression rather than on treatment, though clearly a pharmacotherapy, psychotherapy and other approaches play an important role in treatment of depression (6).

Strategies to promote positive mental health and reduce the potential impact of depression can be implemented at several different levels:

Population level

Stigma and discrimination associated with mental health problems and a fear of being labeled can be compounded by a lack of awareness of the availability and accessibility of services. Therefore awareness campaigns have been the primary mechanism used with the general public. However, evidence on the effectiveness of information campaigns alone influencing public attitudes toward mental health problems is generally very limited unless supported by a range of actions at local level and sustained over time.

Primary Health Care level

Systematic review of studies on the detection and management of depression in primary care has been conducted. Body of evidence supporting a range of health promotion and primary care interventions has steadily built up showing that primary health care could be effective and efficient way of handling depression. It is of great importance to recognize that combination of both patient and professional education, liaison between primary care physicians and other health professionals, and the provision of counseling and support services is needed.

Settings level – school and workplace

Some school setting studies have shown benefits of early intervention across multiple sectors to help prevent some of the adverse consequences of childhood mental health problems including depression.

There is evidence that effective workplace health and mental health promotion interventions are available to help reduce the risks of stress and depressive disorders at work. Such interventions can ameliorate the adverse consequences and improve productivity. Systematic, organization wide approaches are of greatest effect in reducing work-related stress, and have been recommended to include staff support, communication structures, enhanced job control, increased staff involvement and improved working environment.

Conclusion

As a conclusion, mental health promotion should follow the WHO definition of health and goal of improved mental health should be seen as a part of holistically improved health of individual and society.

Prevention (USTFCP)

Health promotion and disease prevention are necessarily related and overlapping activities because the former is concerned with the determinants of health and the latter focuses on the causes of disease. But usually when speaking about prevention it is about screening and better health care services. Among mental health issues the biggest burden of disease comes from depression. Hence, many clinical diagnostic tests for depression exists but there is not enough evidence to distinguish one upon other as the best screening tool (Mental Health Inventory MHI-5, Zung Self-Assessment Depression Scale, Beck Depression Inventory, General Health Questionnaire GHQ). It is recommended by U.S. Preventive Services Task Force as a recommendation class B (*clinicians should routinely provide screening to eligible patients*) to do primary care screening on depression for adults. No matter which test is used as long as positive screening outcome triggers full diagnostic interview. As for children or adolescents the evidence is insufficient to recommend for or against routine screening for depression.

There is no hard evidence that screening for suicide risk reduces suicide attempts or mortality. There is limited or insufficient evidence on the accuracy of screening tools to identify suicide risk in the primary care setting as well as that treatment of those at high risk reduces suicide attempts or mortality. It is worthwhile to mention that early recognition of persons with depressive episode might reduce suicides as well. Anyhow, secondary prevention aiming at reducing consequences of suicide attempts or attempts itself (field task groups, police experts on suicides, call centers etc.) proved to be of some efficiency (7).

Exercise

Task 1:

Carefully read the contents of the module and recommended readings.

Task 2:

Discuss with other students theoretical and conceptual frameworks of mental health promotion.

Task 3:

Find a case of mental health promotion in your country/city, if exist. If not, try to think about reasons for this. Discuss the cases with other students.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Tobacco Control and Health Promotion Activities
Module: 5.6	ECTS: 0.25
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Key words	Health promotion, tobacco control, WHO, FCTC, youth, pregnant women
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none">• be aware of health risks from tobacco consumption;• recognize the importance of initiation of health promotion programs, especially for youth and pregnant women;• increase knowledge about implementation of health promotion tools among participating students;• identify areas for improvement of health promotion interventions;• become familiar with the WHO tobacco initiatives, programs and activities;• understand the prominent role of doctors and public health professionals in tobacco control activities.

<p>Abstract</p>	<p>The use of tobacco is considered as one of the main risk factors for numerous chronic diseases, such as: lung diseases, cancer, and cardiovascular diseases. 4.9 million deaths per year worldwide are tobacco related, having an increasing trend that will lead to double death toll by 2020. WHO is one of the leading organizations in the world actively involved in the health promotion activities related to tobacco consumption reduction and tobacco control. In this regard WHO prepared the Framework Convention of Tobacco Control (FCTC) in 2003, enforced on February 27, 2005. Based on the FCTC the national tobacco control programs should be comprehensive, aiming to control the use of tobacco through various actions including legislation and pricing measures, prevention through education, communication, informative campaigns in order to raise the awareness on tobacco dangers, to prevent tobacco use initiation, to stimulate smoking cessation and to create smoke free environment. WHO recommends that health promotion program should incorporate activities on smoking cessation, smoke free environment, special activities for vulnerable groups such as youth and pregnant women and activities for prevention of initiation of tobacco use. These programs should be supported by the governments through multisectoral activities emphasizing economics and legislation issues. Tobacco smoking is a widespread and serious problem affecting the health of the population in Macedonia. The National Tobacco Control Strategy in R. Macedonia (2005-2010) incorporates legislative and economic measures, health promotion and education for prevention of initiation and smoking cessation, agricultural and environmental measures.</p>
<p>Teaching methods</p>	<p>Teaching methods will include: lectures, interactive work with students and Power Point presentation. Lectures will include information on tobacco use and health promotion for tobacco cessation and prevention of initiation of tobacco use; interactive work with students will include a) <u>role playing</u> (elaborating problem of tobacco consumption taking a role as decision makers/key-stakeholders) and b) <u>case studies</u> (elaborating problem of tobacco consumption among youth and pregnant women); Power Point presentation made by group of students providing recommendations and suggestions emphasizing health promotion as the leading tool in tobacco use control.</p>
<p>Specific recommendations for the teachers</p>	<p>It is recommended that this module be organized within 0.25 ECTS credit, out of which one third will be under the supervision of a teacher. In order to meet the goals of the course, the following is required: PC, LCD, Internet connection.</p>
<p>Assessment of Students</p>	<p>5 minutes Power Point presentation of individually developed provisional health promotion program for a) youth or b) pregnant women, followed by group discussion.</p>

TOBACCO CONTROL AND HEALTH PROMOTION ACTIVITIES

Mome Spasovski, Doncho Donev, Aleksandar Arnikov, Jaroslav Karadzinski

Use of tobacco and tobacco control

The tobacco leaf as raw material is used for smoking, chewing and snuffing. These leaves contain nicotine, that is highly addictive psychoactive ingredient. The use of tobacco is considered as one of the main risk factors for numerous chronic diseases such as: lung diseases, cancer, and cardiovascular diseases. Nevertheless, tobacco is widely used throughout the world. There are only few countries with a legislation restricting tobacco advertising, regulating who can buy and where tobacco products can be used. (1,2)

4.9 million deaths per year are tobacco related, having an increasing trend that will lead to a double death toll by 2020. It is estimated that the highest percentage of deaths, nearly 70%, will occur in developing countries. Most of the tobacco victims are in reproductive age, and due to their early death their families are deprived. Additionally, the use of tobacco is also responsible for high percentage of direct and indirect costs that are affecting countries' economies (1,2).

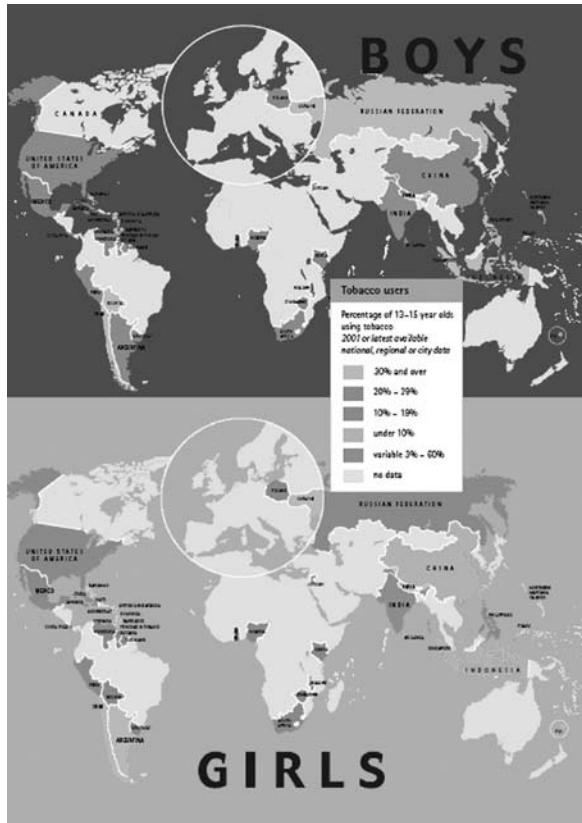
Though the prevalence of smoking is reported as high, there is desire among smokers to stop smoking cigarettes and high school students reported at least one cessation attempt. In this line, interventions should be created and targeted according to the needs and circumstances within each target group. (3,4)

Wide range of measures and activities are implemented in many countries worldwide in order to prevent tobacco consumption and protect people from its effects and effects from second-hand tobacco smoke.

Among those at risk are especially vulnerable groups including youth and women (pregnant women):

The World Tobacco Atlas (5) states that:

1. „There are minimal gender differences between boys and girls (in 30% of the countries boys use other forms of tobacco more often than girls).
2. According to the Global Youth Tobacco Survey (GYTS), one quarter of young people smoke their first cigarette before age of ten.
3. The uptake of smoking among young people increases with tobacco industry promotion (easy access, low prices, peer pressure, their peers, parents using tobacco and misperception that smoking enhances social popularity)“.

Figure 1. Percentage of 13-15 years olds using tobacco

Source: *The World Tobacco Atlas*

Regarding tobacco consumption in women the same source states that:

- „About 250 million women in the world are daily smokers: 22% of women in developed countries, and 9% of women in developing countries.
- "Women who smoke like men die like men who smoke", Josef Califano, US secretary of Health, Education and Welfare, 1977-79.
- Cigarette smoking among women is declining in many developed countries (Australia, Canada, UK and USA), but this trend is not found in all developed countries (in several southern, central and eastern European countries is either still increasing among women or has not shown any decline).
- Tobacco industry promotes cigarettes for women which are long, slim, low-tar, light-colored, or mentholated.“

Figure 2: Female smoking in the world



Role of the WHO

“The WHO FCTC negotiations have already unleashed a process that has resulted in visible differences at country level. The success of the WHO FCTC as a tool for public health will depend on the energy and political commitment that we devote to implementing it in countries in the coming years. A successful result will be global public health gains for all.” (6).

- Dr LEE Jong-wook. Director-General, World Health Organization

WHO is one of the leading organizations in the world that is actively involved in the health promotion activities related to tobacco consumption and tobacco control. In this regard WHO prepared the Framework Convention of Tobacco Control (FCTC) (6) in 2003 that deals with:

1. Illicit trade
2. Regional economic integration organization
3. Tobacco advertising and promotion
4. Tobacco control
5. Tobacco industry
6. Tobacco products, and
7. Tobacco sponsorship

At the Conference of Parties, which is the governing body of the WHO first international Treaty, held in Bangkok (July 2007) the 146 parties to the WHO FCTC decided unanimously on adapting guidelines that stipulate 100% smoke free public places and workplaces as well as beginning a negotiation for a protocol on illicit trade on tobacco products. “This Treaty enables countries to combat the complex threats tobacco poses to human health, such as illicit trade of tobacco products, through international law, including through negotiation of

a special protocol like the one launched during this session” said Dr Haik Nikogosian – head of the Convention Secretariat (7).

Among other decisions, the Conference decided to initiate a development of guidelines related to packaging and labeling of tobacco products and tobacco advertising, promotion and sponsorship.

WHO is playing a leadership role through its Tobacco Free Initiative in strengthening tobacco control systems by working to ensure that interventions on country level will be effective and efficient. WHO is named as one of the five partners to implement the initiative of mayor Bloomberg’s \$125 million to promote freedom from smoking. Also, WHO will help the governments around the world to develop National Tobacco Control Plans pass and enforce key Laws and implementation of effective policies and measures for tobacco control as set out in the WHO FCTC (8).

WHO is conducting many surveillance projects which currently include:

1. WHO/CDC Global Youth Tobacco Survey (GYTS) (9)
2. WHO/CDC Global Health Professional Survey (GHPS) (10)
3. Global Information System on tobacco control (11)
4. Tobacco Free Initiative (TFI) collaborators are promoting research on various aspects of tobacco production and consumption its influence and impact on economics and health.
5. TFI collaborators with other WHO departments are working on facilitating the integration of tobacco control into other health programs (Global Network)
6. WHO collaborating centers are network expanded by TFI of National Institutions designed by WHO to carry out activities in support of TFI’s international health work.

As a result of all its activities the WHO is giving the following recommendations on (12):

1. Smoking cessation
2. Second-hand tobacco smoke
3. Youth and tobacco
4. Gender and tobacco
5. Economics
6. Legislation

Health Promotion activities

The mission of health promotion is to improve the health in the community through increasing capacities of the population to use health promotion strategies addressing the broad determinants of health and assisting communities in gaining control over the integrated actions.

According to WHO recommendations, the health promotion program should incorporate activities on smoking cessation, smoke free environment and special activities for vulnerable groups such as youth and females i.e. pregnant women, activities for prevention of initiation of tobacco use.

These programs should be supported by the Government through multisectoral activities emphasizing economics and legislation issues that will lead to improved health status of the population, due to the reduction in tobacco consumption (13).

The leading role in promotion of smoking cessation should be taken by health care providers, though evidence shows that these interventions should take greater advantage of opportunities to provide such advice to smokers (14,15).

The following table shows the different approaches and interventions implemented in terms of promotion of smoking cessation and other tobacco related interventions.

Table 1. Summary of principal interventions

Intervention	Efficacy: effects on prevalence and consumption	Cost-effectiveness in US\$ (from a health sector perspective)	Reach (i.e. extent to which intervention can reach large number of smokers quickly)	Comments
A. Prevention: Interventions aimed primarily at youth				
1. School health education	Can delay recruitment for several years, but not indefinitely	Minimal costs; effectiveness under real life conditions is uncertain	Limited: effective programs are difficult to implement	Delay is useful, but overall impact is limited
2. Restrictions on smoking in schools	Uncertain	Minimal costs	Can be difficult to implement effectively	Desirable in order to set an example
3. Clubs for non-smoking teenagers ("Smoke Busters Club")	Possible delaying effect but evidence is weak	Poor in terms of direct affects on smoking	Can recruit large number in particular localities	Not recommended except for publicity generation
4. Cessation programs for teenagers	Poor	Poor	Low	Not recommended
5. Mass campaigns	40% fall in prevalence in Vermont trial; no effect in Minnesota or England	Low: in range \$233-1135 per delayed smoker (Vermont)	Very high	Unlikely to be as cost-effective as other options
6. Restrictions on sales to teenagers	Vigorous activity can reduce sales locally; possible delaying effect	Minimal cost to health sector	Low in UK to date	Can be useful source of publicity
B. Interventions aimed at adults				
7. Smokers' advice clinics	10-25% quit rate	Low relative to other interventions	Very low	Only justified in special circumstances
8. Telephone "quit" lines	19% quit rate at six months in Scotland with mass campaign	\$150 per quitter in Scotland	High if well advertised and calls are free	Potentially high impact if part of mass campaign
9. Brief advice from a GP	Up to 5% quit rate	Highly cost-effective; in range \$18-150 per year of life saved (YLS)	Relatively low in UK to date	Highly cost-effective but underused. More elaborate GP interventions are less cost-effective

10. Nicotine replacement therapy (NRT)	Significantly enhances effectiveness of GP advice	Cost of GP advice to smoker to purchase patch in range \$36-300 per YLS	Price may deter some smokers	Not as cost-effective as brief advice, but may be desirable with highly dependent smokers
11. Restrictions of smoking in the workplace	Probably reduces consumption; effects on prevalence uncertain	Minimal costs to health sector	Has spread rapidly among larger UK companies	Necessary to protect non-smokers; possible long term effect on prevalence
12. Paid mass media advertising campaigns	Quit rate in range 0-5%	In range \$10-20 per YSL (at 2.5% quit rate)	Potentially high impact, but efficacy is controversial	High impact, potentially highly effective
C. General interventions aimed at all age groups				
13. Fiscal policy	Price elasticity about -0.5 for consumption. Also associated with substantial falls in prevalence	No direct cost to health sector	High reach, limited only by smuggling	The single most effective measure of all: drawbacks include regressive effects on deprived groups
14. Health warnings on cigarette packages	Possibly some influence on adolescents	No direct cost	High reach	Necessary for ethical reasons
15. Product modification	Possible long term reduction in disease	Minimal costs	High reach	Desirable; ultimately limited by smokers' tastes
16. Bans on all forms of advertising	Probable effects on adults consumption and teenage prevalence	No direct costs	High reach	Desirable for many reasons, but a one-off intervention only
17. Media advocacy and creation of unpaid publicity	Elasticity of -0.5 for consumption; linked with major declines in prevalence. Major effects is on public opinion	Cheaper than paid advertising but requires substantial resources. No Smoking Day costs \$8-36 per YSL	High reach	Strongly recommended for its direct effects alone. Influence on climate of public opinion provides the essential foundation for the entire campaign

Source: *British Medical Bulletin. Tobacco and Health*

Case study in Macedonia

Tobacco growing and production of tobacco products in Macedonia is an old and existing tradition in Macedonia having an increasing trend over time. Additionally, the problem of availability of tobacco products is reaching higher proportions due to their immense import (13).

The National Tobacco control strategy for provision and promotion of health protection of population in the Republic of Macedonia (2005-2010) states that 25% of all deaths related to cardiovascular diseases, that are a leading cause of death in Macedonia, are associated with smoking (13).

The Law for protection from smoking was endorsed in 1995 and it contains legal basis that envisages (16):

1. Protection from harm effects from smoking
2. Protection of healthy living environment
3. Prohibition of smoking in certain public venues (especially important is the Article 2 from the Law that prohibits smoking in the venues where education is conducted and venues where children, scholars and students reside and learn)
4. Prohibition for advertising cigarettes (Articles 4, 5 and 6 from the Law prohibit advertisement of cigarettes, sale of cigarettes to persons younger than 16 years, as well as the responsibility of the manufacturer to print a warning for harm effects from smoking)

The Law was changed and amended in 2003 (17), than 2004 (18) and 2005 (19) and it represents an important tool for the combat for healthy living environment and promotion of smoking cessation.

Macedonia in 2002 was part of GYTS, supported by CDC Atlanta and WHO Regional Office for Europe that showed that “smoking is particularly extended among youth aged 13-15 years, i.e. 8.2% of the interviewees confirmed smoking cigarettes. One out of ten boys or girls is a smoker, and almost all current students-smokers are already tobacco addicts. 20% started to smoke at age of 10.”

Survey conducted among medical doctors has shown that their smoking habits are as follows (13):

1. more than 1/3 of the interviewed reported smoking on a daily basis (39% men and 30% women);
2. 61% of the interviewed reported smoking of 5-20 cigarettes per day and 35% reported smoking of more than 20 cigarettes per day;
3. 37% of men and 52% of women included in the survey reported that never smoked;
4. 43% of men and 28% of women that reported smoking on a daily basis were 46-55 years old;
5. 12% reported that quit smoking (62.5% men and 37.5% women);
6. initiation age of smoking among those who quit smoking was on average 20 years of age and reported smoking cessation at the age of 37;
7. average smoking period among men is 16.38 years while in women is 14.37 years;
8. high prevalence rate of smoking is reported among medical doctors

In the year 2006 in Macedonia a GHPS (Global Health Professional Survey) (10) was conducted among students enrolled in the last three years at the medical disciplines faculties at the University in Skopje. This survey included 309 students of which more than 40% were smokers. The results from this study showed that:

1. 77% of students tried to smoke in some period of their life;
2. 44,5% started smoking at the age of 18-19;
3. 25,8% started to smoke at the age of 11-15 while 24,2% started to smoke at the age of 16-17;
4. 77.3% student-smokers and 83.1% student-nonsmokers think that the health professionals should be a model for their patients and the entire population, and should advise patients how to stop smoking;
5. 54,4% from the older age group of the students, considered themselves educated for that task. (20).

Situation analysis in the Republic of Macedonia

The tobacco control strategy for provision and promotion of health protection of the population in the Republic of Macedonia (13) from 2004 indicated the following: “The most frequent causes of death in the Republic of Macedonia are cardiovascular diseases, hypertension, ischemic heart disease, cerebrovascular diseases and atherosclerosis, as well as non-specific diseases (chronic bronchitis, asthma, chronic obstructive respiratory diseases etc.) and malignant neoplasms.

With reference to cardiovascular diseases - hypertension, ischemic heart disease, cerebrovascular diseases and atherosclerosis, smoking is associated with 25% of deaths. Mortality from cardiovascular diseases is increasing:

- 6365 persons died in 1985 or 44.2%;
- In 1992, this number increased to 8113 persons or 51.2%;
- In 2000, 9670 cases were registered, or 56%;
- In 2002, 10326 persons were registered, with the highest rate of 57% of all deaths.

Increase in mortality from malignant neoplasm is also alarming and accounts for:

- 1980 deaths in 1985, or 13.7% of total mortality
- In 1992 this number increased to 2225 deaths or 13.8% of all deaths
- In 2000, 3051 cases were registered with 17.2% of all deaths and
- In 2002, the highest number of deaths were registered - 3129, accounting for 17.4% of total mortality

In other words, on average, 155 persons per 100.000 die every year from cancer.”

Due to these alarming figures in order to provide comprehensiveness to this problem, the same source (13) has included intersectorial cooperation and multidisciplinary approach. This approach is implemented according to the WHO recommendations and regulations. Ministries taking the responsibilities for implementation of research projects for tobacco control are (4):

1. Ministry of Finance – setting an optimal level of prices and taxes of tobacco products;
2. Ministry of Interior – illicit tobacco and tobacco products trade;
3. Ministry of Economy – explore influence of international trade agreements for tobacco and tobacco products trade;
4. Ministry of Health and Republic Institute for Health Protection – regulations for prevention from smoking;
5. Republic Institute for Health Protection and Institute of Occupational Medicine in partnership with Agency for Sport and Youth – development of new approaches for prevention of smoking in children, adolescents and female population i.e. pregnant women as well as professional hazards from tobacco growth and production process;
6. Ministry of Agriculture – alternative of tobacco production;
7. Ministry of Environment – association between tobacco production and destruction of eco system;
8. Ministry of Health along with NGOs – smoking in different population groups particularly vulnerable groups.

The above mentioned approach will contribute to coordinated response to prevention of tobacco consumption and tobacco control through:

1. development of comprehensive and intersectoral plan of activities;
2. development of stronger coordination among all involved parties;
3. development of supportive environment for smoking cessation;
4. development of programs for training of health workers on tobacco control.

Exercise:

Task 1:

Role playing (elaborating problem of tobacco consumption having a role of decision makers/key-stakeholders)

Considering the widespread problem of tobacco consumption, its scope and range, and also effects from tobacco consumption, students will be required to take part of the exercise and will be asked to make decision about defining a way of dealing with tobacco consumption on national/international level.

While implementing this exercise, following issues need to be considered:

“STRENGTHS:

- introduces problem situation dramatically
- provides opportunity for people to assume roles of others and thus appreciate another point of view
- allows for exploration of solutions
- provides opportunity to practice skills

LIMITATIONS:

- people may be too self-conscious
- not appropriate for large groups
- people may feel threatened

PREPARATION:

- trainer has to define problem situation and roles clearly
- trainer must give very clear instructions”

Task 2:

Case studies (elaborating problem of tobacco consumption among youth and pregnant women)

The second task will be to define key problems and solutions/recommendations regarding tobacco use/consumption among young people and pregnant women. The approach for this problem will be performed through elaboration of case studies prepared by students using clear instructions given by the teacher. This exercise will provide opportunity for students to live the situation as it was real and draw conclusions and recommendations based upon this experience.

While implementing this exercise, following issues need to be considered:

“STRENGTHS:

- develops analytic and problem solving skills;
- allows for exploration of solutions for complex issues;
- allows students to apply new knowledge and skills;

LIMITATIONS:

- people may not see relevance to own situation;
- insufficient information can lead to inappropriate results;

PREPARATION:

- case must be clearly defined in some cases;
- case study must be prepared”(21).

Recommended readings

1. WHO Framework Convention on Tobacco Control available at: <http://www.who.int/tobacco/framework/download/en/index.html>
2. Tobacco Control Strategy for provision and promotion of health protection of population in the Republic of Macedonia 2005-2010
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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Quit & Win Campaign
Module: 5.6.1	ECTS: 0.5
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Address for correspondence	Dominika Novak Mlakar CINDI Slovenia Preventive Unit Stare pravde 2 Ljubljana Slovenia Tel: +386 1 230 73 60 Fax: +386 1 230 73 64 E-mail: cindi.slovenija@zd-lj.si
Key words	Quit & Win, smoking cessation, community intervention
Learning objectives	After completing this module students should: <ul style="list-style-type: none"> • increase knowledge about smoking cessation campaigns as a method of decreasing the prevalence of smoking among mostly adult population • recognise and be aware of strengths and limitations of this kind of preventive measures • be able to critically assess the effectiveness of this kind of preventive measures.
Abstract	Quit and Win is a smoking cessation campaign/competition for adults. It has proved to be a cost-effective way to help a wide group of people to stop smoking. It was developed in the 1980s by the Minnesota Heart Health Program and has been widely used since then as a population-based smoking cessation intervention. The idea of the contest is to abstain from smoking for four week period in May. At the end of this period, there is a draw for prizes among the contestants in participating countries. Abstinence is verified by a witness and by a biochemical test. One year after, there is a follow-up survey of contest participants in order to assess abstinence rates and evaluate the effectiveness of the campaign.

Teaching methods	Teaching methods include introductory lecture, exercises, and interactive methods such as small group discussions. Students after introductory lectures first try to find at least two scientific papers describing Quit&Win campaign course and/or its effectiveness, as well as publications on similar campaigns. Afterwards they critically discuss strengths and limitations of this kind of preventive measures in reducing prevalence of smoking with other students, as well as their effectiveness.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a computer room;• equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases;• training materials: recommended readings are mainly available in the internet;• target audience: master degree students according to Bologna scheme.
Assessment of students	Assessment is based on multiple choice questionnaire (MCQ).

QUIT&WIN CAMPAIGN

Dominika Novak Mlakar, Lijana Zaletel Kragelj

Theoretical background

Definition

Quit&Win is a practical, cost-effective evidence-based smoking cessation method (usually designated as campaign, contest or competition) for population-wide public health use in adult population (1, 2). It is meant to stimulate smoking cessation in smokers of both genders.

This method is basing on sociological theories such as social support, social change, behaviour change, community organisation, and communication theories (3, 4, 5).

Quit&Win campaign represents one of possible measures of influencing the demand for tobacco products (6). The success of the campaigns is assessed by standardized evaluation and follow-up procedures.

The campaign unites people around the world irrespective of their age, gender, ethnicity, religion and social class.

Short history

The very beginnings

Quit&Win campaign was developed in the early 1980s by the Minnesota Heart Health Programme in U.S. and applied in three Minnesota communities in the early 1980s (7). The key features of the very first contests, many of which remained unchanged through their national and international versions, were (7):

1. smoking status was validated prior to entry, and quitting was biochemically validated among potential winners;
2. smokers were adults (18+), and pledged to quit for 30 days on the target quit date;
3. a large grand prize was offered, being a family holiday to Disneyworld., plus several smaller prizes such as bicycles or health club membership;
4. prizes were donated or paid for by donation;
5. contests were heavily promoted through the media, through school children, and through community organizations and worksites;
6. support was sought from health professionals and community leaders;
7. contests were run and promoted by a local volunteer task force, led by a single paid staff member.

Subsequently, the campaign was further developed and extended to national and international applications (5, 7, 8).

Quit&Win in Europe

In Europe, in 1985, Quit&Win was introduced as an innovative method in a regional anti-smoking campaign in North Karelia in Finland in the frame of the famous North Karelia Project (5, 7). One of the basic elements of the project was also to decrease the prevalence of smoking, since in 1972, in North Karelia there were 53% smokers among adult males. There were 250 participants who attended the first campaign in this province.

The next year, in 1986, the campaign spread nationwide with 15.098 participants from the whole Finland.

The campaign in North Karelia proved to be successful since the prevalence of smoking decreased from 53% in 1972 to 32% in 1992 (5, 9).

International Quit&Win

In 1994, the first worldwide Quit&Win campaign was organized within the WHO's CINDI (Countrywide Integrated Non-communicable Disease Intervention) framework. It was organized in 13 countries which all applied jointly agreed rules. Since then, the competition has been performed every second year and the number of participants has grown rapidly from about 60,000 participants in 13 countries in 1994 to about 700,000 participants in 71 countries in 2004 (10). In Table 1 approximate number of participants by year is presented. The number is very rough since not all countries are reporting the number of participants in their country.

Table 1. Approximate number of collaborating countries and participants in international Quit&Win campaigns in period 1994-2004 (10).

Year	Collaborating countries	Approximate number of participants
1994	13	60,000
1996	25	70,000
1998	48	200,000
2000	69	426,000
2002	76	675,000
2004	71	690,000

In the latest International Quit&Win 2006 about 1,000,000 smokers took part in about 100 countries worldwide (1).

The International Quit&Win is being coordinated by Finnish National Public Health Institute KTL (1). The task of the Coordinating Centre is to prepare the rules for the current campaign and its promotional material, and to advise participating countries.

In participating countries the campaign is coordinated by a national coordinator. Its task is to prepare and realize the campaign on national or local level, including media campaign, and distribution of entry forms.

Rationale for developing the campaign

The rationale for developing the Quit and Win model was based on following assumptions (7):

- most smokers prefer to try to quit smoking on their own rather than seeking treatment;
- widespread quit attempts may benefit from a network of support from family, friends, colleagues, and other smokers trying to quit, and from non-smoking members of the community;
- most quit attempts fail within the first 30 days, with less than half surviving even for one week;
- the possibility of winning a large prize could offset the discomforts of quitting, and could attract large numbers of smokers to make the attempt;
- after 30 days of abstinence, the intrinsic reinforcements for quitting are more likely to maintain abstinence.

Campaign rules and its course

The Quit&Win campaign takes a course every 2 years in May (from May 2 to May 29). The last day for entrance in the campaign as a participant is May 2. This date is also the last possible date for cessation of smoking. The participants fill in the entry form and engage themselves not to smoke during the campaign. The verification is assured by the witness stated in the entry form and the biochemical (urine cotinine test) or substitutional test (carbon monoxide in the expired air test).

The competition rules are unified in all respects including age of participants, type of smoker, the winner candidates characteristics, the course of drawing lots, etc. The rules and the course of the latest International Quit&Win 2006 were as follows (11):

- the competition period was four weeks in May 2006, with possibility of exceptions;
- the participants had to be at least 18 years of age and current daily smokers; users of smokeless tobacco were also eligible;
- the participants had to be send the entry form to local organizer no later than the quit date;
- participants who had completely abstained from smoking and tobacco for at least four weeks after the quit date were eligible for the prizes;
- the draw took place among the participants; the winner candidates were contacted immediately after the contest period; the abstinence was verified by a witness and a biochemical test;
- the international super prize of USD 10,000 and six regional prizes of USD 2,500 were drawn among the main prize winners of each country; the probability to win was proportional to the number if participants in each country;
- in May 2007 a follow-up survey to assess the abstinence rates was carried out by the Quit&Win country organizers;
- an optional supporters contest was recommended for non-smokers who wished to participate in the campaign; the task of a supporter was to recruit at least one smoker who should quit smoking with the help of the campaign; a separate prize was drawn among the supporters.

The Campaign prizes

There exist three types of prizes: national, regional, and international, starting from 2000 regional prizes as well.

On a national level, each country arranges its own prizes, with emphasis on the main prize.

The international super prize winner is drawn among the national main prize winners. A minimum entry criterion for a country is at least 100 participants. To compensate for the population size differences between countries the countries get tickets for the draw according to the number of participants in the contest one ticket per beginning one thousand participants. From 1994-1998, international prize was worthy 5,000 USD, starting from 1998 it is worthy 10,000 USD.

Starting from 2000, regional prizes were awarded as well. There are six regional prizes, one for each of WHO regions (AFRO, AMRO/PAHO, EMRO, EURO, SEARO, and WPRO).

Evaluation of the Campaign

A one-year follow-up study to assess the abstinence rates and to evaluate the effectiveness of the campaign is carried out by the participating countries (12-20). The international rules require at least 1000 participants per country to be surveyed one year after the campaign. In the case of small number of participants or limited sources, a follow-up could be made with a smaller sample, but no less than 300 participants.

Case study – Quit&Win in Slovenia

Short history of the Campaign in Slovenia

Slovenia was one of the countries which joined international campaign at its very beginning in 1994. At that time it was coordinated by the Slovene Society for health promotion and health education. In 2000 the coordination took over CINDI Slovenia Preventive Unit, Community Health Centre Ljubljana.

The number of participants was constantly increasing from 1994-2002 while in 2004 it decreased. In Table 2 approximate number of participants in Slovenia by year in period 1994-2004 is presented.

Table 2. Approximate number of participants of Slovenia in international Quit&Win campaigns in period 1994-2004 (10, 21).

Year	Number of participants
1994	851
1996	760
1998	405
2000	699*
2002	1416
2004	887

* the analysis of the application forms has shown, that the number of participants is 699 and not 700, as it has been stated in publications

The course of the Campaign in Slovenia

Usually, the preparations on the campaign start already 8 months before the campaign itself really gets in progress. Upon the proposal of the international coordination centre printed material, posters and application forms are designed and sent to community health centres, hospitals, drug stores, student organizations, faculties and Regional Public Health Institutes. The latter then distribute the material inside the region they cover. The application forms are also being published in most read newspapers and magazines. We choose them with the help of the results of National research of the most read written media (22). Media promotion of the campaign is usually carried out by advertising in printed media, on the radio, and television, and internet. Since 2002, participants have possibility to register using the home page of CINDI Slovenia (23).

On the application forms the participants name also a witness/supporter, who gives them a hand during the campaign. Anybody can be a witness/supporter: a co-worker, friend, partner, son or daughter, one of the parents, health professional, non-smoker or smoker.

When the campaign, which lasts for 4 weeks, is over, can participants, who succeed in abstinence win catchy prizes. These are contributed by Slovenian enterprises and organizations. Additional prizes are given to health professionals, who quit smoking, and to the witness/supporter who was most mentioned on the application forms. Before the

prizes are handed over, those participants, who were decided by lot, are invited to take part at a biochemical test, which shows, if they really were not smoking in the past 4 weeks. In Slovenia, the carbon monoxide breath test using the machine Smokecheck is used. We do not use the urine cotinin test strips NicCheck provided by KTL. The reason for this decision is, that in 2002 it showed, they were not usable, because the transport in letter form does not enable to maintain test strips constantly on low temperature as recommended by the producer. Similar problems were perceived in other participating countries.

Media activities

Since 2000, “The First Morning Programme” of the national Radio Slovenia is used during the campaign as a channel for dissemination of messages. Through this channel different messages, stimulations and talk-shows, which remind people on the problem of smoking are conveyed to the people, and acquaint them with disposable methods, how to quit smoking (individual advising, group workshops “Yes, I quit smoking”, advisory phone line “CINDI help at smoking cessation”, different medicaments, etc.). In 2002 the radio accompanied participants of the workshops for smoking cessation at community health centres, which took place at the same time as the campaign Quit and Win.

Accompanying activities

According to a pilot study about range of smoking among health workers in Slovenia smoking is quite widespread even among health professionals, especially among hospital nurses. Therefore a special campaign is organized, which is oriented at health professionals, every time, the campaign Quit and Win takes place since 2002.

In 2004 we have variegated the campaign with measurements of carbon monoxide in the expired air using the SmokeChech machine and measurements of lung capacity. In may 2004 health workers carried out more than 400 measurements and counsellings about smoking cessation in several shopping centres across Slovenia.

Quit&Win Campaigns 2000, 2002, and 2004 effectiveness

Methods of assessment

Basic data about participants’ characteristics were acquired from application forms, which had been filled in and had arrived at the address of the campaign organizer. The analysis contains data about: age, gender, present smoking per day by the time of entering the campaign, number of previous attempts to quit, years of smoking and who directed the participant towards smoking cessation. We are interested in success rate (number/rate of quitters) as soon as the campaign is over. Therefore, starting from campaign 2002 the follow-up surveys were conducted using a mailed questionnaire. The questionnaire contains questions about: purpose of entering the campaign, reasons for smoking cessation, the status of abstinence, reasons for failure in smoking cessation (if the person keeps on smoking), whether the participant maybe used nicotine replacement therapy, about getting support in cessation attempt with the contest, where he/she got information about the contest, about importance of the campaign for participant’s smoking cessation, marital status, educational level, work the participant does and about residence community. One year after the campaign the participants again receive a questionnaire to estimate current smoking status. After two weeks we send the questionnaires again to non-respondents.

For estimation of the abstinence rates only the questionnaires of respondents are considered.

The abstainers are defined as those who are totally smoke free in the time of the campaign or who completely abstain from smoking during the whole one-year follow-up period after the quit date. The data are represented in groups (age, years of smoking, smoked cigarettes per day by the time entering the campaign, number of previous attempts to quit). Presentation in groups suits data review that is used by international coordination centre and it enables to compare Slovenian data to those of other countries.

The analysis of basic data is made for the whole sample of participants in particular campaign. On the contrary, the analysis of the evaluation's questionnaires at the time the campaign ends is made only for respondents to the follow-up.

Results of the study

Rates of individual characteristics of all the participants in the campaigns in 2000, 2002 and 2004 are presented in Table 3.

Table 3. Quit&Win campaigns in Slovenia in 2000, 2002 and 2004 participants' characteristics.

Characteristics	%		
	Campaign 2000 N=699	Campaign 2002 N=1473	Campaign 2004 N=887
Gender			
male	55.7	50.5	49.8
female	44.3	49.5	50.2
Age groups			
18-24 years	10.6	9.5	13.3
25-34 years	20.9	19.6	25.4
35-44 years	28.3	31.1	24.6
45-54 years	27.6	28.2	24.7
55-64 years	8.3	9.0	9.5
65 + years	4.2	2.5	2.4
Years of smoking - groups			
1-9 years	17.7	16.1	21.4
10-19 years	24.5	24.1	26.5
20 + years	54.8	59.2	52.0
Number of smoked cigarettes per day - groups			
1-9 cigarettes	3.6	2.9	5.4
10-19 cigarettes	21.0	22.8	25.9
20 + cigarettes	75.4	74.2	68.6
Number of previous attempts to quit			
never	16.8	19.1	19.8
1-2 times	45.4	45.5	43.4
3 times or more	37.7	35.4	36.9
Directed to smoking cessation by			
Health professional	8.2	11.2	13.9
other	21.7	24.4	30.0
By him-/herself	64.9	59.2	56.1
Non-smokers			
By the end of the campaign	*	39.2 (among respondents 74.4)	50.3 (among respondents 75.0)
One year since the campaign ended	*	17.9 (among respondents 53.7)	17.4 (among respondents 55.8)

* Data is not available, the evaluation questionnaire, that had been used in 2000 differs from those used in 2002 and 2004; data comparison is not possible

There were more male than female participants in 2000 and 2002, but in 2004 most participants were female. Age of participants varied from 25 to 54 years of age. As they entered the campaign majority has been smoking for 20 years or even more and at least 20 cigarettes a day. Most of them tried previously to quit smoking once or twice. To take part at the campaign they mostly decided by themselves, less they were directed by health professionals. There were also health professionals among participants; doctors were in minority (8 in 2002 and 8 in 2004), while there were some more other health professionals (66 in 2002 and 51 in 2004).

Response rate by the end of the campaign was 52.8% (778 questionnaires) in 2002 and 67.5% (599) in 2004, where one year after the campaign the response rate was 33.3% (491 questionnaires) in 2002 and 31.1% (276 questionnaires) in 2004.

Number of non-smokers by the end of the campaigns in 2002 and 2004 as well as number of those, who managed to maintain in abstinence one year after the end of each campaign, has shown the response rate. We presumed the non-responders to be smokers, which is not completely correct, since we have not known their actual smoking status. Therefore we consider the response rate to be more reliable information than the absolute number of questionnaires that came back.

The data analysis among responders has shown that most people participated with the intention to quit smoking permanently (92.0% in 2002 and 93.6% in 2004). As the most important reason to quit smoking was mentioned taking care of their own state of health (61,0% in 2004).

During the campaign most of participants didn't use any additional therapy (82.7% in 2002 and 79.6% in 2004), in low part there had been used nicotine replacement therapy in form of nicotine chewing gum (10.0% in 2004). In 2004 2.8% participants reached after bupropion chloride.

Important role in supporting those, who decided to take part at the campaign, had their family members (64.4% in 2002 and 67.6% in 2004), friends or co-workers (31.0% in 2002 and 37.9% in 2004), less health professionals (12.4% in 2002 and 16.5% in 2004).

The majority of participants shared the opinion that the campaign has been important for their smoking cessation.

Most participants have finished 4-years secondary school or high school (42.2% in 2002 and 38.4% in 2004); this group is being followed by those who have finished 2- or 3-years professional school (25.0% in 2002 and 27.7% in 2004). Lower is the part of those with university education.

The greater part of participants has lived in urban areas.

Beside media are the family members those who contributed a lot to promotion of the campaign (Table 4).

Table 4. Where did the participants get the information about the Quit&Win campaign in Slovenia.

Source	Year (%)	
	Year 2002	Year 2004
Radio, television	39.1	24.2
Newspapers, magazines	50.3	25.4
Family members	19.0	20.9
Friends, co-workers	12.4	18.2
Health professionals	16.4	20.7

What the results of the evaluation tell us

In 2002 and 2004 the participation rates of male and women were approximately the same, but there were differences regarding the age-groups: young adults have been more interested in participating in the campaign than others. The higher part of participants from 18 to 34 years of age in 2004 is probably a reflection of directed mailing about the campaign to secondary schools, student organizations and student gazettes. If we compare age distribution among the participants of the action and the participants of workshops, which have taken place at the community health centres, we can see that rather elder people, age 35 to 64, have joined in the organized workshops (unpublished data). Therefore we could come to a conclusion the campaign is an important part of stimulating smoking cessation and a way how to quit smoking, which enables us to approach the young adults.

Among the participants of the campaign there were many of those who had been heavy smokers for many years (20 or more years of smoking and 20 or more smoked cigarettes a day). This group had possibly been more motivated to quit smoking than other groups. Later the data analysis proved that, as variables there were included: smoking status, years of smoking and number of smoked cigarettes per day. It turned out that among heavy smokers there has been a higher number of non-smokers, if we compare it to younger ones and those, who smoke less than one cigarette package per day. The higher success rate in smoking cessation there is to find by the participants in age from 25 to 54.

The role the health professionals play by the promotion of the campaign and in supporting the participants is getting more and more important. That is most possible a reflection of pointed advertising in the official journals of associations of health professionals in Slovenia, and of inclusion of Health education centres in the promotion.

Use of additional therapy among the participants has been quite rare. But on the other side, until April 2006 nicotine chewing gum has been the only form of nicotine replacement therapy available in Slovenia. We have been following the use of bupropion chloride since 2004 therefore a comment on its use could not be possible until the data on the campaign in 2006 are on disposal.

Among the respondents there has been a high rate of non-smokers (by the end of the campaign and one year later); we presume that non-smokers are more motivated to fill out the questionnaire than smokers.

The Quit&Win campaign enables us to embrace also young adults. That is important because they are less interested in taking part at organized forms of smoking cessation in community health centres. We are able to reach to the population with secondary school education and we draw attention of greater number of potential participants. Beside that, using mass media, we give laic and professional public a chance to talk about problem of active and passive smoking and about possibilities how to quit smoking, so individual can choose a method which suits him the best. Experiences, gained in past years (2002 and 2004), have shown that 40-50% of people, who enter the campaign, declare them for non-smokers by the time the campaign is over; after one year there are 17,4-17,9% of those. That is an important contribution to reduction of wide-ranged smoking in Slovenia.

Exercise

Task 1:

In bibliographic database (e.g. MEDLINE, PUBMED, etc.) find at least two scientific papers describing Quit&Win campaign course and/or its effectiveness.

Task 2:

Also try to find publications on similar campaigns.

Task 3:

Discuss critically strengths and limitations of this kind of preventive measures in reducing prevalence of smoking with other students.

Task 4:

Discuss critically the effectiveness of this kind of preventive measures in reducing prevalence of smoking with other students.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Say Yes to No-smoking: Case Study Croatia
Module: 5.6.2	ECTS: 0.25
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Key words	Anti-smoking campaign, smoking cessation, community intervention
Learning objectives	After completing this module students should: <ul style="list-style-type: none"> • increase knowledge about anti-smoking campaigns as a method of decreasing the prevalence of smoking among population; • recognize and be aware of strengths and limitations of this kind of preventive measures; • be able to critically assess the effectiveness of this kind of preventive measures.
Abstract	Smoking is the main health risk factor that can be avoided, but remains the largest single cause of premature death in developed countries, accounting for almost 20% of all mortality. Smoking increases the risk of approximately 30 diseases, for some of them even by 10 to 30 times. There exist different measures/intervention programmes to tackle the problem of smoking, anti-smoking campaigns being one of them. Every year, 13,000-14,000 people in Croatia die from the consequences of smoking. Although the advantages of quitting smoking are well-known, large number of smokers find hard to give up smoking. As a response to this problem, in Croatia the campaign »Say Yes to No-smoking« was organized. As a part of this campaign, a first national »Smoke Out Day« was organized on March 2003 under the slogan »Croatia Breathes«.
Teaching methods	Teaching methods include introductory lecture, exercises, and interactive methods such as small group discussions.
Specific recommendations for teachers	<ul style="list-style-type: none"> • work under teacher supervision/individual students' work proportion: 30%/70%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases.
Assessment of students	Assessment is based on multiple choice questionnaire (MCQ).

SAY YES TO NO-SMOKING: CASE STUDY CROATIA

Marta Civljak

Theoretical background

Smoking is the main health risk factor that can be avoided, but remains the largest single cause of premature death in developed countries, accounting for almost 20% of all mortality (1). Smoking increases the risk of approximately 30 diseases, for some of them even by 10 to 30 times. Every year, 13,000-14,000 people in Croatia die from the consequences of smoking (2). Although the advantages of quitting smoking are well-known, large number of smokers find hard to give up smoking (3).

Preventing and quitting smoking are the two main strategies in the fight against smoking. The aim of preventive actions is to influence the beginners (children and adolescents) not to start smoking. Preventive measures include education, guidelines on how not to bow to pressure of the peers to start experimenting with cigarettes, banning adds, putting warning labels on tobacco products and advertisements, enforcing laws prohibiting tobacco sales to minors, and attempts to change the social norms and values (4-7).

Case study from Croatia – »Say yes to no-smoking«

The Ministry of Health and Social Welfare of the Republic of Croatia and the National Television have recognized smoking as a high-priority public health problem, and in March 2002 media campaign against smoking started by broadcasting anti-smoking spots donated by Australian Embassy. These advertisement spots were realistic, hard-hitting, and indelible. They were adapted for use in Massachusetts, Poland, Singapore, New Zealand, and many other countries (8, 9).

To accommodate those 80% of smokers who said they wanted to quit smoking but did not know how to do it, Andrija Stampar School of Public Health has opened the Centre for Prevention and Quitting Smoking (10). We used the experience from the media campaign run in Australia, and included the help line number in anti-smoking TV advertisements to help as many smokers as possible to break the habit and to cover as large a population of smokers as possible. Help phone that was free-of-charge has proved to be a potentially useful strategy in implementation of breaking the smoking habit project (11, 12). During the first year of operation of help line basic data on socio-demographic characteristics, smoking habits, and reasons for calling the Centre were collected during telephone conversations with smokers. The data were entered into previously prepared tables. Statistical analysis included 7,453 recorded telephone calls. Most of calls were received from persons aged 26-45 years (34%), followed by 19-24 (24%) and 45-60 (19%) age groups. There was no statistically significant difference in the number of calls between men and women (54% vs. 46%, respectively). Most callers consumed on average 20 cigarettes per day. The most frequent reason for calling was to get on how to stop smoking, whereas seeking information on professional literature was the least frequent reason for calling among our respondents. According to this analysis we concluded that telephone helpline is a useful and efficacious aid to anti-smoking campaigns (13). Due to the accessibility of the helpline and potentially wide coverage of interested users, it is a simple way to offer help to those who ant to quit smoking. But, evaluation of the helpline effects still presents a challenge.

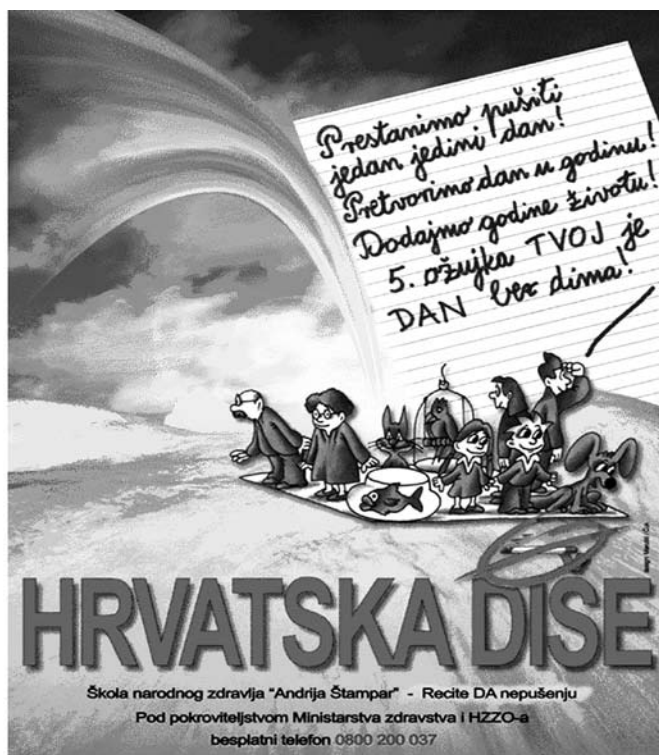
In addition to help line, the Centre has also opened the School of Non-Smoking, which is based on the application of psychotherapeutic-educative model of quitting smoking and has

been active in Croatia for more than 30 years. Although based on group-work, this model of quitting smoking is oriented toward each individual and covers a range of issues, from raising awareness of the motivation to give up smoking to determining the type of smoker, to analysis of previous unsuccessful attempts, to finding a new motivation. The advantages of giving up smoking are individually analyzed, the importance of positive thinking emphasized, and visualization of oneself as a non-smoker encouraged (14).

There was a need to create a network of Schools of non-smoking in order to accommodate smokers of other regions in Croatia who were interested for that kind of help in process of quitting smoking. Efforts to help smokers quit smoking are as worthy as preventive actions. A physician's advice increases smoking cessation rates by approximately 30% counselling can be administered personally, by telephone in pamphlets and booklets, audiotapes, videotapes, and computer programmes. Both individual counselling and group therapy increase the chances of quitting (15). Regarding to that, in April 2003, the course for family medicine doctors was organized in order to introduce the programme and advantages on involvement of family doctors in smoking cessation programmes. There were 220 participants, and 120 of them were recruited for further training which was organized at Andrija Stampar School of Public Health. 45 doctors signed an agreement that will provide service at their medical office and send a report to our School three months later. Only 35 of doctors send a report about their three month work. Analysis of those reports showed that in three months 1015 persons attended School of non-smoking, out of them 392 (38%) quit smoking, 358 (36%) smoked less then before attending the School and 265 (26%) continue to smoke equally.

The campaign has enlisted the support of Croatian sports Celebrities such as ski word champion Janica Kostelic, who supported our activities and took part on promoting healthy lifestyle This activities were recognized by World Health Organization, so they were awarded by World No Tobacco Day (WNTD) award. A year later the same award went to our well known Josko Marusic who was an author of ads used on media campaign (Figure 1).

Figure 1. Poster for the media campaign »Smoke Out Day« organized in 2003 under the slogan »Croatia Breathes«, designed by Josko Marusic.



The Centre has also established an interactive website for those who want to quit smoking (16). This highly visited website offers a large range of articles and all relevant information on detrimental effects of smoking and various types of help offered at the Centre for Addiction Prevention and Quitting Smoking, as well as weekly statistics of help line calls.

Furthermore, there have been many public actions organized, which were supported by public figures and involved a large number of Croatian citizens of all age groups. As part of the campaign »Say Yes to No-smoking«, a first national »Smoke Out Day« was organized on March 5, 2003 under the slogan »Croatia Breathes«. Organization was based on the experience of countries that traditionally carry out similar activities, by which, over a certain period of time, the number of smokers has been successfully reduced. The »Smoke Out Day« was organized on the first day of Lent and supported by 500 public figures, from the President of the Republic, to Prime Minister, to representatives of the government and religious community, to famous sportsmen, actors, and singers (17).

The aim of the first »Smoke Out Day« was to create a supporting environment for people who want to give up smoking and to highlight a number of sources of help available to them. Roman Catholics represent over 80% of the population of Croatia. By organizing the non-smoking day on the first day of Lent, when majority of people decides on what they will deprive themselves of, we expected to have created conditions for majority of smokers to

stop smoking for at least one day, hoping that this single day would turn into months or years. On the other hand, one of the aims of the action was the creation of religious, national, and political tolerance. Indeed, the »Smoke Out Day« was supported not only by the Croatian Archbishop, but also by the leaders of other religious communities in Croatia – mufti of the Islamic community, metropolis of the Serbian Orthodox Church; and leader of the Jewish community. After the »Smoke Out Day«, two surveys were carried out to evaluate the success of the action. First survey was carried out by an independent research agency, »Puls«. This survey was performed among a two-phase stratified, randomly selected representative sample of 600 Croatian citizens over 15 years of age, by using CATI system (Computer Assisted Telephone Interviewing) and specifically prepared questionnaire. Analysis showed that 26% of smokers did not smoke a single cigarette for a whole day on March 5, 2003. Out of those who smoked at least one cigarette that day, 50% smoked less than usually whereas 62% of them seriously considered quitting smoking on permanent basis. When asked to assess the »Smoke Out Day« action on a scale from 1 to 5 (with 1 designating completely useless action, and 5 very useful action), over 80% of respondents assessed the action as useful. The results of this survey were immediately presented to the public to provide support to the smokers who abstained from smoking on the »Smoke Out Day« and help them remain non-smokers.

Concerning smoking behaviour, related attitudes to smoking, and the national »Smoke Out Day« on March 2003, the second survey was carried by the National Television's Market Research Department among a stratified, representative sample of randomly selected 2143 TV viewers and radio listeners aged 15 and over in their households. Over 85% of interviewed persons knew exact date of »Smoke Out Day«. Among smokers 27% of them had given up smoking on that day and 16% declared not to smoke during the Lent. Statistically, significantly more females (34%) than males (23%) abstained from smoking on the »Smoke Out Day« and more females (24% versus 10.8%) had decided to abstain from smoking during the Lent. Majority of abstainers were in the age group 30-44 years. The lowest response was from smokers with university education (18).

Later on we continued with activities prepared to target pupils from the first years of primary school. During the Croatian Children Week (October 6–12) we promoted of the no-smoking campaign called »My parents will say YES to no-smoking«. The campaign was organised with the Ministry of Education and Sports and the «Our Children» non-profit organisation

Due to our experience we can conclude that the most important thing for a change in behaviour is social support for the problem solution. Thanks to »Say Yes to No-smoking programme« we promoted the lifestyle change and created conditions for comprehensive Tobacco control Programme in Croatia (19).

Exercise

Task 1:

In bibliographic database (e.g. MEDLINE, PUBMED, etc.) find at least two scientific papers on any kind of anti-smoking campaigns.

Task 2:

Discuss critically strengths and limitations of this kind of preventive measures in reducing prevalence of smoking with other students.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Health Promotion in Prevention of Drug Abuse: Guidelines for Primary Prevention of Drug Abuse, Attitude and Behaviour of Youngsters – Case Study Macedonia
Module: 5.7	ECTS: 0.5
Author(s), degrees, institution(s)	Silvana Onceva, MD, MSc UNOPS Office Skopje, Macedonia Doncho Donev, MD, PhD, Professor Institute of Social Medicine, Institutes, Medical Faculty, University of Skopje, Macedonia
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Key words	Smoking, alcohol, drugs, ESPAD, Macedonia
Learning objectives	After the completed module, students and professionals in Public Health will broaden their knowledge in: <ul style="list-style-type: none"> • Drug use phenomenon (basic facts) • The magnitude of the drug use problem (attitude and behaviour) among youngsters in Macedonia, compared to other European countries • Experiences in implementation of different health promotion programs
Synopsis (Abstract)	Many countries in the world are facing the problem of drug use. The problem affects not just the user, but also his family and wider society. Different factors make youngsters particularly vulnerable towards drugs. Republic of Macedonia is facing significant increase in number of drug users during the last 15 years. Basic results of ESPAD survey are presented for Macedonia and other European countries. Few health education models for drug use prevention and the impact of those programs are discussed (SMART; DARE; Mia's Diary; Just say no; WHO). Principles, based on the lessons learned from the previous experiences in different health education programs are presented.
Teaching methods	Lecture, Focus group discussion, Case study
Specific recommendations for teacher	Case study: Students can organize a survey in their environment (using the similar instrument) and compare the data
Assessment of Students	Assessment of the theoretical knowledge (oral exam), contribution to the group work and discussion, quality of the final paper.

HEALTH PROMOTION IN PREVENTION OF DRUG ABUSE: GUIDELINESS FOR PRIMARY PREVENTION OF DRUG ABUSE

Attitude and behaviour of Youngsters - Case study Macedonia

Silvana Onceva, Doncho Donev

Psychoactive substances

The WHO defines psychoactive substance as “a substance that, when ingested, alters mental processes” (1). The term refers to any substance that when taken by a person, can modify perception, mood, cognition, behavior or motor functions. Substances affect thinking, feelings, perceptions and physical functions of the individual using them. There are desired effects that individuals using substances seek. These and other less pleasant effects are short-term. Substances also have long-term effects that damage body organs. The consequences are not just present in the person using them, furthermore the problem affect their family and the community as a whole. Many countries recognize that the use of substances by young people is a serious health problem, but also a social problem (2).

The use of substances is a result of interactions between the individual, the substance and the environment (Public Health Model):

1. The knowledge and attitude the individual may have about substances and their effects can influence use.
2. The existence of a substance creates a fundamental risk factor. The composition and nature of the substance can influence use.
3. Within the environment a variety of factors may influence use of substances. These include: existing cultural norms; general and peer-group attitudes about substance use, behaviour of parents, peers and role models, marketing strategies used for the promotion of the substances, laws, policies and regulations that limit the availability and accessibility of substances (2).

Drug abuse

In 1957 the World Health Organization (WHO) defined the drug abuse (“narcomania”) as a condition of periodical or chronicle intoxication, as a result of consecutive intake of drugs.

The drug abuse is characterized with:

- enormous need for repeated intake of drug;
- tendency to increase the quantity (phenomenon of tolerance –applicable for some kinds of drugs, not all drugs);
- psychological (all drugs) and physical dependency/addiction (some kinds of drugs), (3).

Types of drugs

There are few categories of drugs in accordance to their effects on human being:

- Depressors of the Central nerve system: “Opioids” (opium, morphine, heroin, codeine, methadone), tranquilizers (sleeping pills, benzodiazepine), barbiturates and alcohol;
- Stimulants (cocaine, crack, and "designer" substances such as amphetamines, ecstasy);
- Hallucinogen drugs (LSD, psilocybin, mescaline);
- Cannabis (Marijuana, hashish);

- Volatile inhalants (Aerosol sprays, butane gas, petrol/ gasoline, glue, paint thinners, solvents, nitrites).

Nicotine from the tobacco is also psychoactive substance.

The use of tobacco and alcohol is legal and the use of other drugs is punishable. That is the reason why two terms related to drugs are also used: legal and illegal drugs.

Socio-medical importance of drug use problem

The Socio-medical connotation of the drug use problem is related to:

- Increased number of drug users in the world;
- Health consequences related to drug use;
- Participation in the mortality and morbidity rates, physical, emotional and social destruction of the personality, handicap, absenteeism, professional and other kinds of traumatism etc.;
- Difficulties in early detection and delayed initial treatment;
- The need for long term therapy, rehabilitation and re-socialization;
- The impact in the sphere of the family, community and society;
- Economical and social consequences of drug use;
- The correlation between the drug use, crime and violence;
- The need for multi disciplinary and multi sector response in drug use prevention with inclusion/active participation of different stakeholders (4).

Vulnerability and factors related to drug use

One of the worst aspects of the drug problem is that it affects primarily those who are most vulnerable, such as youth (5).

It is well known that childhood and adolescence are times of experimentation, curiosity and the search for identity. This phase may well involve risk taking - including risks to personal health, such as the use of alcohol, tobacco, pharmaceuticals, inhalants, illicit drugs, and other psychoactive substances (6).

The transition from adolescence to young adulthood is a crucial period in which experimentation with illicit drugs in many cases begins.

Young people could be using substances for a variety of reasons: to show independence, signal entry into a peer group, to satisfy curiosity, to relief stress etc.

Drugs may have strong appeal to young people who are beginning their struggle for independence as they search for identity. Because of their curiosity and thirst for new experiences, peer pressures, their resistance to authority, sometimes low self-esteem and problems in establishing positive interpersonal relationships, young people are particularly susceptible to drugs.

Many years ago, people thought that drugs are only used among particular social groups. Today it is well known that drugs are present among all groups.

Marginalized youth are particularly susceptible to the enticement of drugs. Populations such as street children, working children, refugee and displaced children, children and youth in institutional care, child soldiers and sexually exploited children are particularly at risk of abusing drugs mainly for functional reasons (lately there is a tendency for development and implementation of special programs targeting these vulnerable groups).

At the same time, there is considerable abuse of drugs among socially integrated young

people, in particular in the industrialized world. This could be attributed in part to the fact that significant numbers of the world's young people are being exposed to a culture that appears to be more tolerant towards the use of drugs.

In many countries, young people are increasingly being confronted with rapid social and technological change and a more competitive society, where the drive to succeed is high and personal self fulfillment is emphasized. Additionally, a weakening of traditional values and family ties and increased needs for higher levels of stimulation are being experienced (5).

There are also indications that young people are increasingly being exposed to a popular youth culture and mass media messages that are more tolerant towards the use of certain illicit drugs. This creates the wrong impression that the recreational use of those drugs is acceptable and glamorous.

Substance use problems usually arise from a combination of individual, family, school and community related factors. The terms "protective" and "risk factors" are often used to identify aspects of a person and his or her environment that make the development of a given problem less likely or more likely (7).

Substance use-specific research shows that societal and community level factors include the prevailing social norms and attitudes toward substance use (e.g., the smoking of cannabis is traditional in various regions), the level of availability of various substances and economic conditions.

Factors arising from the family environment include a history of substance use problems, effectiveness of family management, structure and coping strategies, the level of attachment between the parent and child, the nature of rules and parental expectations.

At an individual level, some persons may be predisposed to substance use due to their genetic traits. Generally, even in cases where there may be genetic influence, life experiences play a significant role in substance use.

The quality of a child's school experience is a very significant factor for substance use, as well as a number of other problems.

As a child enters adolescence, the selection of peers and the nature of peer support become more important. Anti-social behaviour, such as violence and gang membership, is a risk factor, as well as having friends who use substances.

Transitions or significant changes in one's environment (e.g., moving to a new neighbourhood or school, bereavement, parental separation) can be a significant point of vulnerability for young people (8).

Epidemiological data, results from different surveys/researches and International response

Legal drugs (tobacco and alcohol)

1. Tobacco

About 215 million Europeans smoke, of which 130 million are male.

The annual number of deaths attributable to the consumption of tobacco products is estimated at 1.2 million (14% of all deaths). According to data from 25 countries, covering 60% of the population of the European Region, average smoking prevalence in the male population is around 34% for Western European countries and 47% for Eastern European countries. In the female population the prevalence is some 25% for Western European countries and 20% for Eastern European countries (9).

Smoking is well established behaviour among young people, and the available data show almost no signs of a decrease. In Europe as a whole, smoking prevalence among people aged 15–18 years is estimated at around 30%, with a slight upward trend and no country showing a decrease in late 1990s (9).

International response towards tobacco use

Since the mid-1990s, approximately three quarters of European Member States have strengthened their policies on tobacco taxation; two thirds of countries have reinforced measures to combat smuggling; one third have introduced age restrictions on tobacco sales; and at least eight countries have introduced a complete ban or strict restrictions on direct advertising and have significantly improved regulations on smoking in public places.

At the end of 2001, approximately 80% of Member States had bans or restrictions on smoking in public places and workplaces.

Despite new bans and restrictions on advertising tobacco products, the industry has still been developing unscrupulous marketing, promoting “youth anti-smoking education programmes” and indirect forms of advertising targeted mainly at young people.

The Framework Convention on Tobacco Control is a milestone in an effective international response to many of these challenges. The vast majority of European Member States are involved in the negotiation process for smoking cessation, and the recently adopted Warsaw Declaration for a Tobacco-free Europe shows that the Region can indeed play a leading role in finalizing and adopting international legislation to fight the scourge of tobacco (9).

2. Alcohol

Each year over 55 000 young Europeans die from the effects of alcohol abuse. One in four deaths in European men aged 15–29 years is related to alcohol. In addition, between 40% and 60% of all deaths from injuries are attributable to alcohol.

The consumption of alcoholic beverages is estimated to be responsible for about 9% of the total disease burden within the European Region, increasing among others the risk of liver cirrhosis, raised blood pressure, heart disease, stroke, pancreatitis and cancers of the oropharynx, larynx, oesophagus, stomach, liver and rectum. Alcohol acutely impairs many aspects of psychomotor and cognitive function. Furthermore, alcohol consumption increases the risk of family, work and social problems such as failure in work performance, absenteeism, unemployment, accidents, debt and housing problems. The European Region has the highest alcohol consumption in the world.

The European School Survey Project on Alcohol and Other Drugs (ESPAD) shows that there are clear increases in the proportion of students who use alcohol in the central and eastern parts of Europe, especially in Lithuania, Poland, Slovakia and Slovenia.

In the CEE countries, consumption is increasing in the Czech Republic, Romania and Republic of Macedonia (9).

International response towards alcohol use

In general, western European countries have moved towards stricter alcohol control policies, have reduced per capita consumption levels and have lowered alcohol related harm to a greater degree than many of the countries in the central or eastern part of the Region (9).

Illegal drugs

Historical review of drug use

There are assumptions that the first experience with drugs in the human history has happened 40.000-10.000 years B.C. Most of the opiate drugs were not known in Europe till 13 century, when opium has been brought from the East. China prohibition for the British opium resulted with the First opium war in 1842 (10).

The use of the substances that influence psychological functioning of the body has been accepted as normal behaviour in many countries (alcohol in food, opium and cannabis in treatment, cocaine in decreasing hunger, hallucinogen drugs during religious ceremonies).

Use of cocaine has been legal in some countries till 1990s. Marijuana has been legal till 1930s, LSD till 1950s. Heroin has been isolated in 1868, and has been used for treatment of alcohol and morphine dependence for few decades (11).

Drug abuse among soldiers was present during the First and Second World War. One third of the American soldiers from Vietnam used drugs (4).

Current situation of drug use

The General Secretary of United Nations, during the General assembly of the United Nations in 1998 stated that around the world 200 millions persons take drugs, of which 21M use cocaine and heroin and 30M take stimulants (amphetamine).

In accordance to the United Nations Drug Control Program (UNDCP) data 3.3-4.1% of the world population are drug users. Cannabis is used by 140 millions consumers (12).

In Europe, 1.5-2 millions people use illegal drugs (10). In Central and Eastern Europe lifetime prevalence rates, usually lower than in Western Europe, increased dramatically during the 1990s and are rapidly approaching the levels of abuse of Western Europe (13). The Central and Eastern European countries face increasing problems associated with the traffic and transit of illicit drugs, as well as with the rise in local drug abuse.

The United Nations Office on Drugs and Crime (UNODC) states that cannabis is the most widely abused drug, with about 2.5 per cent annual prevalence among the world's population (5). Studies show that cannabis is also the most widely used drug in the central European countries and evidence suggests that there has been a noticeable increase not only in the illegal traffic, but also in the cultivation of cannabis in the region (1).

According to The World Health Report 2001, 0.4% of the total disease burden is attributable to illicit drugs (heroin and cocaine). Substance dependence is both a chronic medical illness and a social problem. Drug dependence treatment is cost-effective in reducing drug use (40–60%), and the associated health and social consequences, such as HIV infection and criminal activity.

In the EU, illicit drug use is concentrated in young adults, mostly males in urban areas.

The most serious trend is the rapid increase of injecting drug use, which has contributed to the spread of HIV infection. Hepatitis C infection rates in injecting drug users vary from 40% to 90%.

In accordance to the WHO data, in 1990, the participation of illegal drug abuse in total mortality in the World was 0.2%, where as alcohol participate with 1.5%, and tobacco with 6% (14).

Opiate users can have overall mortality rates up to 20 times higher than those of the general population of the same age, due not only to drug overdoses but also to accidents, suicides, AIDS and other infectious diseases (9).

Results of ESPAD studies

The European School Survey Project on Alcohol and Other Drugs (ESPAD) initiated by the Pompidou Group within the framework of the Council of Europe, carried out in 1995 in 25 European countries among 16 years old students showed that apart from the Czech Republic (21.5 per cent), lifetime prevalence of cannabis use varies between 15.7 per cent (Slovakia) and 1 per cent (Lithuania), with the majority of the countries concentrated in the 7-13 per cent range. The highest lifetime prevalence rates of heroin use were registered in Europe (in Denmark, Greece, Ireland and Italy the lifetime prevalence rate among 15- and 16-year-olds is 2 per cent). Heroin injection has increased during the 1990s in Eastern Europe (5).

ESPAD survey was organized also in 1999 and 2003.

ESPAD 1999 results:

Lifetime experience of illicit drug use among schoolchildren roughly doubled in the ESPAD99 countries, mostly reflecting cannabis use (9).

Life time experience of marijuana or hashish: lowest report in Romania (1%) and Cyprus (2%), in Portugal, Sweden and Macedonia (8%). The highest rates were presented in USA (41%), Czech Republic, France and United Kingdom (35%).

In average heroin was used among 4% of European students aged 16 in 1999 (9% in Latvia and Romania, 7% in Russia, 3% in Macedonia, 1% in France, Finland and Estonia). (15).

ESPAD 2003 results:

Life time experience of marijuana or hashish showed the lowest reported results in Romania, Turkey and Cyprus (3-4%). The highest rates were again in Czech Republic (44%), Switzerland, Ireland and France (38-40%).

Heroin was used among at most 5% in Italy and 1-2% in other European countries (15).

International response towards drug use problem

The WHO Regional office for Europe set the following target in the document “Health for all 21”: In all European countries the prevalence of illegal drugs should be decreased at least for 25% and the mortality rate should be decreased for up to 50% by the year of 2015 (10).

Information, education, treatment and rehabilitation are key pillars of national policies for reducing the demand for drugs in the European Region. In addition, most countries aim to reduce the negative impact on public health of continued drug abuse, including the prescription of substitution drugs to drug-dependent people, the promotion of “safe” drug taking, and the establishment of drug injection rooms to decrease the risk of multiple use of contaminated injecting equipment.

Comprehensive national drug policies aim at reducing the consequences of problem drug use such as HIV infection, hepatitis B and C and deaths from overdose. Taking into account the United Nations Declaration on the Guiding Principles of Drug Demand Reduction, special attention must be paid to the wider implementation of community-based drug prevention programs, the development of a public health drug-treatment model that would make services available to more people in need of treatment, and programs for reducing harm, minimizing risk and rehabilitation (9).

Prevention of drug abuse

Primary prevention is defined as “strategies that aim to prevent the uptake of psychoactive substance use, or delay the age at which use begins”, whereas secondary prevention “refers to interventions that aim to prevent substance use becoming problematic among people already using psychoactive substances, which limit the degree or duration of individual or social damage caused, and which assist users who may wish to stop using” (16).

The preventive measures are systematized in few general areas:

- Supply reduction- control of production and trade of drugs as well as repressive measures (organized crime related to drugs);
- Demand reduction - includes prevention and treatment (Primary, secondary and tertiary prevention);
- Harm reduction - Inclusion of drug users in society and provision of health and social support and care (17).

Primary prevention of drug use

The goal of the preventive programs is to achieve a quality of life in which the decreased availability of drugs will result in decreased drug demand, with protection of human being and his family from the risk for physical, psychological and social health disturbances.

Drug abuse prevention is not a single activity; it is rather a process of getting and keeping in touch with young people’s developments, their needs, their fears, and their potentials (6).

Some authors are presenting two types of activities in primary prevention of drug use:

- Non-specific activities are towards the improvement of the quality of living: informal education, leisure time activities, stimulation of successful parenthood;
- Specific activities are related to diminishing the risk for experimenting/initial use of drugs. The programs include information and education on drugs. The goal is to influence attitude and behaviour towards addictive substances (17).

There is a general consent that prevention programs should enhance protective factors and reverse or reduce risk factors (Hawkins et al. 2002). The potential impact of specific risk and protective factors changes with age. For example, risk factors within the family have greater impact on a younger child, while association with drug-abusing peers may be a more significant risk factor for an adolescent (Gerstein and Green 1993; Kumpfer et al. 1998). While risk and protective factors can affect people of all groups, these factors can have a different effect depending on a person’s age, gender, ethnicity, culture, and environment (Beauvais et al. 1996; Moon et al. 1999). Prevention programs should be tailored to address risks specific to population or audience characteristics, such as age, gender, and ethnicity, to improve program effectiveness (Oetting et al. 1997), (18).

Review of the results of preventive programs

Many prevention campaigns in the past have at best been entertaining for young people but by no means effective in reducing problematic drug use among them.

Hypocritical messages, “teaching” and scaring cannot be part of this approach, because they impede the open and honest atmosphere that is needed to make this approach effective and accepted by the target group (6).

In 1979, Abrams, Garfield and Swisher stated that the goal of educational programs for drugs should include information, but also:

- Activities for skills development for decision making;

- Activities for increasing the level of self confidence;
- Increased participation in leisure time activities as alternative to drug use (sport and recreational activities, art, social activities, games, spiritual activities), (19).

Einstein (1983) focused on the influence of drug education on the level of knowledge and attitude. He states that even though the drug education programs could very easily increase the knowledge; it is much more difficult to provoke change of attitude. Many programs did not have effects related to drug use. The fact that drug users have bigger knowledge on drugs compared to those who do not take drugs does not mean that the knowledge on drugs could influence drug use (20).

Similar results are published by the WHO expert committee: The evaluation of short term effects of educational programs for students and public campaigns even though they are increasing the level of knowledge for the problems related to use of tobacco, alcohol and other drugs, have no significant impact on the attitude and behaviour towards drug use among youngsters (20).

DARE- program (Drug abuse resistance education) is designed for developing skills to recognize and resist the social pressure for drug use. The program is focused on development of self esteem, coping in stress situations, self confidence, communication skills, decision making and recognition of positive alternatives. The program is implemented by police officers (19).

The results from the surveys conducted has shown that there is no significant variance between the students who participated in DARE program and the control group in reference to tobacco smoking, alcohol and marijuana use among 7 grade students, one and 5 years after the implementation of the program (21).

Bell is reporting on the effects of ALERT- preventive program on drug use in California. The goal of this program was to motivate youngsters not to use drugs and to provide skills to refuse offered drug. The conclusion was that the long term implementation of educational programs in elementary schools is needed for prevention of drug use among students (22).

SMART- project (Self management and resistance training) was created in 1989 by Moskowitz. There are two approaches: social skills development model and model for decision making. There were good results in prevention of smoking, but no results in prevention of alcohol and drugs intake (19).

The critical review of Nicholas Dorn (1990) is so called British skepticism. He stated that: “Just say no” approach simply does not work (4).

Young people can be rather creative in making fun of official “adult“ slogans: in the United States, the “Just say NO” campaign, initiated by Nancy Reagan in the late eighties, was quickly changed into “Just say YO” by many young people. Similarly, the German Campaign slogan “Keine Macht den Drogen”(No power to drugs.) evoked numerous others making fun of the original, such as :Keine Macht den Doofen” (.No power to dummies.), (6).

O Connor in 1992 is presenting the results from the school educational programs on drugs: there is an influence on the level of knowledge and attitude, but very limited influence on behaviour (drug use), (23).

What works in prevention: reviewing prevention strategies and rethinking approaches

The changing perception of cannabis among young people, the increasing abuse of ATS and the widespread abuse of other drugs indicate a need for innovative approaches and an adjustment of prevention strategies aimed at reducing the demand for drugs.

No particular approach or strategy has been proved through rigorous scientific study to be consistently effective over the long term in reducing drug abuse.

Principles for substance abuse prevention:

- Strategies should be carefully tailored to clearly defined target groups (young people are not all equally vulnerable). Programs should be age- and gender-specific, developmentally appropriate and culturally sensitive;
- Youth are not homogeneous and they are not all equally vulnerable. The specific needs of vulnerable or disadvantaged youths as well as gender aspects should be identified and addressed accordingly;
- The target group should be actively involved in the development, execution and evaluation of the programs and also participate in their re-design and reimplementation, if needed (6);
- Prevention programs should include the family and the community at large in order to reinforce the information that is communicated to young people in the context of prevention activities. The role of the community in preventing substance abuse should be participatory. The community should actively participate in determining the problems and needs, developing solutions, and implementing and evaluating interventions. (This is the underlying principle behind the UNDCP/ WHO Global Initiative on Primary Prevention of Substance Abuse), (2);
- Programs should not be focused on certain substances, but rather on the issue of problematic substance use and how this is related to other problems. Prevention should not focus on one drug only, but it should address, within the wider concept of health promotion, substance abuse in general, including that of tobacco, alcohol and inhalants;
- Advertisements and media messages on substance abuse prevention should not be based on scare tactics, but that focus on positive alternatives to drug abuse;
- Multiple strategies are probably the best way to approach the complexity of the drug abuse problem and the greatest chances of success are likely to come from a combination of different approaches. Ideally, that combination should combine the knowledge/attitude/ behaviour approach with health promotion, and the building of self-esteem and resistance skills;
- Prevention strategies should try to foster and enhance individual strengths and to develop resilience factors that protect individuals in stressful situations and environments, and should try to give youth a set of specific skills for resisting peer pressure to use drugs, to strengthen personal commitment against drug use and to increase social competency (e.g. in communications or relationships with peers);
- There is strong indication that involving young people as prevention agents in peer-led initiatives can produce good results. Activities in schools can support peer-to-peer-projects and enhance also communication between school students and parents. Groups, which may have an influence on the living conditions and social environment of the main target group, should be involved (6);
- Programs should give healthy and creative alternatives to using drugs (promotion of healthy life styles). Alternatives to substance abuse must be attractive. They should combine and encourage individual skill development, interesting leisure activities and a supportive attitude in the community. It is also important to offer young people

- accessible and low-cost opportunities to meet, cultivate an appreciation for the arts, play sports and take part in other challenging activities that develop self-confidence;
- Activities should build on existing research-based evidence and needs assessments, especially among the target group itself to ensure the program is relevant to the target group and takes their attitudes, behaviours, and lifestyles into account;
 - Prevention programs need to be sustained over a long period of time to be effective (5).

Summarizing the above mentioned principles, three general elements should be included in prevention programs:

- (a) Addressing the values, perceptions, expectations and beliefs that young people associate with drugs and drug abuse;
- (b) Developing life skills and social competencies to increase the capacity to make informed and healthy choices;
- (c) Creating an environment where children and young people have the possibility to be involved in healthy activities and where substance abuse is not promoted by peers, family, the media and other influential actors in the community (13).

Peer education

Peer refers to a person who belongs to the same social group as some other people based on age, sex, sexual orientation, occupation, socio-economic and/or health status, etc.

Education refers to the development of a person's knowledge, attitudes, beliefs or behavior resulting from the learning process.

Peer education in youth is the process whereby well trained and motivated young people undertake informal or organized educational activities with their peers (as defined by age, background or interests) over a period of time, aimed at developing their knowledge, attitudes, beliefs and skills and enabling them to protect and be responsible for their own health (24).

The peer-to-peer approach supports the empowerment of young people, encourages them to become more involved in their communities and to use their individual skills in coping with every-day challenges in their own way (6).

The peer-to-peer method is based upon the recognition that children and adolescents have their own way of gaining and spreading information. Young people are more likely to listen to and take the advice of someone with a similar experience than a teacher or a social worker. This is very much so in the field of substance use where role models, lifestyles, attitudes, and value systems, as well as peer pressure that often takes place in settings remote from adult influence, play a major role in the decision pro or contra using drugs (6).

The advantage of peer education is that youth peer educators are less likely to be seen as authority figures "preaching" about how others should behave. Rather, the process of peer education is perceived more like receiving advice from a friend "who is in the know". A successful peer educator is viewed by his or her peers as someone who has similar concerns, is trying to help out, and has an understanding of what it is like to be a young person (24).

Recent information on drug abuse among children and youth suggests the need to begin substance abuse preventive education early in life and to continue such education with developmentally appropriate interventions.

It seems important for the success of prevention programs that drug abuse preventive education should start in primary school (period when values are not yet determined).

There is growing evidence that preventive education needs to be delivered at a time when it is more likely to influence attitudes and behaviour (13).

Peer education can take place in small groups or through individual contact and in a variety of settings: in schools, clubs, religious settings, workplaces, on the street or in a shelter, or wherever young people gather.

Peer education can be used with many populations and age groups for various goals.

Examples of youth peer education activities are:

- Sessions with students using interactive techniques such as group brainstorming, role plays or personal stories;
- A theatre play in a youth club, followed by group discussions; and
- Informal conversations with young people at a disco about risky health behaviours and referrals to service providers.

Life skills

Life skills are considered to be abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life.

Life skills that are important to promote the health and well-being of children and young people include: self-awareness, empathy, communication skills, interpersonal skills, decision-making skills, resistance skills, problem-solving skills, creative thinking, critical thinking, coping with emotions and coping with stress (5).

Life skills development is regular content of peer education programs.

Strategies should try to encourage individual strengths and those things that protect individuals in stressful situations and environments, and should try to give youth a set of specific skills for resisting peer pressure to use drugs, for example in communications or relationships with peers (25).

Prevention Programs in different environments/ settings

Family Programs

Family-based prevention programs should enhance family bonding and relationships and include parenting skills; practice in developing, discussing, and enforcing family policies on substance abuse; and training in drug education and information (Ashery et al. 1998).

School Programs

Prevention programs can be designed to intervene as early as preschool to address risk factors for drug abuse, such as aggressive behavior, poor social skills, and academic difficulties (Webster-Stratton 1998; Webster-Stratton et al. 2001).

Prevention programs for elementary school children should target improving social-emotional learning to address risk factors for drug abuse, such as early aggression, failure and school dropout. Education should focus on the following skills: self-control; emotional awareness; communication; social problem-solving; and support, especially in reading. (Lalongo et al. 2001; Conduct Problems Prevention Work Group 2002).

Prevention programs for middle or junior high and high school students should increase academic and social competence with the following skills: study habits and academic support; communication; peer relationships; self-efficacy and assertiveness; drug resistance skills; reinforcement of anti drug attitudes; and strengthening of personal commitments against drug abuse. (Botvin et al.1995; Scheier et al. 1999).

Community Programs

Community prevention programs reaching populations in multiple settings—for example, schools, clubs, faith-based organizations, and the media—are most effective when they present consistent, community-wide messages in each setting (Chou et al. 1998).

Prevention Program Delivery

Prevention programs should be long-term with repeated interventions (i.e. booster programs) to reinforce the original prevention goals. Research shows that the benefits from middle school prevention programs diminish without follow up programs in high school (Scheier et al. 1999).

Prevention programs are most effective when they employ interactive techniques, such as peer discussion groups and parent role-playing, that allow for active involvement in learning about drug abuse and reinforcing skills (Botvin et al. 1995).

Research-based prevention programs can be cost-effective. Similar to earlier research, recent research shows that for each dollar invested in prevention, a savings of up to \$10 in treatment for alcohol or other substance abuse can be seen (Pentz 1998; Hawkins 1999; Aos et al. 2001; Spoth et al. 2002), (18).

Evaluation results suggest that drug abuse prevention projects and programs are successful if they are nonspecific on certain substances, target-group-oriented, and if they address drug abuse problems on an integrated basis.

They should combine the knowledge/ attitude/behaviour approach with health promotion, and the building of self-esteem and life skills in various settings (6).

Case study in Macedonia

Illegal drugs in the Republic of Macedonia

Growing poppy in the Republic of Macedonia has long term tradition. Although, the pleasant climate resulted with the best quality opium in the region, the number of drug users at that time was very small till 1990s.

The conflicts in the region during the 1990s (war in Former Yugoslavia) changed the regular transit paths of heroin towards Europe and the country recognized previously as a “transit” country became “consumer” country for drugs, too.

The Republic of Macedonia during the last 15 years is facing significant increase of the number of drug users. In accordance to the data from the Ministry of Interior (which is the unique source of official data on drugs) the total number of registered drug users (cumulatively- includes all registered cases from previous years) in 1990 was 337. In 1995 there were 1377 and at the end of 2000, the cumulative number of registered drug users was 4569.

Table 1: Number of registered drug users and number of deaths for the period 2001-2005 in Macedonia

Year	Total number of registered drug users (cumulative, prevalence)	Number of heroin users (out of the total number)	Number of deaths of drug users (incidence)
2001	5030	2704	30
2002	5222	2628	23
2003	6034	2494	33
2004	6583	2538	13
2005	7126	2774	13

Source: Ministry of Interior of the Republic of Macedonia

In 2003, NGO HOPS reported that 91% of their clients are injecting drug users (IDUs). Of those clients, 31% have taken drugs for more than 5 years. Sixty one percents of the clients did not ever used public or any other services, and 36% underwent methadone maintenance treatment (26).

For the period 1999-2007 HOPS contacted 2441 IDUs, of which 1597 IDUs were aged less than 20 years (HOPS, 2007).

Taking in consideration official and unofficial data, it is estimated that in the Republic of Macedonia 6000-8000 persons can be considered as problematic drug users¹ because of heroin use, and face serious health and social consequences. At the same time, it is estimated that the number of predominantly young people using different types of illicit drugs for experimental and/ or recreational purposes is several times bigger.

There are also indications that the time when youngsters start to use or experiment with drugs usually happens at earlier age than previously.

Results from ESPAD 99 survey in Macedonia

The European school survey project on alcohol and other drugs (ESPAD) for the first time was conducted in Macedonia in 1999. The results from 2491 interviewed students, all of them aged 16 were presented and compared with the results from other European countries.

Table 2: Gender structure of interviewed 16 years old adolescents from Macedonia who stated “never smoked” or “never took alcohol” (life time prevalence), (4)

Personal attitude	Female	Male
Never smoked tobacco	43.96%	39.78%
Never used alcohol	36,53%	25,77%

Variances in the results are present among representatives from different ethnic groups in Macedonia (including different religious affiliation: orthodox and Muslim), who stated “never used alcohol”: Macedonians (18.91%), Albanians (77.19%), Turks (75.85%), (4).

Table 3: Life time prevalence of alcohol use among 16 years old students in some European countries in 1999 (15)

Number of occasions when alcohol was used	Macedonia	Bulgaria	Croatia	Greece	Italy	Slovenia	Sweden	United Kingdom
0	32	14	13	2	15	9	10	6
1-2	21	16	19	7	15	14	12	5
3-5	15	16	16	7	16	14	14	6
6-9	9	13	12	10	12	13	13	7
10-19	10	16	13	15	14	16	19	14
20-39	5	10	10	18	11	11	14	16
40+	9	16	18	42	17	23	19	47

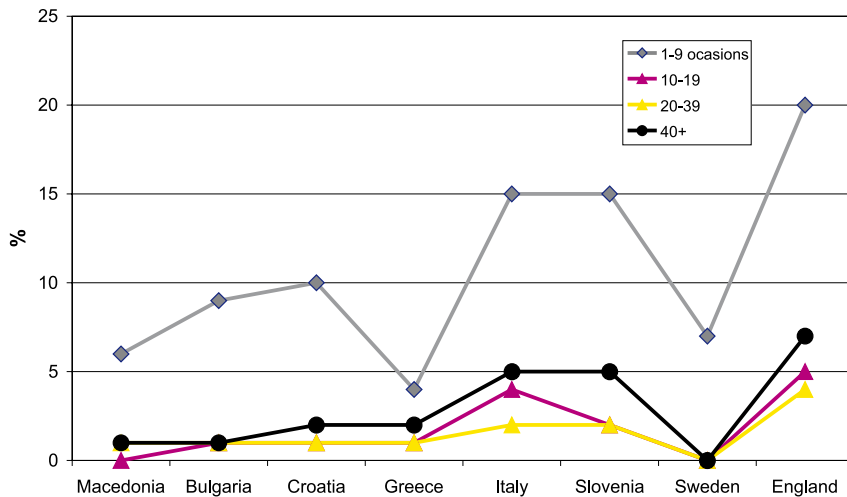
1 EMCDDA definition of problem drug use: “Injecting drug users” or “long duration/ regular use of opiates, cocaine and/ or amphetamines”, EMCDDA [1999]. Methodological guidelines to estimate the prevalence of problem drug use at national level. CT.99.RTX.05, Lisbon, Portugal.

Five percents of male and 3.7% female students stated that they have tried cannabis 1-2 times in their life. Marijuana could be easily provided in coffee bars, discos, in the park, on the street etc. Around 5% students stated that marijuana could be provided in school.

The drug was usually offered by a friend (not a dealer). Curiosity was the main reason for taking drug for the first time.

First contact with illegal drugs was usually at age of 15 or 16, compared to cigarette smoking (started even at 11 years of age at 9% of students who smoked). Marijuana was usually the first taken drug (4).

Figure1. Frequency of lifetime use of marijuana in Macedonia and other European countries, ESPAD 1999 (4)



ESPAD survey was not organized in 2003 in the Republic of Macedonia.

Exercise: Health education programs

Task

Students are asked to investigate what kind of drug preventive programs do exist in their country/city (contents of educational programs, methodology used, target audience), discuss the outcomes of those programs with persons in charge, or provide final reports and lessons learned.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Healthy Nutrition
Module: 5.8	ECTS: 0.5
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Key words	Nutrition, health, prevention
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none"> • define healthy nutrition • recognise health food and healthy feeding • understand all about healthy nutrition • improve knowledge in nutrition
Abstract	<p>Many costly and disabling conditions - cardiovascular diseases, cancer, diabetes and chronic respiratory diseases - are linked by common preventable risk factors. Tobacco use, prolonged, unhealthy nutrition, physical inactivity, and excessive alcohol use are major causes and risk factors for these conditions. The ongoing nutritional transition expressed through increased consumption of high fat and high salt food products will contribute to the rising burden of heart disease, stroke, obesity and diabetes. Changes in activity patterns as a consequence of the rise of motorised transport, sedentary leisure time activities such as television watching will lead to physical inactivity in all but the poorest populations. Many diseases can be prevented, yet health care systems do not make the best use of their available resources to support this process. All too often, health care workers fail to seize patient interactions as opportunities to inform patients about health promotion and disease prevention strategies.</p> <p>Nutrition is an input to and foundation for health and development. Interaction of infection and malnutrition is well-documented. Better nutrition means stronger immune systems, less illness and better health. Healthy children learn better. Healthy people are stronger, are more productive and more able to create opportunities to gradually break the cycles of both poverty and hunger in a sustainable way. Better nutrition is a prime entry point to ending poverty and a milestone to achieving better quality of life.</p>

Teaching methods	The introduction lecture relating to basic definitions and concepts. The guided discussion in small groups. The distribution of topics for seminar papers to each student. The presentation and evaluation for seminar paper. Learning how to measure with specific equipement.
Specific recommendations for teachers	Module to be organized in 0.5 ECTS
Assessment of students	Multiple choice questionnaire (MCQ) and seminar paper.

HEALTHY NUTRITION

Gorica Sbutega Milosevic, Jelena Ilic Zivojinovic, Milos Maksimovic

Introduction

Due to increased standard of living for people worldwide and public health successes, populations are ageing and increasingly, people are living with one or more chronic conditions for decades. This places new, long-term demands on health care systems. Not only are chronic conditions projected to be the leading cause of disability throughout the world by the year 2020; if not successfully prevented and managed, they will become the most expensive problems faced by our health care systems. People with diabetes, for example, generate health care costs that are two to three times those without the condition, and in Latin America the costs of lost production due to diabetes are estimated to be five times the direct health care costs. In this respect, chronic conditions pose a threat to all countries from a health and economic standpoint.

Many costly and disabling conditions - cardiovascular diseases, cancer, diabetes and chronic respiratory diseases - are linked by common preventable risk factors. Tobacco use, prolonged, unhealthy nutrition, physical inactivity, and excessive alcohol use are major causes and risk factors for these conditions. The ongoing nutritional transition expressed through increased consumption of high fat and high salt food products will contribute to the rising burden of heart disease, stroke, obesity and diabetes. Changes in activity patterns as a consequence of the rise of motorised transport, sedentary leisure time activities such as television watching will lead to physical inactivity in all but the poorest populations. Many diseases can be prevented, yet health care systems do not make the best use of their available resources to support this process. All too often, health care workers fail to seize patient interactions as opportunities to inform patients about health promotion and disease prevention strategies (1).

In 1998, NIH (National Heart, Lung and Blood Institute of the National Institutes of Health) published evidence based clinical guidelines on the identification, evaluation, and treatment of overweight and obesity (2). These guidelines included BMI (Body Mass Index), which calculated as weight in kilograms divided by the square of height in meters-kg/m², and WC (waist circumference). This classification system was divided in 6 categories

Underweight < 18.5

Normal weight (18.5-24.9)

Overweight (25.0-29.9)

Obese-I class (30.0-34.9)

Obese-II class (35.0-39.9)

Obese-III class >40.0

BMI-for-age

BMI is used differently for children. It is calculated the same way as for adults, but then compared to typical values for other children of the same age. Instead of set thresholds for underweight and overweight, then, the BMI percentile allows comparison with children of the same gender and age. A BMI that is less than the 5th percentile is considered underweight and above the 95th percentile is considered overweight. Children with a BMI between the 85th and 95th percentile are considered to be at risk of becoming overweight.

WC categories were divided into two groups (normal – WC less than 102 cm in men

and less than 94 cm in women). The health risk increased when the BMI moved to higher group (3). The same in case is with WC where also was notified that people with greater WC have greater risk than patients with normal WC values. Increased visceral fat has been associated with increased plasma triglycerides (TG), decreased high-density lipoprotein (HDL), cholesterol, and increased glucose levels, as well as with type 2 diabetes (4, 5, 6).

The first National Health Examination Survey covering 1960-62, estimated the prevalence of obesity to be 13.4% (7). In the United States more than 64% of adults aged 20 to 74 were overweight or obese according to the NHANES (8). Obesity is associated with conventional cardiovascular risk factors (eg. hypertension, dyslipidemia, and diabetes mellitus), (9).

Lately, obesity is also associated with so called novel risk factors (inflammatory markers such as high-sensitivity C-reactive protein [hs-CRP] and interleukin-6 [IL-6]). (10). Obesity is now the second most preventable cause of death in USA (11).

Nutrition is an input to and foundation for health and development. Interaction of infection and malnutrition is well-documented. Better nutrition means stronger immune systems, less illness and better health. Healthy children learn better. Healthy people are stronger, are more productive and more able to create opportunities to gradually break the cycles of both poverty and hunger in a sustainable way. Better nutrition is a prime entry point to ending poverty and a milestone to achieving better quality of life (1).

Food Pyramid

The Food Pyramid, developed by the US Department of Agriculture (USDA), is an excellent tool to help you make healthy food choices. The food pyramid can help you choose from a variety of foods so you get the nutrients you need, and the suggested serving sizes can help you control the amount of calories, fat, saturated fat, cholesterol, sugar or sodium in your diet (12).

Breads, grains, cereals and pastas

At the base of the food pyramid, there is the group that contains breads, grains, cereals and pastas. These foods provide complex carbohydrates, which are an important source of energy, especially for a low-fat meal plan. You can make many low-fat choices from foods in this group. You will need 6 to 11 servings of these foods in a day. One serving of this group can be:

- 1 slice of bread
- 1/2 cup of rice, cooked cereal or pasta
- 1 cup of ready-to-eat cereal
- 1 flat tortilla

Try to eat whole-grain breads, cereal and pasta for most of your servings from this group. Whole-grain foods (which are made with whole wheat flour) are less processed and retain more valuable vitamins, minerals and fiber than foods made with white flour.

Fruits and Vegetables

Fruits and vegetables are rich in nutrients. Many are excellent sources of vitamin A, vitamin C, folate or potassium. They are low in fat and sodium and high in fiber. The Food Pyramid suggests 3 to 5 servings of vegetables each day. One serving of vegetables can be:

- 1 cup of raw leafy vegetables
- 1/2 cup of other vegetables, cooked or raw
- 3/4 cup of vegetable juice

The Food Pyramid suggests 2 to 4 servings of fruit each day. One serving of fruit can be:

- One medium apple, orange or banana
- 1/2 cup of chopped, cooked or canned fruit
- 3/4 cup of fruit juice

Figure 1. Food Pyramid (13)



Beans, Eggs, Lean Meat and Fish

Meat, poultry and fish supply protein, iron and zinc. Non-meat foods such as dried peas and beans also provide many of these nutrients. The Food Pyramid suggests 2 to 3 servings of cooked meat, fish or poultry. Each serving should be between 2 and 3 ounces. The following foods count as one ounce of meat. (An ounce is equal to 437.5 grains, 1/16 of a pound, or 28.350 grams), (14):

- One egg
- 2 tablespoons of peanut butter
- 1/2 cup cooked dry beans
- 1/3 cup of nuts

Dairy Products

Products made with milk provide protein and vitamins and minerals, especially calcium. The Food Pyramid suggests 2 to 3 servings each day. If you are breastfeeding, pregnant, a teenager or a young adult age 24 or under, try to have 3 servings. Most other people should have 2 servings daily.

Fats and Sweets

A food pyramid's tip is the smallest part, so the fats and sweets in the top of the Food Pyramid should comprise the smallest percentage of your daily diet. The foods at the top of the food pyramid should be eaten sparingly because they provide calories but not much in the way of nutrition. These foods include salad dressings, oils, cream, butter, margarine, sugars, soft drinks, candies and sweet desserts.

Calory needs

You need to have enough calories every day in order for your body to have the nutrients it needs. How many calories that actually amounts to depends on a variety of factors including your:

- Age
- Sex
- Size
- Activity level
- Special Needs such as pregnancy and dieting, or chronic illness

The Dietary Guidelines for Americans are the cornerstone of Federal nutrition policy and nutrition education activities. They are jointly issued and updated every 5 years by the Departments of Agriculture (USDA) and Health and Human Services (HHS). The Dietary Guidelines provide authoritative advice for people two years and older about how good dietary habits can promote health and reduce risk for major chronic diseases.

Components of energy requirements

Basal metabolism. This comprises a series of functions that are essential for life, such as cell function and replacement; the synthesis, secretion and metabolism of enzymes and hormones to transport proteins and other substances and molecules; the maintenance of body temperature; uninterrupted work of cardiac and respiratory muscles; and brain function. The amount of energy used for basal metabolism in a period of time is called the *basal metabolic rate (BMR)*, and is measured under standard conditions that include being awake in the supine position after ten to 12 hours of fasting and eight hours of physical rest, and being in a state of mental relaxation in an ambient environmental temperature that does not elicit heat-generating or heat-dissipating processes. Depending on age and lifestyle, BMR represents 45 to 70 percent of daily total energy expenditure, and it is determined mainly by the individual's age, gender, body size and body composition.

Physical activity. This is the most variable and, after BMR, the second largest component of daily energy expenditure. Humans perform *obligatory* and *discretionary* physical activities. Obligatory activities can seldom be avoided within a given setting, and they are imposed on the individual by economic, cultural or societal demands. The term "obligatory" is more comprehensive than the term "occupational" that was used in the 1985 report (WHO, 1985) because, in addition to occupational work, obligatory activities include daily activities such as going to school, tending to the home and family and other demands made on children and adults by their economic, social and cultural environment.

Discretionary activities, although not socially or economically essential, are important for health, well-being and a good quality of life in general. They include the regular practice of physical activity for fitness and health; the performance of optional household tasks that may contribute to family comfort and well-being; and the engagement in individually and socially desirable activities for personal enjoyment, social interaction and community development.

Estimated Average Requirement (EAR)

This is an estimate of the average requirement for energy or a nutrient - approximately 50% of a group of people will require less, and 50% will require more. For a group of people receiving adequate amounts, the range of intakes will vary around the EAR.

Reference Nutrient Intake (RNI): The RNI is the amount of a nutrient that is enough to ensure that the needs of nearly all the group (97.5%) are being met. By definition, many within the group will need less.

Lower Reference Nutrient Intake (LRNI)

The amount of a nutrient that is enough for only the small number of people who have low requirements (2.5%). The majority need more.

Energy requirements

The EARs for energy are based on the present lifestyles and activity levels of the UK population. Energy requirements are related to age, gender, body size and level of activity. Energy requirements tend to increase up to the age of 15-18 years. On average, boys have slightly higher requirements than girls and this persists throughout adulthood. After the age of about 18 years energy requirements tend to be lower, but this depends on the individual's level of activity. By the age of 50 years, energy requirements are lower still which is partly due to a reduction in the basal metabolic rate (BMR) and to a reduced level of activity.

The EARs for various groups are shown in Table 1.

(Joule (J) is the amount of mechanical energy required to displace a mass of 1 kg through a distance of 1 m with an acceleration of 1 m per second ($1 \text{ J} = 1 \text{ kg} \times 1 \text{ m}^2 \times 1 \text{ sec}^{-2}$). Multiples of 1 000 (kilojoules, kJ) or 1 million (megajoules, MJ) are used in human nutrition. The conversion factors between joules and calories are: $1 \text{ kcal} = 4.184 \text{ kJ}$, or conversely, $1 \text{ kJ} = 0.239 \text{ kcal}$.)

The EARs for adults are based on the current lifestyle in the UK which is fairly sedentary. The EARs were calculated by multiplying BMR by a factor – the Physical Activity Level or PAL – which reflects current levels of physical activity.

Table 1. Estimated Average Requirements for Energy (15)

Age	EAR - MJ/day (Kcal/day)			
	Males		Females	
	(MJ)	(Kcal)	(MJ)	(Kcal)
0-3 mo	2.28	(545)	2.16	(515)
4-6 mo	2.89	(690)	2.69	(645)
7-9 mo	3.44	(825)	3.20	(765)
10-12 mo	3.85	(920)	3.61	(865)
1-3 yr	5.15	(1230)	4.86	(1165)
4-6 yr	7.16	(1715)	6.46	(1545)
7-10 yr	8.24	(1970)	7.28	(1740)
11-14 yr	9.27	(2220)	7.72	(1845)
15-18 yr	11.51	(2755)	8.83	(2110)
19-50 yr	10.60	(2550)	8.10	(1940)
51-59 yr	10.60	(2550)	8.00	(1900)
60-64 yr	9.93	(2380)	7.99	(1900)
65-74 yr	9.71	(2330)	7.96	(1900)
74+ yr	8.77	(2100)	7.61	(1810)

Energy EAR = BMR x Physical Activity Level (PAL).

A factor, or multiple of BMR, of 1.4 reflects the lifestyle of most adults in the UK. This factor is suitable for people who do little physical activity at work or in leisure time. If people are more active, larger factors (PALs) are used. For example a PAL of 1.9 would be appropriate for very active adults.

Special note

The EAR for women who become pregnant increases by 0.8 MJ/day (200 kcal/day) but only in the final three months. Although energy is needed for the growth of the fetus and to enable fat to be deposited in the mother's body, pregnant women can compensate for these extra demands by becoming less active and using energy more efficiently.

Breastfeeding mothers have increased requirements for energy but this will depend on the amount of milk produced, the fat stores that have accumulated during pregnancy and the duration of breastfeeding (15).

Calculation of energy requirements

The total energy expenditure of free-living persons can be measured using the doubly labelled water technique (DLW) or other methods that give comparable results. Among these, individually calibrated heart rate monitoring has been successfully validated. Using these methods, measurements of total energy expenditure over a 24-hour period include the metabolic response to food and the energy cost of tissue synthesis. For adults, this is equivalent to daily energy requirements. Additional energy for deposition in growing tissues is needed to determine energy requirements in infancy, childhood, adolescence and during pregnancy, and for the production and secretion of milk during lactation. It can be estimated from calculations of growth (or weight gain) velocity and the composition of weight gain, and from the average volume and composition of breastmilk (16).

Good nutrition and regular physical activity are fundamental to healthy living. According to the National Institutes of Health, sedentary lifestyles and unhealthy eating are linked to an increased risk of more than 20 physical ailments as well as a number of psychological problems. Specifically, poor eating and activity habits are major contributors to cancer, coronary heart disease, hypertension, diabetes, and stroke. (17).

Knowing what to eat can be confusing. Everywhere you turn, there is news about what is or isn't good for you. Some basic principles have weathered the fad diets, and have stood the test of time. Here are a few tips on making healthful food choices for you and your entire family.

- Eat lots of vegetables and fruits. Try picking from the rainbow of colors available to maximize variety. Eat non-starchy vegetables such as spinach, carrots, broccoli or green beans with meals;
- Choose whole grain foods over processed grain products. Try brown rice with your stir fry or whole wheat spaghetti with your favorite pasta sauce;
- Include dried beans (like kidney or pinto beans) and lentils into your meals;
- Include fish in your meals 2-3 times a week;
- Choose lean meats like cuts of beef and pork that end in "loin" such as pork loin and sirloin. Remove the skin from chicken and turkey;
- Choose non-fat dairy such as skim milk, non-fat yogurt and non-fat cheese;
- Choose water and calorie-free "diet" drinks instead of regular soda, fruit punch, sweet tea and other sugar-sweetened drinks;

- Choose liquid oils for cooking instead of solid fats that can be high in saturated and *trans* fats. Remember that fats are high in calories. If you're trying to lose weight, watch your portion sizes of added fats;
- Cut back on high calorie snack foods and desserts like chips, cookies, cakes, and full-fat ice cream;
- Eating too much of even healthful foods can lead to weight gain. Watch your portion sizes (18).

Exercises

Task 1:

Calculate your Body Mass Index

Task 2:

Calculate your energy necessity

Task 3:

The distribution of topics for seminar papers. Each student should choose one of suggested topics, find and read appropriate paper. After consultations with tutor and corrections, if any, student should prepare Power Point presentation for final discussion. During this session the quality of the paper and presentation will be evaluated and discussed.

Task 4:

Proposal for meny in kindergarden.

List of potential topics for seminar papers:

1. Healthy nutrition in pregnancy
2. Healthy nutrition for old people
3. Prevention of obesity in childhood
4. Healthy food – how to choose and prepare
5. Health risk for obesity
6. Health nutrition in community
7. The relationship between water and nutrition

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Violence and Injury Prevention – Challenges For Health Promotion in Macedonia
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Key words	Unintentional injuries, violence, health promotion, safety, public health approach, burden, risk factors, prevention, challenges
Learning objectives	The aims of this Module are to: draw attention to the magnitude of the injuries and violence as a public health problem; highlight the burden and costs of injuries and violence; describe the main challenges faced and the health sector response in Macedonia applying public health approach and focusing on primary prevention.

Abstract	World Health Organization estimated 5.1 million deaths from injuries in 2002 in the world or 9% of all deaths, disproportionately affecting the young. These are a leading cause of premature death and DALYs at age of 5 to 45 years. In Europe injuries are third leading cause of death, after cardiovascular diseases and cancers with 800,000 or 8.3%. Injuries can be avoided and prevented. Many effective strategies can be used to target high risk groups and to reduce health consequences for victims of injuries. The health sector can play a key role in injury and violence prevention and control, by providing care and services to victims, prevention and advocacy, and engaging in partnerships with other sectors and across all levels of government and society. Decreasing the burden from injuries will require political commitment across all government levels and with this the allocation of adequate resources to take these activities forward. Future challenges for injury and violence prevention and health promotion, that the countries including Macedonia would face are: developing national action plans for unintentional injury and violence prevention, forming an intersectoral injury prevention committee, improving national surveillance system, strengthening national capacity to respond to the burden of injuries and violence through both primary prevention and care, promoting evidence-based practice by facilitating the exchange of knowledge and experience across the Region, recognize gaps in knowledge and prioritize research and development in both primary prevention and care, as well as studies on costs
Teaching methods	Teaching methods will include public health approach and ecological model applied through lectures, interactive small group discussions and case study. The students will apply new knowledge working in small groups, identifying the problem, risk factors and prevention interventions for injury and violence, preparing country projects.
Specific recommendations for teachers	This module will be organised in 0.5 ECTS credits with 70% work under teacher supervision and 30% individual students' work. Teaching venue with available computers, internet access, LCD projector and flip charts will be needed for interactive teaching and group work.
Assessment of Students	Assessment will be done through the group work, seminar paper and case problem presentations.

VIOLENCE AND INJURY PREVENTION – CHALLENGES FOR HEALTH PROMOTION IN MACEDONIA

Fimka Tozija, Mome Spasovski, Jovanka Karadzinska-Bislimovska, Dragan Gjorgjev, Elena Kosevska

Methods and conceptual framework

This Module provides a theoretical basis for understanding injuries and violence as a public health problem, suggesting implementation of prevention programmes in line with the WHO recommendations and identifies future challenges for action at global and national level.

The public health approach has been presented in this Module as a conceptual framework for injury and violence risk assessment and prevention interventions.

The aims of this Module are to: draw attention to the magnitude of the injuries and violence as a public health problem; highlight the burden and costs of injuries and violence; describe the main challenges faced and the health sector response in Macedonia applying public health approach.

Injuries and violence as a global public health problem – burden and trends at global, regional, national level

Injuries and violence are serious public health problem leading to a premature death and disability with growing burden of disease, which is the result of fast modernization and urbanization, not followed by appropriate preventive programs. Injuries and violence have a very significant impact on health and health services placing a high economic and societal burden (1, 2).

An injury is the physical damage that is a result of a human body being suddenly subjected to energy in amounts that exceed the threshold of physiological tolerance or a result of the lack of one or more vital elements, such as oxygen. This energy could be mechanical, thermal, chemical or radiant (1). The main causes of unintentional injuries are road traffic injuries, poisoning, drowning, falls and burns. Intentional injuries are caused by violence, although not all violence (e.g. threats) results in injuries. Violence is defined as the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in injury, death, psychological harm, maldevelopment or deprivation. Violence can be divided into: self-directed (as in suicide or self-harm), collective (in war and by gangs), and interpersonal (child, partner, elder, and acquaintance, stranger) (3).

Although injuries significantly impact upon public health and health services, their importance has never been recognized nor have they been prioritized on the health policy agenda. This resulted in lack of awareness of the magnitude of the problem; a lack of awareness of the preventability of injuries; unwillingness to take ownership and leadership in view of the multi-sectoral nature of the response required which also involves other sectors, e.g. transport, justice, education, social affairs; and inadequate attention to evidence-based trauma care in the prehospital, hospital and rehabilitation phases, which all represent challenges for the public health.

As a result, there is an overall lack of visibility and political commitment to the issue and inadequate allocation of financial and human resources to scale up the public health response to injuries, particularly in relation to prevention, safety promotion and working across different

sectors; inadequate information collection to define the magnitude and consequences of non-fatal injuries and to evaluate the effectiveness of programmes. Such information could be used to increase the visibility of problems and solutions to both policy makers and the public's insufficient capacity to provide an effective response for prevention, care and rehabilitation; to a previously fragmented approach to violence and unintentional injuries, which needs to be replaced by a coordinated strategy; and to the need to optimise the quality of trauma care in the continuum of care from prehospital care, hospital care to rehabilitation by improving the evidence base, capacity and the organisation of trauma services.

Injuries are present in all countries and regions, at all ages, and dependently of the economic power of the country different types are dominant. In the world injuries are the fifth cause among 15 leading causes of death (after cardiovascular diseases, malignant neoplasms, cerebrovascular and chronic respiratory diseases), with 5.8 million deaths in 1998, and with projection of 8.4 annual deaths for 2020. Every day in the world 16 000 people die from injuries, on every dead person few hundreds are injured, and many of them have permanent sequels and disability. Injuries participate with 16% in total burden of disease in the world. Injuries are the third cause of death in the European Region with mortality rate of 50 per 100 000. In Europe 80 million accidents happen annually, with incidence rate of road traffic injuries of 340 per 100 000 in EU countries i.e. 1.5 million injured in EU countries and 3.5 million in whole Europe (4).

Road traffic accidents are the leading cause of death from all injuries (20.3 %); 10th of all causes of death (2.2%); they are at the 9th place in the total burden of disease in the world with 41 million DALY-s for both sexes and participation of 2.8% in total number of DALY-s, while 14% of all DALYs lost in Europe. In the world in 2000 there were 1.2 million deaths from road traffic injuries (out of which 88% in the developing countries with increasing trend, and 12% in the developed countries with decreasing trend), 815 000 deaths from suicide, 520 000 from interpersonal violence, 310 000 deaths from war and conflict and 3 million deaths from accidents.

The number of injury-related deaths in the European region was estimated as 800,000 or 8.3 % of all deaths in the Region as the third leading cause of death, after cardiovascular diseases and cancers, out of which 534,000 were from unintentional injuries and 257,000 from intentional injuries or violence. Three leading causes account for nearly 50 % of all deaths related to injuries: suicides (164,000), road traffic injuries (127,000) and poisoning (110,000). Every death due to injuries results in hundreds of individuals who suffer non-fatal physical and mental disabilities, often life-long. There is a lack of information about the health consequences of unintentional injuries and violence, and thus, it is necessary to develop and implement appropriate plans of action.

Violence may lead to fatal injuries (homicide is the 5th leading cause of injury death in the Region), and psychological and sexual violence (child abuse, intimate partner violence) which are more difficult to measure using routine surveillance, and the burden from these remain largely unmeasured, except when surveys have been undertaken (3). In the case of intimate partner violence, in addition to physical injuries surveys have shown a high prevalence of mental and reproductive health problems and negative health behaviours (5).

The burden of injury is unequally distributed across the world: low- and middle-income countries, show the highest mortality rates, while high-income countries report the lowest rates. However, even within high-income countries, there are marked differences, with economically deprived and socially vulnerable groups being at comparatively greater risk.

Similarly, inequalities exist among age and sex groups. A disproportionately large burden is inflicted on young people under 45 years old, making injuries a leading cause of loss of productive life, of high medical care costs and significant degrees of disability.

In developing countries around 1 million children under 15 years annually die from injuries, out of which 240 000 are due to road traffic accidents. In developed countries 20 000 children die from injuries. In OECD countries 10 000 children die from road traffic accidents annually. On every 100 000 children born in OECD countries less than 200 will die from injuries at age under 15, while in the developing countries over 1000. Road traffic accidents and drowning are main causes of death for around one million children annually in the countries of Africa, Asia and Latin America. Mortality from injuries is three times higher among male children under 15 in the OECD countries. One third of all injured in road traffic accidents are at the age between 15 and 29 (6).

In the year 2002, about 26,000 children below 15 years of age lost their lives from injuries in the European region, equivalent to 70 deaths per day, or about 3 per hour. Children are particularly at risk: road traffic injuries are the leading cause of childhood mortality in children between 5 and 14 years of age and drowning is the third leading cause, being particularly prevalent in the low and middle income countries of Europe. Deaths are the tip of the iceberg; there may be long-term physical and psychological consequences in children, with serious repercussions on their health in later life. These may be difficult to measure using routine information systems. Children are also vulnerable to violence, with the loss of nearly 3000 lives in the European Region every year. The health sector has a critical role in the early detection of violence in children. Child abuse, whether physical, sexual or psychological may be difficult to detect, but its consequences are nevertheless long standing (3). For example, exposure to child abuse is associated with a 4 to 12 fold increase in risk for alcoholism, drug use disorders, depression, and suicide attempts in later life (7).

Injuries can be avoided and prevented. Many effective strategies exist, which can be used to target different injury causes and high-risk groups and to reduce health consequences for victims. The health sector can play a key role in addressing this major problem, by providing care and services to victims, but also by putting prevention and advocacy at the core of its public health activities, and engaging in partnerships with other sectors and across all levels of government and society.

Many evidence based preventive measures and interventions (use of seatbelts, child seats, helmets etc.) show that this type of injuries can be prevented even if the accident has happened. Preventive programs, interventions and strategies are developed in rich countries and can help in developing similar appropriate cost-effective strategies for prevention of road traffic injuries in poor countries, based on the complexity of this problem and available resources and commitment of the country. Mortality from injuries in childhood in OECD countries within period 1970-1995 has been decreased from 22.8 to 11.5 per 100000 as a result of successful implementation of preventive programs: research, lobbying, legislative, environment modification, population education and improvement of emergency services. Significant results in decreasing injury mortality have been achieved in 5 countries: France, Ireland, Italy, Sweden and Great Britain.

Injury mortality has shown a downward trend since the 1990s in 15 European Union (EU 15) countries and those of South Eastern Europe. In contrast, trends for the Baltic countries and the Commonwealth of Independent States (CIS) has shown a marked peak in between 1990-1994, followed by a downward trend and then an alarmingly upward trend again since

1999. The upward trends in some of these countries in transition are thought to be due to a variety of factors ranging from increased motorised road transport, an increase in inequalities in wealth, unemployment, decreases in social capital, the liberalisation and increased availability of alcohol and poor regulatory and enforcement mechanisms (8).

Violent death rates, from suicides and self-inflicted injuries as well as from homicides and intentional injuries, in most of the countries of South-Eastern Europe (Russian Federation, Moldova, Hungary, Croatia, Bulgaria, Albania, Serbia and Montenegro, Bosnia and Herzegovina, Slovenia), had increasing trend in the period 1990-1995, while decreasing in the second half reaching rates as presented in Table 1. (9) The situation in the Republic of Macedonia was the opposite with increasing trend in the second half of the nineties reaching the highest rates in 2000. Suicides have the highest rates in Russian Federation, Hungary and Slovenia, higher than the CIS and EU average rate. Homicide rates are the highest in Russian Federation, as well as in the Republic of Moldova and Albania, compared to CIS average 19.07 and EU average rate of 7.96 in 2000.

Table 1. Injury and violent death rates in South Eastern Europe (9)

Countries	Suicides 2000	Suicides Last available	Homicides 2000	Homicides Last available
Albania	2.30	4.84	5.99	4.31
Bosnia and Herzegovina	...	9.94	...	
Bulgaria	15.00	11.02	3.32	2.65
Croatia	20.81	16.98	2.62	1.27
Greece	3.25	2.78	1.07	0.84
Hungary	29.17	23.2	2.49	1.8
Italy	5.98	5.93	0.97	0.91
Republic of Moldova	16.31	17.65	12.68	8.39
Romania	12.44	11.96	3.58	3.06
Russian Federation	37.78	29.8	27.59	23.69
Serbia and Montenegro	15.08		2.23	
Slovakia	13.44	11.93	2.17	1.56
Slovenia	27.17	21.98	1.03	1.08
Sweden	11.60	12.15	1.02	1.15
Republic of Macedonia	7.56	7.01	3.10	3.18
Europe	18.31	11.23	7.96	1.17
EU-25 average, 25 Member States, European Union (from 1 May 2004)	11.80	15.67	1.28	2.38
CIS average	29.20	22.72	19.07	15.93

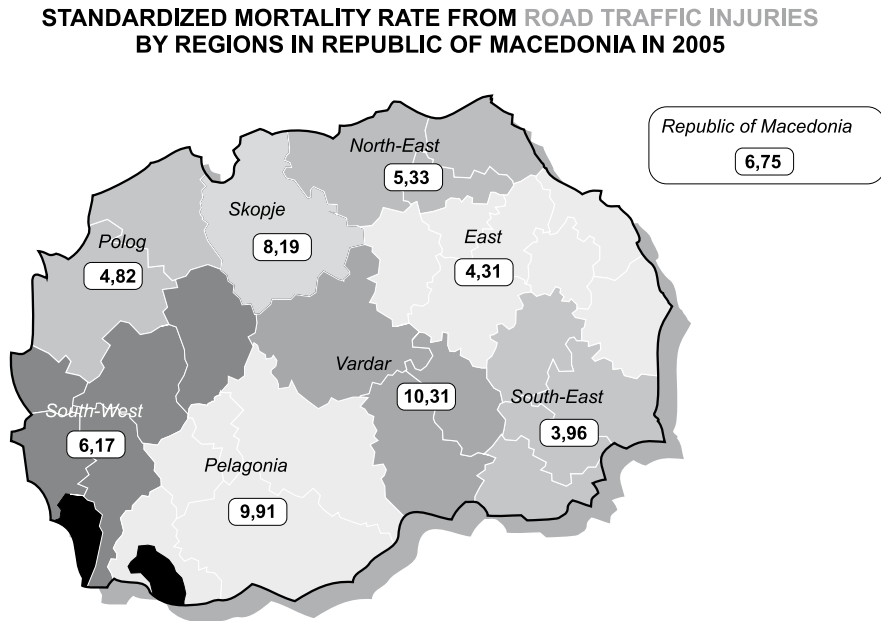
Source: WHO. *Health for all Database* (9)

Injuries in Macedonia are a high priority public health problem with increasing trend and with increasing participation of intentional injuries in deaths from all injuries. Injuries were the third cause of death after diseases of the circulatory system and malignant neoplasms with 750 deaths in 2002, mortality rate of 36.8 per 100 000 and participation of 4.4% in total number of deaths. Mortality from injuries decreased within the period 2001-2005 with

rate of 28.8 per 100,000 in 2005, (compared to 36.4 in 2001), and SDR of 29.5 per 100,000, becoming the fourth cause of death. Mortality rate increases with the age and it is three times higher among males 41.2 per 100000 (compared to 16.4 among females). Unintentional injuries are dominant in the structure of fatal injuries participating with 66.8% (out of which 33.7% are traffic injuries), followed by suicides with 24.4% and homicides with 8.8% (10).

Distribution of SDR from injuries by regions shows that it is much higher in some regions where the exposure to risk factors is higher, such as Vardarski 44.1/100000, East 35.3, North-East 35.2, Pelagoniski 31.2 and Skopje 30.3 when compared to Poloski 15.5, South West 26.1 and South East 27.4 (Fig. 1). There are differences in injury mortality rates among different municipalities within each of these regions.

Figure 1. Standardized mortality rates from injuries by regions in Macedonia in 2005



Source: Medical Map 2005, Republic Institute for Health Protection, Skopje 2007

The number of drivers and vehicles in Macedonia has an increasing trend in the last 10 years with cyclic variations of road traffic accidents of five years. There is a positive correlation between number of road traffic accidents and number of injured and dead in these accidents (11). The severity degree (deaths per 1000 injured) in Macedonia was still very high in 2000 (69‰), decreasing to 30‰ in 2006.

Mortality due to injury and violence is only the tip of the iceberg (587 deaths from injuries in Macedonia in 2005, 11 797 hospitalized and 52 428 visits to the primary health departments). Information for the death is easy to obtain, but non-fatal injuries and psychological traumas remain unrecorded. It is important to use more than one source of information in order to cover all injuries.

Number of all injuries in Macedonia, fatal and non-fatal, have a decreasing trend, but the risk factors can not be explored using the official routine statistics. Therefore, there

is need of community household injury survey with defined multistage sample (applying WHO guidelines for community injury survey) and of national Report, that by implementing WHO recommendations, will develop national Strategy for Injury and Violence Control and Prevention and national action plan.

Socio economic costs

Severe injuries are treated in hospitals (in developed countries 10% of hospital beds occupied), 15% with in-patient and 30% with out-patient rehabilitation, 10% of injured have permanent disability. Average figures from the Netherlands, Sweden and the USA suggest that for every injury fatality, an estimated 30 people are hospitalised and 300 require outpatient treatment in hospital emergency departments (12). This results in high health care costs, making demands on already overstretched resources. Health care costs for injuries in the European Region are not widely available. Estimates for the EU15 suggest that hospital admissions in 1999 for injuries arising at home and from leisure activities cost about € 10 billion, equivalent to 5.2% of the total inpatient expenditure (13). When all injuries and violence are considered, then the proportion of health care expenditure is substantial. Rough estimates suggest that the health care costs of treating injuries, which result in fatality would be in the order of €1-6 billion (average cost of health care from €1,250 to €7250 per fatal injury) and that of non-fatal injuries from € 80 billion to 290 billion (average cost of health care from €4800 to €12000 per non-fatal injury).

The economic consequences of injuries are high, estimated as 518 billion US dollars annually. Total annual costs from road traffic injuries in developing countries are 1% from GDP, 1.5% in transition countries and 2% in developed countries. Studies show that for road traffic injuries, in Europe, 1-3% of country GDP is lost due to this cause (14). The estimated economic costs of motor vehicle traffic accidents are in the order € of 180 billion in the EU15 (about 2% of GDP), while in countries with economies in transition in central and eastern Europe, the average annual cost of road crashes was estimated in the order of 1.5% of gross national product, totalling about US\$ 9.9 billion (15). The majority of these costs are related to the injury, in which medical care costs and loss of productivity predominate. Data for violence for the Region are scarce (16). In England and Wales, a study estimated total costs from crime of \$63.8 billion. Sixty-three percent, or \$ 40.2 billion, of this amount is attributable to violence – including homicide, wounding, and sexual assault including both direct costs such as police, judicial system and health service costs, and indirect costs including foregone output and physical and emotional costs (17). Economic valuations underestimate the real cost paid by society, as they do not capture the suffering caused to families and social support networks of victims, as well as to communities, workplaces and school classes. The benefits of effective preventive strategies would far outweigh the huge economic and societal costs.

Need for action - prevention

Injuries can be prevented, and there is a large and growing evidence base of proven and promising effective strategies for both unintentional injuries and violence, which can be used to target injury causes of concern and high-risk groups (1). In the area of road traffic injuries, effective preventive strategies have been documented in the *World Report on Road Traffic Injury Prevention* and in *Preventing Road Traffic Injury: a public health perspective for Europe* (18). They include: speed control and provision of safer conditions for vulnerable road users, safer road infrastructures, motorcycle helmets, seat belts and child seats for cars,

and setting and enforcing legal blood alcohol concentration limits for traffic injury prevention (18).

For other unintentional injuries effective interventions include: child resistant containers and safer storage to prevent poisonings; poison control centres for better post-event management; preventing production of, and access to impure alcohol products to prevent poisoning in adults; exercise and home hazard modification to prevent falls in the elderly; appropriate ground surfacing in playgrounds, window bars and stair guards to prevent falls in children; fencing of pools and other water areas and provision of lifeguards and water flotation devices to reduce the risk of drowning; smoke detectors, flame resistant clothing and cooking surfaces at heights for burns prevention (19). The implementation of these cost-effective interventions can often result in quick and visible gains in reducing mortality and morbidity.

Violence is often seen as an inevitable part of human life, events which are responded to, rather than prevented. The World Report on Violence and Health challenged this notion and has shown that violence can be predicted and is a preventable health problem. In the area of violence prevention effective strategies have been documented: individual-level interventions, such as pre-school enrichment or life skills training programmes, and incentives to complete secondary schooling; at the relationship level home visitation, parent training and mentoring; at the community level reducing alcohol availability, and improving institutional policies in schools, workplaces, hospitals and residential institutions, and at the societal level public information campaigns, reducing access to means (such as firearms), reducing inequalities and strengthening police and judicial systems (3).

The implementation of cost-effective interventions can often result in quick and visible gains in reducing mortality and morbidity. In France the 34% reduction in road traffic injury deaths over a two year period (2002-4) resulted from the implementation of preventive measures (traffic slowing, seat belt use and control of drinking) with strong political leadership where the health sector played an important contributory role (20).

Political commitments, partnerships and networks – international and national

Unintentional injuries and violence are now regarded as largely avoidable and prevention policies have been placed firmly on the public health agenda: EB190/15 Violence and health; WHA49.25: Prevention of violence: a public health priority; WHA50.19 Prevention of violence; WHA56.24: Implementing the recommendations of the World report on violence and health; WHA57.10: Road traffic safety and health; WHA57.12 Reproductive health: draft strategy to accelerate progress towards the attainment of international development goals and targets; Regional Committee Resolution EUR/RC54/R3 on Environment and Health and Children's Environment and Health Action Plan for Europe (CEHAPE); Regional Committee Resolution EUR/RC53/R7 on the health of children and adolescents in WHO's European Region; Regional Committee Resolution EUR/RC51/R4 Progress report on the European Alcohol Action Plan, including follow-up to the WHO Ministerial Conference on Young People and Alcohol; Regional Committee Resolution EUR/RC49/R8 on European Alcohol Action Plan – Third Phase; Regional Committee Resolution EUR/RC49/R4 on Environment and Health; UN resolution 58/289 on Improving global road safety.

In addition, there are other relevant commitments from the Council of Europe, the European Commission, and UNECE and the related WHO European policies and strategies, such as the European Alcohol Action Plan 2000-2005, as well as the Mental Health Declaration

and Action Plan for Europe, adopted at the WHO European Ministerial Conference on Mental Health (Helsinki, Finland 12 -15 January 2005). The commitment to the Millennium Development Goals, in particular Goal 4 - to reduce under-five child mortality by two thirds by 2015 - will not be achieved unless sufficient attention is paid to reducing mortality from injuries.

The establishment and expansion of many international networks are crucial for injury and violence prevention: network of National Focal Points and other stakeholders for injury and violence prevention; the European Child Safety Alliance, European Network for Safety among Elderly, the Health Promoting Schools, Healthy Cities, and International Society for Spinal Cord Injury. In addition, the Safe Community Network, promotes the “safe community concept” which recognizes safety as a ‘universal concern and a responsibility of all’ (21).

International partnerships have been developed with stakeholders from different sectors, both national and international, to provide co-ordination and promote synergy in the response to injury and the use of available resources and competences: the European Commission (such as the Working Party on Accidents and Injuries), the Council of Europe, the European Conference of Ministers of Transport, the OECD, UNICEF, the United Nations Economic Commission for Europe, the European Crime ...

The Republic of Macedonia is a signatory and implements the above listed international documents as well as all international acts on protection of human rights and prevention of discrimination, torture and maltreatment which are incorporated in the national legislation: The International Covenant on Civil and Political Rights (ICCPR); The International Covenant on Economic, Social and Cultural Rights (ICESCR); The International Convention on the Elimination of All Forms of Racial Discrimination (ICERD); The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW); The Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment; The Convention on the Rights of the Child (CRC) and The European Social Charter.

In the Republic of Macedonia there are legislative, regulatory, and administrative provisions covering the areas included in the programme of Community action in the field of public health – Decision 2002/1786/EC. The Constitution guarantees the right to health care for all citizens of Macedonia, as well as the right and obligation for protection and improvement of own and the health of others.

Every citizen of the Republic of Macedonia has a right to health care in accordance with the Health Care Law (Official Gazette of the Republic of Macedonia No. 38/91, 46/93, 55/95 and 10/04), (22) and the Health Insurance Law (Official Gazette of the Republic of Macedonia No. 25/2000, 34/2000, 96/2000, 50/2001, 11/2002 and 31/2003), (23) that regulate the health insurance relations and rights, the procedure for obtaining health care services, and the health care system and organisation.

In line with the Health Insurance Law the Fund for Health Insurance of Macedonia was founded as a unique and independent financial institution for the territory of the whole country to implement the obligatory health insurance. The Health Insurance Fund has branch offices in municipalities where the insured persons exercise their health care rights, and the funds for obligatory health insurance are collected.

The Law for Local Self-Government (Official Gazette of the Republic of Macedonia No. 5/2002) (24) was adopted in 2002 and its goal is decentralisation of public services at a municipality level providing the local authorities the right to participate in the management of the primary health care through its representatives in the managing boards of the primary

health care institutions, promotion of health, surveillance of communicable diseases, health education of the population, surveillance of the general health status and participation in dealing with health problems of certain vulnerable categories of population.

WHO, European and National Targets for injury and violence

The WHO Health for all policy sets international targets for reducing mortality and disability from injuries and violence in all member countries and at all ages especially among children and youth (25). Target 9: By the year 2020, there should be significant and sustainable decrease of the number of injured persons with disability and mortality from injuries and violence in the Region. Particularly: (i) mortality and disability from road traffic injuries should be decreased for at least 30%; (ii) mortality and disability from all injuries at working place, home and leisure, should be decreased for at least 50%, with the highest decrease in the countries where there is a high mortality rate from accidents; (iii) incidence and mortality from domestic types of violence, related with gender or organized violence and its consequences, should be decreased for at least 25% (26).

Target 4: By the year 2020, young people in the Region should be healthy and capable to fulfil their roles in the Society. Particularly : (i) mortality and disability from violence and accidents, involving young people should be decreased for at least 50%; (ii) number of young people with risk behaviour, using drugs, cigarettes and alcohol, should be significantly decreased (26).

The European Commission has adopted the goal of reducing road fatalities by 50% by 2010. This target represents an ambition to reduce the number of deaths more quickly than continuation of past trends would imply. The European Conference of Ministers of Transport has adopted a target of reducing road deaths by 50% by 2012, to serve as a benchmark for its 43 member states.

The Republic of Macedonia accepting the WHO strategy “Health for All by the year 2000” and later on the strategy “Health for All in the 21 century”, has oriented its strategic health activities to achieve these targets (25, 26). In the Strategy for improvement of the health care in Macedonia, prepared by the Macedonian Academy of Science and Art and Ministry of Health in 2001, target 9 for injury and violence control was incorporated as own target 9: By the year 2010 injuries, mortality and disability caused by accidents and violence should be significantly decreased: (i) mortality and disability from road traffic injuries should be decreased for at least 30% i.e. mortality rate of 5 per 100000; (ii) mortality and disability from all injuries should be decreased for at least 50% i.e. mortality rate of 16 per 100000 (27). In the Strategy of the Republic of Macedonia 2006-2015, injuries and violence are set as priority in target 9: there should be a significant and sustainable decrease in injuries, disability and death arising from accidents and violence (28)

The World Health Day 2004 – Road Safety Is No Accident – focused on road safety, an issue that affects men, women and children around the World and expressed WHO global perspective for preventing road traffic injuries (18). The First United Nations Global Road Safety Week 23-29 April 2007 was dedicated to youth safety (29).

Need for action and framework and recommendations for prevention and control

In order to achieve these targets, there is a need governments to undertake activities which will enable to implement the recent World Health Assembly resolutions on violence and health (WHA56/24) and on road safety and health (WHA57/10) which recognise the multi-sectoral approach, encouraging the health sector to take a lead role in violence and road traffic injury prevention, inviting member states to appoint national focal points and to engage in the development of national action plans.

The Global Campaign for Violence Prevention is built around 6 country-level and 3 international-level recommendations made in the *World report on violence and health* and endorsed by the World Health Organisation (3). The 6 national-level recommendations are to: Create, implement and monitor a multisectoral national action plan for violence prevention; Enhance capacity for collecting data for violence; Define priorities for, and support research on, the causes, consequences, costs and prevention of violence; Promote primary prevention responses; Strengthen responses for victims of violence; Integrate violence prevention into social, educational policies, and thereby promote gender and social equality;

The 3 international-level recommendations are to: Increase collaboration and exchange of information on violence prevention; Promote and monitor adherence to international treaties, laws and other mechanisms to protect human rights; and Seek practical, internationally agreed responses to the global drugs trade and the global arms trade.

The 2004 World Health Day message was: Governments should give high priority to preventing road traffic deaths and injuries in their policy statements and mobilize resources and political commitment to carry this out. The WHO and World Bank prepared the World Report on Road Traffic Injury Prevention which identifies the six main recommendations for improving road safety at global level (18):

Identify a lead agency in government to guide the national road traffic safety effort; Assess the problem, policies and institutional settings relating to road traffic injury and the capacity for road traffic injury prevention in each country; Prepare a National road safety strategy and plan of action; Allocate financial and human resources to address the problem; Implement specific actions to prevent road safety crashes, minimize injuries and their consequences and evaluate the impact of these actions; Support the development of national capacity and international cooperation.

Additional recommendations are given by WHO Regional Office for Europe aiming to facilitate the implementation of the global recommendations in Europe (14): Strengthen and expand the role of the health sector as a champion of road safety; Improve implementation mechanisms and tools; Consider speed as the most important determinant for safety in road transport system; Strengthen the role of international organizations in preventing road safety.

In terms of implementing these recommendations, future challenges for injury and violence prevention and health promotion, that the countries including Macedonia would face are (1)

- Develop national action plans for unintentional injury and violence prevention;
- Form an intersectoral injury prevention committee;
- Improve national surveillance to gather information on injury burden and risk factors;
- Strengthen national capacity to respond to the burden of injuries and violence through both primary prevention and care;
- Promote evidence-based practice by facilitating the exchange of knowledge and experience across the Region;
- Recognize gaps in knowledge and prioritize research and development in both primary prevention and care, as well as studies on costs.

Decreasing the burden from injuries will require political commitment across all government levels and with this the allocation of adequate resources to take these activities forward.

Challenges for health promotion for injuries and violence prevention in Macedonia

An important strategic step in overcoming these challenges consists of addressing violence together with unintentional injuries, as both share a number of underlying determinants (e.g. economic, social, political and environmental) and risk factors (e.g. alcohol and drugs), and disproportionately affect vulnerable groups in the population. This requires multi-sectoral approaches to develop programmes to deal with common risk factors, such as alcohol, which is a leading risk factor for the whole spectrum of unintentional injuries and violence.

The health sector can play an important role not only in providing care and support services for the victims, but also in primary prevention, including advocating evidence-based strategies. Health service responses to victims of unintentional injuries and violence often involve the same providers: emergency pre-hospital and trauma care, toxicology care for poisonings (whether intentional or unintentional), psychological support to deal with post-traumatic stress disorder, and rehabilitation services for victims.

Evidences from some high income countries have shown that improvements in trauma care have led to decreases of around 30 percent in mortality from trauma (30). Lives could be saved, disabilities and long-term negative health impacts avoided if the quality of care were systematically evaluated and improved.

Regardless of the underlying cause of injury, the health sector is uniquely positioned to provide support for victims, identify and promote the implementation of evidence-based strategies, lead research and innovation, promote advocacy, and work closely with other sectors to address this issue, by facilitating the mainstreaming of injury prevention across different policies within and outside the health sector (31, 32)..

Macedonian Ministry of Health has followed the above mentioned recommendations aiming to achieve the set targets, appointing a focal point – coordinator for injury and violence control and prevention in July 2003 as well as establishing Department for Injury and Violence Control and Prevention in the Republic Institute for Health Protection Skopje in May 2004 as a leading agency in health sector for injury prevention and control in the Republic of Macedonia. At the same time it is a teaching base for research and safety promotion at the Medical Faculty, University “Ss Cyril and Methodius” Skopje, included in the Department for Social Medicine.

Based on WHO Recommendations the priority activities in the area of injury control and prevention in Macedonia are the following:

- (i) *Develop the newly established Department for Injury Control and Prevention* as modern agency with the following scope of activities:
- (ii) *Improve data collection, needs assessment and safety promotion research*: create database for injuries and violence especially for road traffic injuries and risk factors; create database for successful evidence based intervention programs; preparation of guidelines for interventions in violence prevention and road safety.
- (iii) *Develop national health policy*: develop Strategy for injury and violence control and prevention and national action plan;
- (iv) *Develop integral information system for injury surveillance* within the global health information system linked with other relevant information systems; establish national register for road traffic injuries (web oriented) in accordance with the current legislation; preparation of guidelines for injury surveillance in Macedonia in accordance with WHO recommendations; define indicators for surveillance of road traffic injuries in accordance with EU directives; revision of the registration form for road traffic injury in accordance with EU standards; revision of the current legislation: Law for evidence in health.
- (v) *Capacity building*: develop curriculum for safety promotion – TEACH VIP; train public health experts in governmental organisations as well as in non-governmental.

The Department for Injury Control and Prevention, is working closely with multidisciplinary and inter-sector group of experts, in implementing of the proposed and agreed activities, mainly focused in the area of road safety and violence prevention. There are major achievements in health and safety promotion, since the establishment of this Department in 2004, in the area of **road safety**:

National study on Road traffic injures among children and students – conducted (11); Draft Strategy for road safety prepared (11); Law for road safety amended and empowered; World Health Day 2004 promotion activities; 27 International Medical Student Association Congress held with introductory lecture for World Health Day 2004, workshop on road safety and workshop on violence poster exhibition, 2004; World Health Day – promotion and oral presentation at the International Congress of Occupational Medicine in Ohrid, 2004; World Health Day 2004 and 2005 – promotion and lecture in the WHO Collaborative Center in the Institute of Occupational Medicine in Skopje; WHO Certificate for the Republic Institute for Health Protection, Department for Injury and Violence Control and Prevention – issued; Stability pact – Pre-hospital trauma life support Project – in progress; Survey on evaluation of the emergency medical services in Macedonia conducted in collaboration with WHO and Report prepared – 2007; Elective course for Injury research and safety promotion in the Master for Public Health curriculum – prepared by applying “Healthy Planit”; TEACH-VIP – in preparation; Environment and Health and Children’s Environment and Health Action Plan for Europe (CEHAPE) activities – in progress; Outline for Community injury household survey prepared 2007; Focal point and National Committee for UN First Global Road Safety nominated and activities accomplished – 2007; Information on road traffic injuries prepared and adopted by the Government with recommendations for future promotion activities for Campaign “Safe Roads” - 2007; and in **violence prevention**:

Draft National Action Plan prepared; Institutionalization: by establishment of the Department for Injury and Violence Control; Violence is priority in Biannual Country Agreement between Macedonian Ministry of Health /WHO 2004-2005 and 2006-2007; National Campaign against Violence – ongoing; Health promotion activities for the 16 Days of Activities Against Gender Violence since 25 November 2003 every year; Anniversary of the Republic Institute for Health Protection – violence poster exhibition, 2004; Study visit to Croatia for family violence prevention – multi-sectoral group – cooperation with UNICEF, 2004; Co-hosted 53 General Assembly of the International Federation of Medical Student Associations in Ohrid, Macedonia, 2004, with main topic Violence and Health: plenary session, lecture and workshop ; Advocacy of the passed Law for family - Section for family violence, 2004; Designed and published brochure “Recognize and stop violence”, 2005; Legal and social policy activities; Survey on youth violence - collaboration with Macedonian Medical Student Association and WHO; Survey on interpersonal violence – collaboration with Medical Student Association and daily news; Project for documentation of interpersonal violence prevention programs, collaboration with WHO Department for Injury and Violence Prevention in Geneva; Report Violence and Health in Macedonia and guide for prevention – collaboration with WHO European Region Office in Copenhagen within the BCA - 2006 - published in Macedonian and English, promoted and distributed (32); National task force – Inter-ministerial and multidisciplinary group has been established and business plan developed; Development of Protocol for victims of violence – joint Project with Ministry of Labour, Ministry of Interior, 2 NGOs (Zdruzenska and ESE) and financially supported by UNIFEM; Curriculum development for the Medical Faculty: Undergraduate studies and Master of Public Health program – facultative course on Burden of Injuries and Safety Promotion; Advocacy and media; Sharing information through the web site of the Republic Institute for Health Protection; UNIFEM Regional Conference on violence budgeting in Skopje 2006; Regional Conference on domestic violence in Ohrid 2006; Public Health congress in Ohrid 2006; ASPHER Conference – building partnerships for violence prevention – the Macedonian case – 2006;Preparation of the Strategy for domestic violence prevention in collaboration with governmental and non-governmental institutions – 2007.

Injury prevention

Injury prevention is set as priority in the Health Strategy of the Republic of Macedonia 2006-2015, prepared by the Ministry of health, i.e., Goal No. 9 refers to achievement of significant and sustainable reduction of the number of injuries, disability and occurrence of death due to accidents and violence (29). The Ministry of Health has undertaken the leading role in primary, secondary and tertiary prevention of injury and violence, through the following activities:

- Commencement of National Campaign for violence prevention as part of the Global campaign organized by the Republic Institute for Health Protection in 2003, in collaboration with WHO, UNICEF, Open Society Institute and NGO for Emancipation, solidarity and equity of women - ESE;
- Establishment of Department for Injury and Violence Control and Prevention within the Republic Institute for Health Protection in 2004, as a leading agency in the health sector for prevention and control of injuries and violence, with activities focused on preparation of strategic documents, organization, research and safety promotion through web site, media and publishing promotion materials;
- Violence and injury set as priority in the Biannual collaborative agreement signed between the Ministry of Health and WHO;
- Established inter-ministerial and multidisciplinary National Commission for violence prevention and health protection, with representatives from Ministry of Health, Ministry of Labour and Social Policy, Ministry of Interior, Ministry of Education and Science, Ministry of Justice, Republic Institute for Health Protection, State Statistical Office, Institute for Promotion of Social Affairs, NGOs, media and WHO;
- Implementation of the Pilot project for documentation of interpersonal violence prevention programs in Macedonia: established national electronic database with 47 systematically documented programs for prevention of interpersonal violence;
- Amendment of the legal documents related to family violence: Family Law and Criminal Code;
- Preparation of Report on violence and health in Macedonia and guide for prevention with comprehensive analysis of the epidemiology of violence in the country, its influence on health, public health approach in recommendations for violence prevention and support for victims of violence, particularly women and children;
- Preparation of Report on Survey of the emergency medical services in the Republic of Macedonia has been done in 2007 with situation analysis, challenges and perspectives recommendations for improvement;
- Focal point, youth delegate and National Intersect oral Commission for the First UN Global Road Safety Week have been appointed and many activities have been undertaken before, during and after the Week 23-29 April 2007.

Among the biggest achievements in the area of injury and violence prevention and safety promotion, which is worth to elaborate in more details are the achieved results and future challenges in National campaign against violence in Macedonia. The Macedonian Ministry of Health started the Campaign Against Violence in Macedonia in collaboration with WHO Headquarters, WHO Regional Office for Europe, WHO Office in Macedonia, UNICEF Office in Skopje, Foundation Open Society Institute Macedonia (FOSIM), NGO ESE and

Republic Institute for Health Protection, launching the WHO World Report on Violence and Health and 2 series of posters against violence, on 25th of November 2003, the first day of the 16 International Days Against Women Violence. The launch was another step towards Macedonian's international commitment to draw further attention to the dimension of violence and to support appropriate measures to decrease this public health problem.

The main goals of National campaign are: to obtain visibility for the World Report on Violence and Health, to build up a network of parties who will be supporting and contributing to its national implementation, to lay the grounds for national implementation of the recommendations and to plan follow-up activities as presented in the Report Violence and Health in Macedonia and Guide for Prevention; and develop plans of action for violence prevention and networks for the prevention of violence. The Campaign continued during the "16 days Against Women Violence" in the following years, at national and local levels. On the Conference Milestones of Global Violence Prevention Conference in Geneva 2004 – Republic of Macedonia has been selected among five countries to present the results achieved in violence prevention.

The main achievement of the national Campaign is institutionalization of activities through establishment of the Department for Injury and Violence Control and Prevention in the Republic Institute for Health Protection and appointment of the national focal point for injury and violence control.

Future challenges for safety promotion and injury prevention

Future plans are to follow and implement the recommendations of the World Report Violence and Health and the World Report on Road Traffic Injury Prevention (1).

- Improving injury surveillance, by improving the documentation of the different causes, risk factors, consequences and costs of injuries and violence;
- Conducting more descriptive and analytic epidemiological studies documenting the magnitude, characteristics and causes of unintentional injuries and violence;
- Applying the public health approach systematically to reduce the burden of injuries and violence;
- Engaging in stronger advocacy to draw the attention of politicians and get political commitment for injury and violence prevention;
- Promoting the development of national injury prevention plans by developing an overarching vision and strategy, which places primary prevention at the core of activities, with the health sector playing a coordinating role in a multi-sectoral response;
- Strengthening national capacity to respond to the burden of injuries and violence;
- Equipping stakeholders with the tools for planning, implementing and evaluating violence prevention programmes;
- Strengthening national capacity for provision of services for victims of injuries and seek to improve pre-hospital, hospital care and rehabilitation of victims;
- Developing and strengthening partnerships of all kinds and at all levels (local, national and international), with stakeholders from different sectors, to provide co-ordination and promote synergy in the response to injury and the use of available resources and competences;
- Sharing knowledge and experiences in injury and violence prevention within and between different sectors, communities, countries and regions of the world;
- Identifying and disseminating good practice;

- Advocating for injury prevention activities, and promote the implementation of effective measures and raise public awareness about injuries and opportunities for their prevention in different settings (e.g. schools, workplace);
- Addressing priorities at local level especially in countries in transition such as the Baltic countries, the Commonwealth of Independent States and South Eastern European countries to respond to the marked variation in injury patterns, implementing the cost-effective solutions locally, with strong political leadership, across all levels of society.

Decreasing the burden from injuries will require political commitment across all government levels and with this the allocation of adequate resources to take these activities forward.

Our vision: healthy and safe communities without violence and fatal injuries – Zero vision.

Exercise

Task 1:

The students will work in small groups, applying the newly learnt methods of the public health approach to injury and violence prevention and the ecological model to the situation in their own countries with regards to the following aspects of selected type of injury or violence: definition of the problem; identification of multilevel root causes and risk factors; existing and potential multilevel prevention interventions

Task 2:

Case problem analysis will be used for evaluation of violence prevention programmes, analysing three different evidence-based prevention programmes.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Public Health Aspects of Trafficking in Human Beings – Health Promotion and Prevention Tasks and Possibilities
Module: 5.9.1	ECTS: 2
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Key words	Trafficking in human beings, migration health, sexual and reproductive health, prevention & health promotion, victims' protection & psychosocial assistance, international collaboration
Learning objectives	<p>After completing this module students and public health professionals should:</p> <ul style="list-style-type: none"> • be familiar with the concept of trafficking, its roots and dynamics in modern/postmodern societies; • have a comprehensive understanding of the trafficking process as experienced by the trafficked persons; • understand the specific health (public,- sexual & reproductive - and mental health) consequences of trafficking; including medico-legal issues; • understand the need for multidisciplinary, interagency, intersectoral and international cooperation as essential components of combating trafficking and related violence against fundamental human rights; • possess sound knowledge and communication skills needed to recognize vulnerable individuals, families and social groups for trafficking; • be able to understand the essentials, the methods and techniques of preventive actions in the context of counter-trafficking on individual, community, national and international level; • be familiar with basic principles, helping strategies, and ethical standards essential to ensure a multi-faced, holistic, high-quality psychosocial assistance to trafficked persons; with an emphasis on recognizing the special needs of trafficked women and children; • be familiar with basic principles of self-help, prevention and control of role stressors that threaten the mental health of both the professionals and non-professional helpers working in the realms of counter-trafficking.

Abstract	<p>In the last decades trafficking in human being has become one of the most lucrative criminal enterprises all over the world, with strong links to other illegal activities, such as money laundering, drug trafficking, document forgery, and smuggling. The US Justice Department estimated that annually some 700,000 women and children are bought, sold, transported and held in slavery-like conditions for sexual and labour exploitation. IOM estimates that around 120,000 women and children are being trafficked into the European Union each year, primarily through the Balkans, and 10,000 women, mostly from Moldova, Romania and Ukraine, are working only in the sex trade industry in Bosnia-Herzegovina. However, trafficking is not only a criminal act against human rights and dignity, but an ever increasing public health issue as it is stated in the Budapest Declaration adopted by the participants of the ministerial level Regional Conference on Public Health & Trafficking in Human Beings in Central, Eastern and Southeast Europe, held on 19-21 March 2003, in Budapest. Providing appropriate health promotion and care services for trafficked persons is <i>not only a humanitarian obligation, but also a public health concern</i> for countries of origin, transit and destination alike. (Eg.: Medical records from Moldavia show that some 88 per cent of the ex-victims return to their homeland with sexually transmitted infections (STI), and about the same number (84 per cent) exhibit chronic anxiety disorders with the mix of depression and post-traumatic stress syndrome (PTSD).</p> <p>The module provides a framework not only for the assessment and treatment of specific health and mental health needs of the ex-victims of trafficking, but takes a large-scale public health perspective of a community approach to prevention and health promotion of most vulnerable social groups to this kind of abuse and violence.</p>
Teaching methods	<p>A well-planned sequence of five lectures will constitute the teaching module that begins with a historical overview of trafficking, and its re-emergence in the modern/post-modern societies. It continues with outlining the trafficking process itself, i.e., the process of victimization, both from medico-legal, and the victims' perspectives. The next two lectures will focus on trafficking related health hazards and specific issues regarding victims' protection, rehabilitation and reintegration and community networking both in host, and home countries. The last lecture in the series will provide basic knowledge of and opportunities for practical skills training in health education and awareness raising programmes .</p> <p>Lecturing <i>per se</i> should take approximately one-third of the total teaching time, and the rest should be provided to students' experiential learning activities, including small-groups discussion, focus group discussion on selected issues, and an extensive use of PBL (problem-based learning) method.</p>

Specific recommendations for teachers	The continuity and sequencing of material is of utmost importance. The personal learning, the sharing of personal and professional experience and the development of personal/professional competencies in the realms of counter-trafficking is highly significant as well as taking the perspectives of a holistic approach to prevention and the heuristics of continuing education on the subject. Students would feel devoted to study and act upon on a life-long basis.
Assessment of Students	The assessment of students takes three, interrelated stages: (1) entrance assessment for eligibility, (2) ongoing activities assessment and (3) final assessment based on tangible project proposal. As far as teaching-learning process assessment is concerned, a five minute quiz of one or two questions should start each lecture. The first one should be the students' statement on what they expect to learn from the course. Based on small group discussions, students should explore sources (the internet, the library) to find evidence supporting or rejecting what is being discussed. A one page summary of this material should be submitted at the end of each session. The summary of the first session submitted at the start of the second discussion group, and continues in sequence. A five page essay, following the criteria stated in the <i>task</i> , serves to demonstrate the students' understanding, application, and creativity regarding the concepts and modalities that constitute the thesis of this module. The essay counts for 60%, the quizzes 20%, and the summaries for 20%.

PUBLIC HEALTH ASPECTS OF TRAFFICKING IN HUMAN BEINGS, HEALTH PROMOTION AND PREVENTION TASKS AND POSSIBILITIES

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Definitions

Different definitions and expressions are used to describe smuggling of migrants and trafficking in human beings. Hereafter reference is made to the definitions in the protocols supplementing the United Nations Convention Against Transnational Organized Crime (1), in particular in Protocol to Prevent, Suppress, and Punish Trafficking in Persons, Especially Women and Children (2). Interpol also adopts these definitions.

Trafficking in Human Beings is “the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs.” (Interpol)

Although men are also concerned, human trafficking in Europe affects mostly children and women.

Trafficking differs from people smuggling because it involves the exploitation of people for forced labour and prostitution. People smuggling involves people who are willing to pay (using cash or other favours) in order to gain illegal entry into a state or country of which they are neither citizens nor permanent residents. From health and public health point of view regarding the required assistance, the required assistance between this two most common form of irregular migration is not significantly different.

Smuggling of migrants means „the procurement, in order to obtain, directly or indirectly, a financial or other material benefit, of the illegal entry of a person into a State Party of which the person is not a national or a permanent resident.” (Interpol)

Short history of trafficking in human beings

Children, adolescents, women and men have been the victims of trafficking for sex and other purposes for thousands of years. Nowadays, international trafficking of human beings is a growing phenomenon, as hundreds of thousands of men, women and children are trafficked by businessmen into dens around the world. Surprisingly, many follow the trafficking routes of the Middle Ages or the Renaissance when mainly Eastern European women and children were sold in slave markets in Western Europe.

The first known phase of trafficking occurred during the Middle Ages, when each year thousands of women and children from East Prussia, the Czech lands, Poland, Lithuania, Estonia and Latvia were sold in the slave markets of Italy and southern France.

The second phase occurred during the latter part of the Middle Ages and the early Renaissance when Eastern European women and children were trafficked, mainly from Russia and the Ukraine, and sold into slavery in Italy and the Middle East. Others came from Bosnia, Albania and the Caucasian Mountains. They also ended their days as slaves in Italy and France. This trafficking route into Western Europe ceased when the Ottoman Empire conquered Constantinople. Western European countries then turned their attention to West Africa as a source of slaves.

The modern slavers from Serbia, Albania, Bosnia, Turkey, Russia and Eastern Europe model themselves on the slavers of the Middle Ages and the early Renaissance. Not much has changed, except they now dress in expensive suits, carry mobile phones and drive flashy automobiles. Contemporary slavery takes various forms and affects people of all ages, sex and race (3).

Estimated magnitude of this ‘modern’ type of slavery

When it comes to trafficking, it is nearly impossible to come up with well-established statistical figures. The nature of this crime – underground, often under-acknowledged – contributes to the inability to pin down the number of people who are victimized by traffickers each year.

Nevertheless, the US Department of Justice yearly reports (2002 – 2006) estimated that annually some 700,000 women and children are bought, sold, transported and held in slavery-like conditions for sex and labour exploitation (4). According to the Swedish NGO, Kvinna Till Kvinna, an estimated 500,000 women from all over the world are trafficked each year into Western Europe alone. A large proportion of these come from former Soviet Union countries.

According to International Organization for Migration (IOM) estimates, 120,000 women and children are being trafficked into the European Union (EU) each year, primarily through the Balkans and that 10,000 women, mostly from Moldova, Romania and Ukraine, are working only in the sex trade industry in Bosnia Herzegovina (5). However it is difficult to verify these figures with the information from particular regions or countries.

Economists estimate that in the ‘crime industry’ drug, weapons and trafficking are the highest three income generating black businesses.

Subject overview

Health and public health professionals’ understanding of trafficking, and their capability to prevent its further spread and deadly impacts both in own countries and worldwide certainly asks for a kind of special knowledge that goes beyond the knowledge of sheer descriptive statistics on its magnitude, geographic distribution and trends and the like. To advance this knowledge, professionals are expected to understand, at the first place, the attitudes, misperceptions, prejudices and myths about the phenomenon in the general (lay) public that make most people passive “by-standards”, hence ignorant to this particular form of mass violence and crime.

Secondly, one has to understand the phenomenon as a special kind of migration process that shares, on one hand, certain common characteristics with other types of migration (e.g. economic migration), while on the other hand, it has vast many unique features never if ever observed before in the history of migrations.

Last but not least, one has to understand the very intricate fabrics, dynamics health, public health and mental health consequences of the trafficking process as a whole, without which effective and meaningful efforts invested in counter-trafficking would be unthinkable.

Until recently, much of the support in the fight against trafficking has focused on information exchange, criminal and juridical cooperation, and return and reintegration assistance. In the last few years, however, a number of protocols, declarations, published studies and reviews have also called attention to the serious health concerns related to trafficking (6–10). These documents also highlight the need to develop minimum standards of care and provide specialized services that specifically match the needs of the victim.

Trafficked persons – regardless of whether trafficking is for the purpose of labour, sexual or any other form of exploitation – are exposed to a range of health-related problems. During captivity, they experience physical violence, sexual exploitation, psychological abuse, poor living conditions and exposure to a wide range of diseases, which may have long-lasting consequences on their physical, reproductive, and mental health.

In recognition of these health concerns, the *Budapest Declaration* (Annex I) notes that “more attention should be dedicated to the health and public health concerns related to trafficking”. Specifically, it recommends that trafficked persons should receive “*comprehensive, sustained, gender, age and culturally appropriate health care (...) by trained professionals in a secure and caring environment.*” To this end, “minimum standards should be established for the health care that is provided to trafficked victims” with the understanding that “different stages of intervention call for different priorities”. This module offers a set of information and overview for meeting these recommendations.

It should be noted that providing appropriate health promotion and care services for trafficked persons is not only a humanitarian obligation, but also a public health concern for countries of origin, transit and destination alike. Since the general population is also exposed to the high health risks associated with trafficking, states should commit themselves to both disease prevention and control in this area. This problem does not merely appear in the context of spreading sexually transmitted infections (STIs) and ‘common’ infectious diseases, such as the (re)-emerging problems of TB, HIV/AIDS and of Hepatitis B and C. A significant public health risk may also emerge if – as a consequence of the demolished public health system in the majority of countries of origin – ‘vaccine preventable diseases’ are spread to transit and destination countries where most physicians have not been confronted with these pathologies before. Providing appropriate and adequate care in the first line of service is the best security measure against such a risk. *To achieve significant advances in this field, governments must harmonise their public health policies including service provision, availability of specially trained practitioners, and data and information sharing.*

Myths about trafficking

It is a known fact that the general public’s awareness about trafficking all over the world countries is blurred with prejudices and myths about trafficking and its victims, on one hand, and with very low-level, incoherent, sporadic knowledge of its very nature, on the other, as the consequence utmost biased and sensationalistic media communication about the entire phenomenon. To illustrate the case, here we quote a few common myths about the victims of trafficking that Ukrainian researchers and health professionals can hear and record on a day-to-day basis (11):

Myths about awareness. According to this myth: “All the girls and women who go abroad (from Ukraine) know what will be awaiting them there... These women are guilty because they broke the law and agreed to work illegally; they naively believed all the tales about big money in other countries, so they don’t deserve our compassion and help.”

Myths about prostitution. “A woman who returns after trafficking is a prostitute. She had fun; she earned a lot of money. Why should anyone help her? ...Once a prostitute, always a prostitute. She’ll never change. Why should she get help?”

Myths about choice. “The woman went there of her own accord and earned money, just as she wanted to. So what does it have to do with us?” (...)“Look at the way she’s all dolled up and covered with make-up. She’s just a whore, not someone who was victimized by traffickers.”

Myths about responsibility: “All these women, who went onto trafficking about all the things they claim to have went through. They just want to get help, to gain basic benefits from their lies (...).These women could have escaped from their pimps. Why didn’t they?”

One can find virtually the same or similar myths about trafficking in many other countries as well, such as: “All prostitutes are willing to participate in trafficking”, “All participants involved in human trafficking are criminals”, and the like.

Behind all myth-makings and violent attitudes one can easily discover a “double-bind” (Janus-faced) morality typical for the value structure of modern (Western-type) societies, in particular regarding sex & labour, as the two most sensitive moral issues that persist and regenerate themselves probably since colonial times (12). The essence of this double-faced morality lays, on one hand, in the historic fact that modern mainstream societies typically and permanently tend to create, enforce and reinforce a full range of myths about own “clean morality”, “high-standard values”, the “superiority of own culture” (over others), while on the other side, they create, maintain and re-incarnate prejudices, violent attitudes and diverse mechanisms of social exclusion towards all those social groups, who – for one or another reason – are considered “unfit” to the normative standards of the “general public”. These are usually labelled as “outcast” groups, many of them “underclass”, and can be of very diverse kind and origin – the “poor”, the “Gypsies”, the prostitutes, the gays, the immigrants, trafficked & smuggled people, to name only a few. Needless to emphasize then, that one of the first and most important steps in a public health approach to trafficking seems to lay, indeed, in the task of debunking public myths and biased attitudes both about the victims and their perpetrators.

Understanding the dynamics and process of trafficking

From a sociological point of view, trafficking in humans is a special kind of migration process, and as such, it shares to some extent two basic features common to other types of migration. One of these features is the dynamics of mass migrations, which rests, among others, on balancing between two forces. One of these forces is the complex of push factors that makes the exodus side of migration (moving from, flight from), and another is the complex of pull factors that makes the teleonomic, i.e. goal-seeking aspect of migration (moving towards, attracted to certain values and goals). This two-factor model is one of a classic (economic) approaches to migration, also known by name “the laws of migration”, and it was invented by a British economist, E. Ravenstein way back in 1880’s (13). As far as the trafficking in humans is concerned, this theory certainly can highlight many personal motivation factors that “move” great many victims onto the web of trafficking, but there

are still great many other push & pull factors that have little or nothing to do with personal motivation of potential victims. In Table 1 we listed a sample of this factor specific to the dynamics not only of trafficking but to other types of modern migration (e.g. smuggling).

Another base of comparison of trafficking with other types of migration lays in the fact that virtually all migrations are a stage-wise process with rather distinctive phases of change both in life conditions, and in social identity. Researchers in the past usually distinguished three major phases in this change process: (A) pre-departure stage, (B) transient stage, and (C) adaptation or integration stage (14) This rather simplistic three-stage model rests on the assumption that the migration trends are linear moves of people from one social setting to another, from one’s country of origin to one or more other setting, where some of those other settings will be a kind of life-long “final” destination. At the time being, however, such kind of three-step linear moves appears to be rather atypical in more recent trends of migration, both within countries and in trends of cross-border migration. Specifically, more typical is for the currently unfolding migration trends the kind of, so called, “open-ended” migration process, where moving from one site of residency to another is not at all a linear, but rather a circular process, where “circularity” means moving forth-and back to one place or country of residence to another, and that goes along with permanent changes both in individual and social identities (15, 16).

Table 1. A sample of latent push & pull factors underlying trafficking

Push factors	Pull factors
Natural or man-made disasters in home countries, including war Civil unrest, inter-ethnic conflicts, escalation of community violence and crime at sites of residence Corrupt political & bureaucratic regimes, weak law enforcement Weak democratic institutions, deepening social inequalities High unemployment rates, general poverty, forced labour, mass exploitation Poor educational opportunities in the country Poor health & social care Flight from family violence & child abuse (...) any many more.	The „illusion of prosperity & good life” in Western societies Illusion of “personal freedom” and self-determination as part of the post-modern value climate Faked self-presentation of home-coming migrants (guest workers) Lasting impact of globalized “Hollywood-effect” (easy-going life) through media on mass culture Peer pressure towards norm-breaking, adventure & delinquency Attraction to prostitution & prostitutes as ‘role models’ for easy and luxury life (...) and many more.

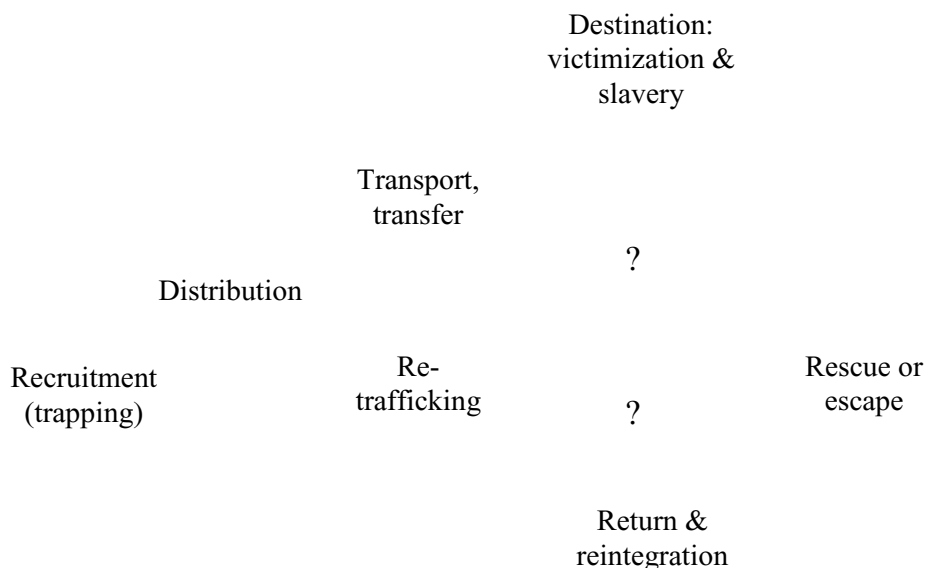
Viewed from this perspective, trafficking apparently represents an extreme case of fully “open-ended” migration processes, which typically starts at some “fixed” point both in space and time, yet it is fully uncertain whether and how, if ever, it ends at any point in space and time. The most frequently quoted stages of trafficking experience in the literature are the followings (17):

- pre-departure stage,
- travel and transit,
- “destination” stage, and if the victim is lucky enough, the trafficking experience continues with

- rescue or escape, detention and deportation, criminal evidence, and eventually ends with
- return and
- social reintegration in the country of origin (or else).

The flow-chart below clearly indicates that after one or more, so called, “destination” sites the future of a trafficked person is typically blurred and full with uncertainties, and her/his fate is completely out of personal control. The truth is that the bulk of victims never if ever would reach any of the last two closing phases of trafficking experience. According to rough estimates, some 85-90 per cent of victims is never if ever able to return home and back to civil life. Moreover, an unknown number of ex-victims even after rescue and fortunate return home would be re-trafficked under life-threatening pressure from the side of local and/or international traffickers.

Figure 1. Major stages of the trafficking process



Now, let us take a somewhat closer look what happens most likely (typically) with the victims all along their way in labyrinths of trafficking.

Recruitment and distribution

Traffickers usually use different, carefully ambushed techniques of complete or partial deception in targeting the potential victims personally, or using peer pressure or in the case of minors, they would manipulate with parents, relatives or close others (e.g. blackmailing). In some countries, kidnapping, faked marriage offers, abduction, and the like are not rare. Far the most used recruitment techniques among the youth in many European, in particular in CEE countries are, however: advertisements offering work and/or study abroad; agencies offering work, study, marriage or study abroad; false pre-arranged marriages, or simply relatives or friends offering “good-heart” help to a young persons facing life crisis and/or

live in desperate need for taking control over own life. The life story of a young girl from Romania quoted in the text-box below illustrates the case (18).

“I was just 15 when I left Romania. When I was 12 my mother died, my father became an alcoholic and would beat my brother and me. A cousin said he would get me out of this situation and into a ‘normal’ life. He sold me like a slave”

As soon as the potential victim (or any of her/his significant others) make the first move towards the offered “help” in migration, the perfectly organized networks of pimps and traffickers both within the country and abroad get mobilized, and organize the distribution of potential victims in various directions, according to “supply needs” as dictated by their national or international “bosses” in the trafficking business, including the arrangement of their travel documents (if needed), paying their travel costs (later used against them as debt bondage), arranging for them the most appropriate modes of legal or illegal pass across international borders etc.

Travel and transit stage

The travel and transit stage begins at the time of recruitment and ends upon arrival at the work destination. Recruitment is followed by a movement phase, which is far to be based upon the transported persons’ free and informed consent. Already during the journey, the victim may suffer grave human rights and physical abuse, and a variety of other crimes. Most trafficked persons have never left their country of origin before and they are therefore completely dependent on the traffickers. Some leave their country without international passports, but for many, even if they do hold a passport, it is often taken from them and held by the traffickers as a way of securing greater compliance.

Traffickers often use legal modes of transportation, as this is cheaper and may convince the trafficked person that her/his travel has a legitimate purpose. But there are also instances where trafficked persons are exposed to dangerous modes of transportation, high-risk border crossing and arrest, threats and intimidation, and violence including rape and other forms of sexual abuse. Trafficked persons are vulnerable to abuse by many individuals during the movement phase, including the trafficking agents, escorts, drivers, border officials, etc. It is also not unusual to find trafficked persons who have had several cycles of travel and transit and have been re-sold or re-trafficked several times along the way. For most trafficked persons, the movement phase is also the stage of initial trauma since this is the time when illicit activities begin, as the following case report illustrates (18).

“We were kept as cattle, with no exaggeration. We did not even have the possibility to wash. We even had limited drinking water, without even mentioning food. We were poorly fed – once a day.”

The destination stage

The destination stage is when the trafficked person is put to work and subjected to a combination of coercion, violence, forced labour, debt bondage or other forms of abuse. In order to coerce victims into provide services they were simply sold and bought for like a

cattle, trafficked persons, in particular women, report being subjected to physical, mental and sexual violence/abuse, such as severe beatings, rape or gang-rape. They are deprived of basic elements for survival such as food and water, human and social contact.

Debt bondage is a tactic typically used by traffickers to control them: enslavement occurs under the pretence of repaying an accumulated debt which includes the price the ‘owner’ paid for the person’s travel, false documents and purchase. In some instances, traffickers increase the victims debt by charging for accommodation, re-sale to other ‘owners’, penalties, food, lodging, etc.

The physical and mental torture is compounded by threats to their families’ safety, prohibition to contact any family member or friend, frequent monetary fines and seizure of money, valuables, and limited assets that they may have, forced use of alcohol, and other substances and other coercive techniques to ensure their ‘cooperation’ and prevent them from escaping. An excerpt from a case study below would provide a full picture of the tortures and brutalities that most victims face in slave-like conditions (18).

“In the country of destination, the girls were delivered to a hotel, assembled in one room and told to wait for the company owner. Some time later a man arrived and told the girls in poor Russian, that they were sold to him and now they had to repay their debts by providing sex-services to clients. Initially all the girls refused and were severely beaten. A couple of days later, the hosts transported 4 girls to another place, while Christina and 2 other girls remained in the hotel. When they served clients, the hosts distributed them between separate rooms. Usually, every girl from the group served from 8 to 12 clients daily. To make women less tired and more submissive the hosts forced them to drink alcohol with sedatives and psychotropic substances. For the whole period of her stay in the hotel, Christina was never allowed to leave it; sometimes she was only allowed to walk on the hotel roof with other girls. Windows in the hotel were trellised, rooms were equipped with video cameras and the girls were not allowed to make phone calls to their relatives. Oksana, a friend of Christina’s, once tried to make a call from a mobile phone she had been given by a client, but was severely beaten afterwards.”

Rescue and/or escape detention, deportation and criminal evidence gathering

Another series of painful events begins when the trafficked person is rescued or manages to escape from the traffickers and is now in police custody or care of immigration authorities for alleged violation of criminal or immigration law, or cooperating in legal proceedings against the traffickers, or abusive employers.

Even when relatively ‘safe’ and out of the traffickers’ clutches, victims are generally observed to be anxious, frightened, in a confused state. They are also often suspicious of any assistance initially provided, and worry about what awaits them from the time of their escape, rescue and their stay at the transit centre up to their return home stage. In some countries of destination or transit, the harsh conditions of detention facilities may pose additional physical health risks.

Additionally from a mental health angle, an almost exclusive contact with authorities (e.g. arrest, giving evidence, testifying in a criminal proceeding) will have severe psychological effects on a trafficked person. The trafficked individuals may experience memory lapses, fear of law enforcement officials and feel deep insecurity about own futures and fear for the safety

of loved ones left back home. While the stage may be unavoidable, it may be alleviated by sufficient psychosocial support. ‘Z’ the 26 years old victim has explained it as follows (18):

“In the prison where I was held, they would not feed the women who had worked as prostitutes. These women had to pay the prison’s staff in order to be fed. Since I had no money, I was starved. During my detention period, I lost 6 kilograms. Sometimes, I was fed by other women who had money and who would pity me.”

Who are victims?

Trafficked persons are women, children and men. Women and children are particularly vulnerable. They are bought, sold, transported and re-sold mostly for sexual and labour exploitation, but a substantial minority may also end up in situations such as forced begging, delinquency, debt bondage, false marriage, adoption, or as victims of the trade of human organs. The profile of trafficked persons is constantly changing. They are currently observed to be getting younger, and children are increasingly being caught up in the process.

Frequently victims:

- Do not speak any foreign, and are unfamiliar with the culture and society they are dragged into;
- Distrust outsiders, especially law enforcement (fear of deportation);
- Typically do not identify themselves as victims; often blame themselves as predicaments;
- Although many victims have been beaten and/or raped, the current situation and life conditions still may feel and claim “better” than were they came from;
- May be unaware of their rights or may have been intentionally misinformed about any rights in the country they been transported;
- Fear for the safety of families in their home countries, who are often threatened by local traffickers.

Health consequences of trafficking, highlights of case management

The model of types and sequence of health harms of trafficked persons counts with nine categories (19):

- physical abuse/physical health;
- sexual abuse/sexual and reproductive health;
- psychological abuse/mental health;
- forced, coerced use of drugs and alcohol/substance abuse and misuse;
- social restrictions and manipulation/social well-being;
- economic exploitation and debt bondage/economic well-being;
- legal insecurity/legal security;
- abusive working and living conditions/occupational and environmental well-being, and
- risks associated with marginalization/health service utilization and delivery.

Although many of the risks and abuses associated with trafficking occur simultaneously or overlap, it is possible to delineate the different forms in order to gain a better understanding of

their attendant effects on health. This approach attempts to show the reciprocal and connected nature of harm and its consequences - how harm in one category can have consequences in another (e.g., physical violence causes physical disability that in turn creates economic problems such as when the individual has difficulty working) and the way that these can have a mutually reinforcing effect on one another (e.g., inability to work and economic problems exacerbate mental health problems, such as stress and fear). For helpers and health practitioners, it is critical to understand how these various forms of violence - both separately and in combination with each other - interact to destroy the health of a trafficked person.

Within the frame of this module we can only highlight some of the basic ethical standards in physical and mental health case management (20).

Basic ethical principles of case management:

Do no harm

“Do no harm” is the first principle of most medical ethical guidance. Given the extreme risks associated with trafficking, the fragile state of many of its victims and the potential for increased trauma, the significance of this basic rule cannot be overrated. It is the ethical responsibility of every health practitioner to assess the potential for harm, and if there is any reason to believe that carrying out an interview, or conducting an examination or procedure, will cause the individual to be worse off than before, it should not be undertaken at that time. Treat each individual and situation as though there was a significant potential for harm until there is evidence to the contrary.

It is important to recognise that for a person who has been trafficked every meeting with a service provider becomes part of the recovery process, because each positive interpersonal encounter helps build his/her faith in others, increases self-confidence, and fosters hopes s/he has for the future. Providers should be prepared to react to questions and possible distress with clear and patient responses (20).

Ensure safety, security and comfort

Before speaking with a trafficked person it is essential to make certain that s/he feels safe and secure. Even if the risks to an individual’s safety have been reviewed at other times for other purposes, support persons must ask whether the individual feels safe at that particular moment and whether there is anything more that could be done that would allow her/him to feel more secure.

At the same time, it is mandatory that all trafficked persons be asked very specifically whether they are in immediate need of medical care (e.g., not simply “are you feeling okay?”) and, if so, that (something seems to be missing for clarity of the sentence, such as ” addressing the needs” or “this” should take precedence over an interview or any other service activity. Physical and psychological symptoms can become especially acute when an individual is under pressure - such as in an interview or service setting.

Sexual and reproductive health

Trafficking in women has serious implications for sexual and reproductive health. Even women who are not trafficked into forced prostitution frequently suffer sexual abuse or exploitation. Sexual and reproductive health has social, psychological, and medical implications, each of which must be treated professionally and with all due care (21, 22).

Table 2. Health Risk, Abuse and Consequences of Trafficking

Risks and Abuse from Sexual Violence	Reproductive and Sexual Health Consequences
<ul style="list-style-type: none"> • Forced vaginal, oral or anal sex; gang rape; degrading sexual acts • Forced prostitution, inability to control number or acceptance of clients • Forced unprotected sex and sex without lubricants • Unwanted pregnancy, forced abortion, unsafe abortion • Sexual humiliation, forced nakedness • Coerced misuse of oral contraceptives or other contraceptive methods • Inability to negotiate sexual encounters 	<ul style="list-style-type: none"> • Sexually transmitted infections (STIs), reproductive tract infections (RTIs) and related complications, including pelvic inflammatory disease (PID), urinary tract infections (UTI), cystitis, cervical cancer, and infertility • HIV/AIDS • Amenorrhea and dysmenorrhoea • Acute or chronic pain during sex; tearing and other damage to vaginal tract • Negative outcomes of unsafe abortion, including cervix incontinence, septic shock, unwanted birth • Difficulties forming intimate relationships

STI/RTI Screening Options for Women

IOM advise is that among high-risk populations such as trafficked women, routine screening for common reproductive tract infections (RTIs) and sexually transmitted infections (STIs) should be implemented in all organized assistance structures. This includes using history taking, clinical screening, and laboratory screening. Many women will only seek treatment when they are symptomatic. The use of screening strategies is an essential method for detecting and treating infections among asymptomatic women. Syphilis, gonorrhoea, HPV, Hepatitis B, and chlamydia are examples of often mild or asymptomatic infections with serious consequences that may not be recognized by the patient and can be missed by the provider. WHO estimates that 60-70% of women with gonococcal and chlamydial infection go undetected when using algorithms based on symptoms, since women have an asymptomatic infection (23).

Screening options:

- Syphilis
- Hepatitis B
- Cervical Infection (Gonorrhoea and/or Chlamydia)
- Cervical Dysplasia
- HIV

HIV testing should be encouraged for all women but should not be mandatory. Active management of HIV/AIDS is recommended. That is, a woman should be aware of all the tests and treatment options available to her. Women should be counselled on the benefits of testing and assured of confidentiality. HIV/AIDS education should be provided by trained staff and testing should be always completed with pre- and post test counselling.

Contraception

Victims of trafficking should be advised on available contraceptive methods and share culturally appropriate health education material explaining contraceptive choices, methods

and techniques, in accordance with international standards established by WHO and UNFPA.

In many countries women have no or only little choice regarding their pregnancies. The subject of contraception might, therefore, be addressed within the broader framework of a woman's right to information without the threat of coercion or violence (24).

Mental health consequences of trafficking

According to available evidence, the mental health consequences of the trafficking experience must be virtually countless, and on a long run, they surely impact not only the victims themselves, but their entire social environment wherever they live, in particularly their families and local communities after, if ever, they return home. Although we do not have any extensive and much reliable epidemiological evidence on the kinds and magnitude of mental health injuries that trafficked persons contract and accumulate all along the way of trafficking experience (and it is doubtful as whether such data base ever will be available at national and international levels), we have at least some partial evidence on this matter. The following figures are evidence on the kind and magnitude of major categories of mental health disorders diagnosed in a sample of ex-victims of trafficking from Moldavia (N = 171), after their return home, and received professional help at the IOM Rehabilitation Centre in Chisinau, including medical, psychiatric and psychosocial care (25):

- Neurotic disorders, including PTSD (84%)
- Affective disorder (35%)
- Personality disorders (18%)
- Mental disorders due to alcoholism/drug addiction (14%)
- Mental retardation (15%)
- Sexual aversion disorder (5%)
- Manic-depressive psychosis (3%)
- Schizophrenia (3%)
- Epilepsy (3%)
- Mental disorder due to physical trauma (2%)

Similar clinical evidence was made available on somewhat larger samples of ex-victims from Ukraine (N=427), helped in 2004 at the IOM Rehabilitation Centre in Kiev.

The above listed statistics indicate only the rates of "major" (prime) diagnosed disorders, and other (e.g. secondary) diagnoses are omitted. The rates of multiple disorders must be extremely high, presumably much higher than one would diagnose in any other population of victims hit by any natural and/or man-made mass disaster, including the morbidity rates among war veterans.

Children and adolescents

Far the most vulnerable populations to trafficking are the children and minors, who make more than half of the total population of victims, according to UNICEF estimates (30). Children and adolescents are trafficked into many of the same forms of labour and for similar purposes as adults (e.g., factory work, domestic service, sex work, and as brides). They are also exploited in ways that are more particular to children (e.g., child pornography, camel jockey, begging, mining, and organ donation) (26).

During a trafficking experience, a child is exposed to a physical and psychological

environment that damages her/his potential for normal and healthy development. Chronic abuse likely affects personality development and can cause pathological personality development. For example, children learn to “survive” in taking the path of very diverse criminal activities; feeling compelled, even while they are abused; they tend to form attachments and develop trust with their criminal caretakers. After all, children tend to trust adult caretakers, comply with authority figures and blame themselves and feel guilty even for what others impose on them. This has disastrous effects on their future capacity to form healthy relationships based on mutual trust and intimacy.

Children are not small adults, and the medical staff and other persons assisting children victims of trafficking should not treat them as such, but be sensitive to the special needs of a child in such difficult conditions (27).

Caring for children and adolescents who have been trafficked requires:

- Developing approaches that demonstrate respect and promote participation.
- An understanding of the complex ways in which their past experience has harmed them.
- Tailoring services to meet the needs of each age group and in ways appropriate to the age and characteristics of the child concerned and never merely following programmes designed for adults.
- Implementing strategies aimed at mitigating the effects of past trauma and fostering healthier patterns of development.

The right of children and adolescents to health and to health services appropriate to their age and particular requirements are not only essential for their survival and well-being, but are also fundamental human rights grounded in international human rights instruments, - in particular the Convention on the Rights of the Child (CRC), which states that the best interests of the child shall be a primary consideration (28).

Special considerations:

Cultural competence

The term “cultural competence” is often used in medical and non-medical settings to refer to the ways ethnic, racial, national, social and linguistic factors affect health care, and the relationship between patients and providers. Gaining cultural competence involves developing an awareness and acceptance of and responsiveness to cultural differences in all of these senses. Responding appropriately to these differences is not only essential to providing effective care, but also an obligation dictated by internationally accepted human rights instruments, such as the of International Covenant on Economic, Social, and Cultural Rights (29).

Cultural competence has been defined as “the complex integration of knowledge, attitudes and skills that enhances cross-cultural communication and appropriate/effective interactions with others.” It includes at least three aspects:

- Knowledge of the effects of culture on the beliefs and behaviour of others;
- Awareness of one’s own cultural attributes and biases and their impact on others;
- Understanding the impact of the socio-political, environmental and economic context on the specific situation (30).

The ways in which their family, community, and society experience trauma and how they respond is likely to have a major impact on how a trafficked person responds.

Conceptual models from one society may be inadequate or inappropriate to address the suffering of individuals from another culture or background. Support strategies common in western settings may be alien or even offensive compared to how others deal with traumatic events. For example, offering debriefing sessions or encouraging individuals to recount past events (common to some western treatment strategies) may provide little solace for individuals from cultures where forgetting is a normal means of coping with past difficulties, or where revealing intimate or embarrassing details is not acceptable except within a family setting (31).

Why counter-trafficking so weak in many countries?

According to trafficking in persons surveys in some 140 countries conducted annually by the US Department of State, a strikingly small number of national governments (17-18 per cent) comply fully with international standards and measures of counter-trafficking (TIER 1 level), whereas the rest of countries either applies only a limited number of measures or does effectively nothing on the matter (32).

One of the reasons, as we pointed out earlier, surely lays in the poor awareness and ambivalence of the general public to pay even attention to the phenomenon in own country. However, this is only one of many barriers to combat trafficking. Brian Iselin, an international expert on trafficking from the UN Office on Drugs and Crime makes a list of eight major barriers in law enforcement to tackle human trafficking in an effective and co-ordinated way (33):

- No coherent; comprehensive international strategy on trafficking;
- Environments of crime without complains;
- Lack of competent, reliable witnesses;
- Absence of quality evidence;
- Seamless partnership required between law enforcement, communities, NGOs, psycho-social workers;
- Victims 'present' as illegal migrants;
- First level traffickers mostly women, girls, and former victims;
- All in environment of apathy and values that facilitate trade.

Perspectives to tackle trafficking in a more effective way

There is an abundance of scholarly papers, case studies, handbooks, guidelines and training manuals aiming to assist both the professional and general public to take role and responsibility in combating trafficking in a meaningful, effective and organized way (34, 35). Given the limited space for this module, certainly we are not able to discuss at any length any of counter-trafficking programs and strategies. The only thing we can do is to highlight briefly three interlocking perspectives which, sooner or later, surely will make the building blocks of a new paradigm to tackle human trafficking and related crimes.

Health promotion perspectives

It is a generally acknowledged fact that one of the most salient changes in entire philosophy of public health came around in the mid '80s, with the WHO initiated Ottawa Charter on Health Promotion (36). The turning point was, indeed, the critical re-conception

of health as a positive social construct, and paradigm shift was, indeed, in moving away from its rather narrow, largely “disease-focusing”, mostly bio-medical conception as it was propagated over decades by clinical health sciences. One of the key axioms of Declaration one can find in the statement, which says: “Health is a positive concept emphasizing social and persona resources, as well physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond health life-styles to well-being.”

Another famous axiom of the Declaration was a brief call, as it is: “Act locally, think globally!”

Put it differently, the Ottawa Charter ‘86 on Health Promotion made quite clear, for the first time in the history of health sciences and related disciplines, the health and the future of the modern societies is not, and cannot be left anymore to illusionist (utopist) thinking, rather it out to be a grand plan of social action drawn upon the following ground principles:

- social change
- physical (environmental) change
- healthy policy development
- empowerment
- community participation
- equity and social justice
- accountability (of any social action).

Although the document was not about to address any kind of crime prevention, and it was created far ahead in time before trafficking became one of the key public health issues world-wide, the above listed ground principles of social action equally apply to violence and crime prevention in modern societies. As far as counter-trafficking is concerned, of the above listed range of interlocking principles, *community participation strikes out as one of most and urgently needed avenue for social action*. As community development, in general, drawn on existing human and material resources in a community to enhance *self-help and social support, in the case of counter-trafficking*, it seems to offer, at the time being, one of most viable strategies both for early prevention and victims’ protection.

A feminist perspective

If take this perspective seriously and critically, it must have little, if any, connection with the fact that the vast majority (some 90-95 per cent) of the trafficked persons in Europe are young girls and women. Rather, the importance of this perspective dwells on the historic fact that not the men, but the women became first watchful about the rise of trafficking and many other mass violence in modern societies (the bulk of which, if not all, are committed by men). On the other hand, women’s care for, and understanding of the roots and lasting consequences of this particular kind of violence on family life, in particular their care for its consequences on children and the reproductive health of a society as a whole, seems to make the feminist perspective more viable and important on the whole scene of counter-trafficking than any other, mostly men-dominated, “strong-hand” law enforcement. Hence, it is no wonder that so far most of counter-trafficking programs and helping resources for victims of trafficking are created mostly by women’s voluntary organizations, indeed, both on national and international levels, such as “White Ring” in Hungary, Payoke in Belgium and Holland, La Strada in Italy, Albania, Macedonia and Bulgaria, Winrock International in Ukraine, Moldova, Rumania and Russia, to name only a few. That is also the reason that

the International Organization for Migration (IOM) the most powerful intergovernmental organization that is active in this field is widely cooperating with these NGOs within the frame of its Counter Trafficking programs.

Law enforcement perspectives

It is also a known fact, that in the last one-and-half decade or so (since the mid '90s), the entire system of law enforcement in more developed parts of the world entered an era of radical changes in terms of moving away from the orthodoxy authoritarian “punitive” measures and policing of the, so called, “social order” in the direction more human strategies of care for the safety of the general public. This paradigm shift is often symbolized with the acronym “3 Ps”: Prevention – Protection – Prosecution, as interlocking strategies in very diverse field and disciplines of law enforcement, from police education to care for future generations of lawyers and judges at university law schools (37).

As far as the regulation of trafficking and other illegal cross-border criminal activities is concerned, the first important push towards paradigm shift in law enforcement has arrived in 2000, in the form of the UN Protocol to Prevent, Suppress, and Punish Trafficking in Person, Especially Women and Children (3-4). In the meantime, vast many important research and proposed standards were set to assist national governments to “soften” their immigration policies and criminal laws towards steadily growing masses of illegal migrants, including victims of trafficking and smuggling on domestic “black” labour market. One of the model documents created on this line, was the US’ Trafficking Victims Protection Act – TVPA (Public Law 106-386), enacted in 2000, and re-authorized in 2003 by the Federal Government to set some \$200 million to continue domestic fight against human trafficking (38). The TVPA addressed three key areas:

- Prevention: public awareness and education;
- Protection: T-visa, certification, benefits and services to help victims rebuild their lives;
- Prosecution: new law reinforcement tools and efforts.

To make sure, the US’s TVPA is not the only and single model act created for the cause to prevent further escalation of trafficking in humans. The impact and the challenge of the TVPA, however, is in the fact that it was one of the most important “ice-breaking” documents that mobilized both the lay and professional public to “stand up” against trafficking in a meaningful, community-based, and effective way. The agenda for social action as featured in the TVPA is clear, and viable to be applied in vast many other countries. Below, we summarized a selected number of recommendations of the TVPA document for effective law enforcement:

- Create new laws that would criminalize trafficking regarding slavery, involuntary servitude, peonage or any kind of forced labour;
- Create laws that permit prosecution where non-violent coercion used to force victims to work in belief they would be subject of serious harm;
- Permit prosecution where victim’s services compelled by confiscation of documents such as passports or birth certificates;
- Increase prison terms for all slavery violations from 10 to 20 years; add life imprisonment where violation involves death, kidnapping, or sexual abuse of victim;
- Enable victims to seek witness protection and/or other types of assistance;
- Give prosecutors and agents new tools to get legal immigration status for victims of trafficking during investigation, prosecution.

Principles for Promoting the Health Rights of Trafficked Women

1. The right to health of trafficked women, including the right to necessary care and treatment, is a fundamental human right.
2. Trafficked women have the right to be asked specific questions to determine whether they require medical assistance (physical or psychological). State authorities must fully inform women of their rights to health care, and the health service options available to them. Medical assistance must be provided to trafficked women who request it or require it, before any other action may be taken.
3. No legal proceedings, or other actions that are likely to negatively impact the physical security, or physical or psychological health of trafficked women should be taken by State authorities unless women's health and wellbeing can be assured.
4. Trafficked women, given the level of harm and mistreatment they have experienced, should be offered access to quality health care on the same basis as citizens of the country which they are in.
5. Trafficked women have the right to non-discriminatory, gender-appropriate health care.
6. In all health interventions for trafficked women, the best interests of the woman must be the primary consideration. Governments, medical professionals, public health workers, and NGOs should collaborate to ensure that necessary and appropriate medical resources, including physical health care and psychological support, are made available. Care should be provided in women's own language, whenever possible.
7. Trafficked women should not be subjected to mandatory medical investigation, procedures or clinical testing, including for HIV/AIDS.
8. Trafficked women's right to privacy and confidentiality must be respected. This includes the right to a private setting for interviews, confidential testing, treatment, and medical files, and non-disclosure of personal information.
9. Trafficked women have the right to their medical and health records. In cases of deportation, removal or voluntary return, these records must be made available to women prior to their departure.
10. Trafficked women have the right to timely forensic examinations and medical reports to pursue cases of sexual or other violence against traffickers

APPENDIX I

Budapest Declaration

The participants of the Regional Conference on Public Health & Trafficking in Human Beings in Central, Eastern and Southeast Europe, held on 19-21 March 2003, in Budapest:

Affirming that trafficking in human beings is a violation of human rights;

Concerned that victims of trafficking in central, eastern and southeast Europe have been and continue to be exposed to a range of health-related problems, including, but not limited to, physical and psychological abuse and trauma, sexually-transmitted and other infectious and non-infectious diseases and complications, including HIV/AIDS and tuberculosis;

Recognizing that some countries in the region are currently experiencing epidemic levels in the incidence of HIV and tuberculosis, particularly drug-resistant tuberculosis;

Convinced that there is a need to address the health and public health aspects of trafficking in human beings;

Have agreed and committed themselves to the following:

Despite much effort and progress in combating trafficking in human beings both regionally and globally, more attention and resources should be dedicated to the health and public health concerns related to trafficking;

Victims of trafficking must be given access to comprehensive, sustained, gender, age and culturally appropriate health care which focuses on achieving overall physical, mental, and social well-being;

Health care should be provided by trained professionals in a secure and caring environment, in conformance with professional codes of ethics, and is subject to the principle that the victim be fully informed of the nature of care being offered, give their informed consent, and be provided with full confidentiality;

Minimum standards should be established for the health care that is offered to trafficked victims. These standards should be developed through a partnership of governments, inter-governmental and non-governmental organizations, and academic institutions, and should be based on comprehensive research and best practices;

Different stages of intervention call for different priorities in terms of the health care that is offered to victims.

During the initial rescue phase, which begins at the first point of contact between a victim and a health professional and often occurs in the country of destination and/or transit, care should focus on treatment for injury and trauma, crisis intervention, and basic health care, including counselling.

During the rehabilitation phase, which often occurs in the country of origin, care should focus on the long-term health needs and reintegration of the victim. Victims should be provided with health care which is tailored to their individual needs and circumstances.

Some examples of long-term health needs, without attempting to provide a complete and definitive list, might include counselling, follow-up care, and testing and/or treatment for sexually-transmitted infections, HIV/AIDS, tuberculosis, physical and psychological trauma, substance abuse, and other related problems.

Trafficked children and adolescents are an especially vulnerable group with special health needs. The provision of health care to this group should follow a long-term, sustained approach, and must take into consideration the possibility of long-term mental and psycho-social effects.

Moreover, the phenomenon of trafficked children and adolescents raises complex legal issues, including those relating to guardianship, that must be resolved if minimum standards for treatment and care are to be established.

In all cases, the best interests of the child must be the primary concern and motivating factor;

Shelters and rehabilitation centres play an important role in providing protection, assistance, health care, and security to victims. The operation and management of shelters and rehabilitation centres should follow a professional, standardized approach;

Specialized training programs for multi-disciplinary health teams should be developed which focus on sensitizing health professionals about the special needs of trafficked victims;

Psycho-social counselling plays a critical role in building trust, identifying the needs of the victim, gaining consent for the delivery of health care, engaging the person in setting out recovery goals, and assisting in long-term rehabilitation and empowerment;

Social, recreational, educational and vocational activities organized in shelters and rehabilitation centres play an important role in re-building self-esteem, and therefore have positive health benefits for victims;

Increased understanding is needed regarding the public health issues associated with trafficking. Non-stigmatizing and culturally-appropriate public awareness campaigns targeting at-risk groups, on both the supply and demand sides, should be implemented across the region;

Governments should take increasing responsibility for prevention, as well as the provision of security, legal rights, protection and care to trafficked victims, especially children and adolescents, by ensuring access to national health structures and institutions;

Governments, inter-governmental and non-governmental organizations should increase cooperation amongst themselves and across borders by coordinating and integrating the health care offered in destination, source and transit countries. Sharing of medical data, subject to the informed consent of the victim, and with the assurance of maximum levels of confidentiality and protection of information, is essential in ensuring continuity of care, effective case management and rehabilitation and reintegration.

The participants hereby commit themselves to the promotion and realization of the recommendations contained herein.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Perinatal Health Care Improvement in Macedonia Through Education: Case Study
Module: 5.10	ECTS: 0,5
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Key words	Perinatal mortality, neonatal mortality, newborns, education, intensive care units, national health planning, health care, breastfeeding
Learning objectives	After completing this module-case study, students and public health professionals should: <ul style="list-style-type: none"> • Have a comprehensive understanding of the process of change management related to perinatal health care; • Be able to identify the common indicators of health and specific health indicators in the field of perinatal care; • Be induced to recognize the current policies and practices in mother and child care in their own countries; • Be able to identify the weaknesses of some practices; • Be able to recognize the need for change and to set the goals and objectives in perinatal health care improvement; • Understand the importance of intersectoral cooperation as an essential component within the implementation process; • Be able to assess the importance of the education and training in change management process; • Be able to recognize the most relevant learning strategies for each of the problems related to perinatal health care; • Be able to identify the most appropriate modes of assessment; • Recognize their own role and activities within the change management process and health promotion activities; • Recognize the importance of specific team-building actions.

<p>Abstract</p>	<p>The Official Macedonian Reports on the situation in the field of perinatal health care showed for a longer period high rates in perinatal/ neonatal mortality which ranked the country in the bottom of the list of European countries. It required urgent Strategy for improvement the efficiency of perinatal care services in Macedonia in late 1990-ties. The main issues within the strategy were: prevention and health promotion, training and education, infrastructure, equipment supply, institutional and organizational change and policies and procedures. The example of Macedonia emphasized the role and the value of the education and training and health education in highly successful implementation of the National strategy for perinatal care improvement. The most appropriate learning strategies and methods of assessment were chosen in order to get the best scores in theoretical and practical sense. The greatest achievement was the overall decrease of 27% in the Perinatal Mortality Rate, compared 3 years before intervention with 2 years after starting intervention (27.4 to 21.5 per 1000 births) and decrease of 36% in early neonatal deaths in babies >1000g (12.0 to 7.7 per 1000 live births), reflecting the postnatal thrust of the program. The process of change management in perinatal health care was kept along implementing the standards, and the results were published as “successful story” in the final Report after the evaluation, prepared by the external consultant Prof Dr Heather Jeferry and submitted to the Ministry of Health of the Republic of Macedonia.</p>
<p>Teaching methods</p>	<p>After an introductory lecture students will work in small groups (group work) on recognizing strengths and weaknesses of the perinatal health care, process of change, interventions to be performed, assessing the methods of teaching and the role of education and training, which will be followed by group reports and interactive discussion. SWOT analysis will be performed for the perinatal health care in Macedonia. Discussion about the specific aspects of mother and child health care in their own countries, educational methods and proposals for changes will be encouraged. The students will be required to prepare individual presentation following seminar paper on proposal for change implementation related to some health problem in their own countries. Education and training should take great part of it.</p>
<p>Specific recommendations for teachers</p>	<p>The module might be organized within 0,5 ECTS out of which one third are lectures and group discussion supervised by the lecturer, second third will be used for literature searching (mainly Internet) and gathering material for their seminar paper, and the rest is for preparing individual seminar paper and presentation. Equipment: laptop, overhead projector, Internet access, flipcharts. Training materials: handouts, textbook, Target audience: students of Public Health studies, Obstetrics and/or Neonatology</p>
<p>Assessment of Students</p>	<p>The final mark should be derived from assessment of the theoretical knowledge (oral exam), contribution to the group work and quality of the Seminar paper on Change management proposal for improvement the efficiency of perinatal health care services.</p>

PERINATAL HEALTH CARE IMPROVEMENT IN MACEDONIA THROUGH EDUCATION: CASE STUDY

Elizabeta Zisovska

Introduction

The Official Macedonian Reports on the situation in the field of perinatal health care demonstrated high rates in perinatal/neonatal mortality for a longer period, of final ranking Republic of Macedonia at the bottom of the list of European countries. This required urgent Strategy for improvement of the efficiency of perinatal health care services in Macedonia in late 1990-ties (1,2).

The primary idea for such strategy originated in 1998 when the doctors from three Departments (neonatology/intensive care units) within the Gynecology and Obstetric Clinic, the Pediatric Clinic and the Special Hospital for Gynecology and Obstetrics, all in Skopje, started complaining that the equipment was outdated, lacking or non-functional, there weren't standards for the appropriate levels of care regarding equipment, space and staff, accentuating that all these weaknesses are the main reasons for the high perinatal/neonatal mortality and morbidity rates. Thus, the need for an urgent change was apparent.

The initial requirement included the need for equipment and enlargement of intensive care beds (capacity). The objectives of the Ministry of Health (MOH) and the World Bank and the needs assessment clearly defined the urgent need for a larger initiative at national level.

The Report from the first meeting of the directors of these three hospitals, followed by a short overview on the perinatal/neonatal care services and data were submitted to the Ministry of Health, and accepted as a priority for the already secured Credit. The Government of the Republic of Macedonia secured a Credit (Cr.2889-MK) from the International Development Association (IDA) to help finance the development of the health sector, supported by the Health Sector Transition Project, including a component to strengthen the Basic Health Services. Part of this component related to the Perinatal Services Support Program. For the Republic of Macedonia this project was managed by the Macedonian Ministry of Health (MOH) through its International Project Unit (IPU), (3).

Objective of the Strategy

As defined by the MOH, the overall objective of the strategy was to focus on a neonatal intensive care network on a national level, with included tertiary and secondary care facilities together with supporting services and their efficient organization, but did not exclude relevant primary level health care services where appropriate (4,5,6).

Trying to follow the main rules of creating an appropriate strategy, all steps of managing changes were respected.

First of all, a Perinatal Management Committee was established, and its members were the most relevant policymakers together with the representatives from the three institutions providing perinatal health care in general, more specifically neonatal health care. An International Consultant working for the World Bank was engaged in the whole process of creating and implementation of the strategy (7,8,9).

Steps of the Strategy:

- Analysis
- Planning and programming
- Implementation
- Monitoring
- Evaluation

1. Analysis

In this phase, all relevant data were collected and a situation analysis completed. Mainly SWOT (Strengths, weaknesses, opportunities and threats) analysis was performed for each of the services. The data were collected by visiting the health care facilities providing perinatal health care.

A report was prepared by the international consultant and the team leader, Professor Heather Jeffery from Sydney, Australia, supported by the MOH and the World Bank during the period from July to October 1999. The aim of the report was to recommend preparing a National Strategy for improving the perinatal/neonatal health care, to be used by the Macedonian MOH, health professionals and international agencies as a framework through which they would contribute to decreasing the perinatal mortality rate in the Republic of Macedonia.

What was concluded about the potentials of the overall health system:

- Within a relatively short time frame, namely three years, Macedonia had the capacity with a receptive, interested and energetic perinatal medical and nursing community, to reduce perinatal mortality and morbidity significantly;
- Since Republic of Macedonia became an independent country, a centralized health care system was developed under the new Constitution, drafted in 1991. The previous system included decentralization of health care, local financing by self managed communities of interest in health care, fragmentation and duplication of capacities, equipment and services and large numbers of health workers;
- Self-managed communities of interest in health care were abolished in 1991 and the Health Insurance Fund (HIF) was established within the framework of the Ministry of Health;
- Two advisory bodies were established: the Council for Health Care and the Council for Health Insurance with experts not pertaining to the Ministry of Health;
- Compulsory and additional forms of health insurance were introduced;
- Preventive health care related to protection from infectious diseases and environment protection was separated and covered by the central budget;
- Private health organizations were founded simultaneously beside the public ones.

There were limited information on the maintenance of breast feeding rates, although initiation of breast feeding was encouraged at all levels of care. However practices that interfered with breast feeding and the mother-infant relationship, such as routine 3-hourly feeding and lack of rooming-in, were almost universal in district and tertiary hospitals. The recent evidence certainly indicated that breastfeeding is an efficient form of immunization, with significantly reduced rates of respiratory and gastrointestinal infection in babies breast-fed during infancy.

UNICEF has implemented a widespread educational project to encourage supportive practices within these hospitals and established Baby Friendly Hospitals. In addition,

UNICEF intended to commence (September 1999) a cross sectional community study to examine practices and duration of breast feeding (10).

Main *strengths* of the perinatal health care services were considered:

- Commitment of the relevant structures (Ministry of Health, other key stakeholders);
- Regionalization of the health care (ensuring reasonable geographical coverage of the health care, sustainability of clinical skills, good usage of the capacities, reducing the costs);
- Sufficient human resources.

Weaknesses:

- High rates of perinatal and early neonatal mortality (11);
- Standards for appropriate level of care were not met;
- Outdated or lack of equipment;
- Inappropriate and insufficient distribution of the tertiary level beds;
- Non consistent curricula for the staff;
- Variable guidelines-protocols (evidence based medicine not implemented);
- Insufficient computer skills.

2. Planning and programming

Several phases based on their priority were planned, although some were supposed to go concurrently:

a) prevention and health promotion

- Use of evidence-based medicine to define the optimal number of ultrasounds in an uncomplicated pregnancy;
- Educational advice concerning periconceptional period;
- Implementation of the cost effectiveness of different screening methods;
- Since it has been proved and recognized the advantage of pain relief as well as psychological support, mothers were encouraged to choose support persons;
- The approach to breast feeding for all infants, and therefore, all medical and nursing staff caring for pregnant women and their newborns and infants, should be based on the evidence for the 10 steps to successful breast feeding (WHO recommendations). Rooming in should be instituted immediately throughout hospitals in Macedonia. For preterm neonates, early minimal enteric feeding of breast milk should be preferentially encouraged. Training of nurses specialized to support and facilitate lactation of mothers with term, preterm or sick neonates, suitable places to express milk and safe transport and storage of expressed breast milk should be implemented as soon as possible.

b) training and education

- Education of specific medical and nursing staff in up-to-date management of Neonatal Intensive Care Unit (NICU) care in overseas units was found to be necessary as a high priority. The overseas units had to agree to provide opportunities for Macedonian doctors and nurses to gain expert and current knowledge and skills, based on practical clinical experience. Exposure to teaching, research, critical appraisal and perinatal data collections and analysis were also desirable;
- Health education in secondary care obstetric and neonatal departments included continuing medical education (CME) program for all doctors and nurses who take of neonates.

CME started one week after the departure of trainees from Sydney in June 2000, when the first team of two nurses and three doctors left the Royal Prince Alfred Hospital for Skopje,

the capital of Macedonia, to commence the local training in a purpose to built Continuing Medical Education (CME) Centre in Skopje. These modules of training differed from the Sydney program, since the teaching had no clinical component and was entirely composed of structured teaching sessions. These used a variety of modern educational methods shown to be of benefit in the teaching and learning of practical skills.

This programme was to target nursing and medical clinicians from district (Level 2) hospitals in Macedonia. The brief included further consolidation of the educational skills of clinicians who had recently been educated in Sydney. This was achieved by having a team of local and Australian educators working together allowing supervised teaching practice.

- Continuing medical education program that included appropriate and safe use of equipment for neonatal problems and for stabilization prior to neonatal intensive care transport to a Level III unit, management of common neonatal conditions;
- Early referral of high risk mothers to achieve transfer in utero rather than neonatal transfer by a retrieval team;
- Use of evidence-based protocols, generated in conjunction with the tertiary obstetric and neonatal units in Skopje and updated regularly;
- Educational reform in nursing considered as a pressing need;
- Undergraduate medical education including basic knowledge, skills and attitudes relevant to the healthy neonate and to the common conditions in the sick neonate;
- Postgraduate neonatal training (general pediatric registrar training to include rotations in neonatal care, both level II and III, at the three major hospitals in Skopje and defining and implementing subspecialty training in neonatology are urgent needs).

c) infrastructure

- Reorganization and reallocation of two neonatal intensive care units (NICU) had to be implemented (Clinic for Gynecology and Obstetrics and Pediatric Clinic);
- Refurbishing of level II or III units, labor wards, rooming in facilities should facilitate easy access for staff to hand washing;
- A Perinatal Committee had to be formed and led by obstetric and neonatal medical staff, with representatives from the Clinic for Gynecology and Obstetrics and other institutions.

d) equipment supply

Introduction of equipment to level II and III units, staged according to operating bed numbers and completed education, commencing with level II concurrent with education, proceeding to level III after overseas educational experience.

e) institutional and organizational change

Further development of the Clinic for Gynecology and Obstetrics as the high-risk maternity hospital required commissioning and expansion a NICU containing ventilating beds. This was an urgent and high priority need.

f) policies and procedures

- A perinatal death classification that specifies various antecedent maternal conditions, pregnancy complications and fetal abnormalities, had to be used to identify causes of perinatal death amenable to preventative strategies;
- UNICEF was approached to provide additional useful information on infant care practices in their breast feeding survey, especially on the usual position of the infant sleeping during the first six months after birth;
- Evidence-based protocols for perinatal care were urgently needed and included beneficial interventions that will reduce mortality and morbidity.

3. Implementation

Stage 1 (completed into 6-12 months)

- required attributes of doctors and nurses, the objectives and the potential destinations for overseas training in level III and II units, were defined, such as
 - a) attributes of doctors and nurses;
 - b) the objectives for level III doctors and nurses training overseas were set;
 - c) destinations for level III / II training identified, and ensured the unit accepting responsibility for training, was able to demonstrate that the trainee will receive exposure and practice in the listed skills, use epidemiological principles to guide practice including ability to teach critical appraisal, use of the Cochrane database, collection and use of perinatal data, engaging in peer review and quality assurance programs.
- doctors and nurses from tertiary and district hospitals were selected;
- CME for level II training of doctors and nurses was organized;
- equipment in level II-a was installed;
- Structural changes concurrent with educational implementation were introduced.

The main goal was achieved during this stage: trained 25 doctors and nurses, and among them the teachers for the Level II CME in Macedonia were selected. Each participant who obtained the required standard of performance received a certificate from the University of Sydney.

The three main components of the training were: learning objectives, teaching methods and assessment. These components of the teaching sequence were interrelated and integrated to optimize the learning process.

1. *Learning Objectives* were clear statements of what trainees should be able to do as a result of the training. The content and the teaching methods introduced were designed to implement and evaluate the effectiveness of the educational program in Newborn Care, using the best evidence teaching methods and content. Pre intervention, an audit of newborn care practices and documentation was performed using a structured checklist. This intervention consisted of different teaching sessions each involving short lectures, interactive skills stations and practical training “hands on”. Post intervention, participant satisfaction, knowledge, competence and performance were evaluated. Matched pair pre and post education Multiple Choice Questionnaires (MCQ) scores compared knowledge, with significant improvement in both groups (nurses and doctors).

2. *The teaching methods* (strategies of teaching) in Sydney were different, all of them confirmed and accepted as evidence based education in adult learning. The learning was enhanced by allocating more time to small group problem-based learning activities.

What were the methods?

- plenary lectures
- SCORPIO teaching
- small group learning
- problem based learning
- hands-on training (practical teaching)
- self-directed learning

Plenary lectures: the Lecture as a transmittal technique was the most commonly used instructional strategy for working with groups of adult learners. Lectures were taught in 15-

to 20-minute sections spaced with active learning activities to reenergize the participants for the next wave of information. The lectures were useful for presenting up-to-date information; summarizing material from various sources; adapting material to the background and interests of a group at a particular time and place; helping learners read more effectively by providing orientation and conceptual framework; and focusing on key concepts or ideas. The lectures created interest in new topics, motivated doctors/nurses to research further, or challenged ideas from their previous experience;

SCORPIO teaching (Structured, Clinical, Objective, Referenced, Problem orientated, Integrated & Organized) sessions were used as a way to maximize in-depth learning. The SCORPIO method was well tested as effective method of practical, skill-based, small-group teaching. SCORPIO involved delivering a syllabus through a series of lecture-demonstrations during which students, teachers and patients gathered at a designated area. Following a short introductory lecture, participants rotated in small groups, through a series of teaching stations. These stations were structured to provide participants with a problem-based, integrated learning experience. Each SCORPIO lasted for 3 hours. Small groups of up to six trainees usually rotated around five teaching stations spending 25 minutes at each. A tutor at each station conducted the teaching sequence which addressed a pre-determined learning objective written up in the study guide. The objectives varied from a problem solving activity at one station to communication skills training at the next to physical examination to learning a procedure and so forth. At some time after the teaching rotations a performance-based formative assessment feedback on their performance was held to ensure that the trainees had mastered the learning objectives. A structured approach to skills training; „tell, show, do, feed-back” was introduced. Participants were also asked to evaluate the teaching sessions (13);

Small group learning: The curriculum delivery system at the University of Sydney Medical Program has been designed specifically to promote students’ commitment to deep learning. Measurements such as learning preferences and personality types helped to determine the relationship between such student attributes and other variables such as anxiety levels;

A Problem-based learning (PBL) was used introduced as well. Progressive development of the delivery of PBL has been undertaken in order to promote the maturation of clinical reasoning skills. One of the major research interests of the Discipline was the research into theoretical underpinnings and implementation of PBL including the use of IT for distributed learning. When provided with a clinical scenario, the current problem was presented, discussion provoked and clinical pathway related to the problem was identified;

Practical teaching (hands-on training) was performed every day, involving the trainees in the daily work of the Unit. They were also included in the roster duties during the night;

Self-directed learning helped the trainees to search for the literature and practices used worldwide, and to prepare their individual papers and presentations.

3. *Assessment* is the third component of the learning sequence and like the teaching was multi-dimensional given that different methods were necessary to assess objectives in the different learning domains. Generally, assessment methods fall into four classes; pen and paper tests, performance-based tests, individual presentations and personal learning portfolios. Multiple Choice Questionnaires (MCQ) and Short Answer Questions were two commonly used pen and paper tests. They were reliable methods to assess a knowledge base and were the principal modalities used in the program. The Objective Structured Clinical Examination (OSCE) was widely used performance-based test. It was a valid and reliable

way to assess competence in the skills domain. The OSCE was a two-hour examination during which students moved through several stations (10 minutes per station x 10 stations) where they were examined on different aspects of the station's subject or clinical materials provided at the station. The trainees were also invited to prepare individual presentations on different topics by their choice on one change they would like to institute on their return to Macedonia. This assessment was intended to be useful to the candidates in that they would be able to use the presentation they produced in their own country. They were assessed not only on factual content but also on presentation skills. The Personal Learning Portfolio was a self managed assessment tool, recommended for trainees to reflect on actual learning and enhance their competence in addition to the participation in the training program. Participants were introduced to the concept of the Learning Portfolio during the introductory program. They each kept a portfolio in which they noted their reflections on the work of each day. The participants were interviewed on the content and the process of keeping their Learning Portfolio. The interviews were structured with six key questions and were conducted by two examiners. The educational value of the formative assessment was highlighted in the program with formal pre and post testing of trainees.

Stage 2 (completed after education and structural changes, ideally within 12 months, although full NICU functioning bed capacity was intended to take up to 3 years)

Installing the equipment in level III units was planned as soon as their reorganization and reallocation were finished.

4. Monitoring

Data for monitoring and evaluation from the statistical reporting of perinatal outcomes were based upon:

- a minimum dataset of outcome variables;
- clearly defined definitions of each variable;
- ongoing education at each hospital, especially for the audit nurse and all perinatal medical and nursing staff, in order to develop a more critical, analytical view of their own hospital's important and relevant statistics. This should form the basis of regular audit and review;
- quality checks on data.

5. Evaluation

Three years later all relevant indicators (reported in the situation analysis in 1999) were reevaluated and a Report was published (13).

The Evaluation of the National Perinatal Program occurred during 3 weeks in January 2002, exactly 2 years after the commencement of the implementation when education of trainees started in Sydney, early February 2000. The team of evaluators included the following members:

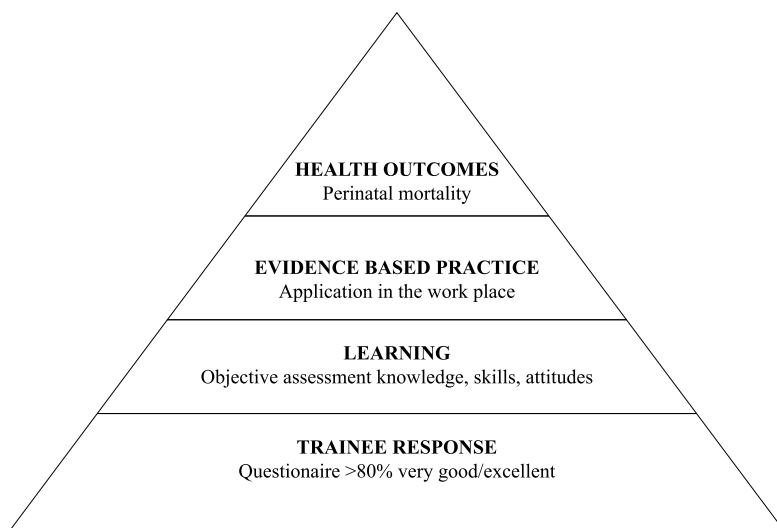
- *2 overseas consultants*, both of whom were thoroughly involved with implementing the program from its inception. These assessors were able to use the evaluation as a learning experience by providing direct feedback on perinatal mortality for the specific hospital in the context of National Perinatal mortality rate and on many practice issues;
- *2 members of the International Project Unit (IPU) of the MOH*. Both were very familiar with the project from its inception. One of them has visited the same hospitals during

- the situational analysis in July 1999 together with the Chief International Consultant;
- 2 observers from the Paediatric Clinic who were not directly involved with the implementation;
 - 1 neonatologist who was also the coordinator of the CME centre, responsible for continuing the educational program with her teachers, all trainees from Sydney (present at the four largest hospitals).

Methods of evaluation:

In planning this program, outcomes to be assessed were those suggested, illustrated and prioritized as follows (14):

Graph 1: Priorities for the evaluation process of the project



Five outcomes were thus assessed (Graph 1):

- The Perinatal mortality rate in Macedonia during 3 years before intervention (1997-1999) compared with the rate during 2 years after the intervention (2000-2001) in 16 hospitals with >93% births represented (table 1);
- Evaluation of implementation of evidence based practice in these 16 hospitals;
- Assessment of teachers at CME Center and assessment of trainees in Sydney and in Skopje;

The assessment of the trainees was performed by several proved methods:

- Learning portfolio interview;
- Individual presentations;
- Multiple choice question paper (MCQ test);
- Short answer paper;
- Objective structured clinical examination OSCEE (for assessing skill acquisition).
- Response of trainees to the educational program in Sydney and in Skopje;

The overall assessment of the teaching in general was carried out by the trainees in both Sydney and Skopje, at the end of the each session, and at the end of the course. Participants

were asked to rate five aspects of the training program on a five-point, Likert scale.

- Achievements and failures compared with the original recommendations of the report dated September 1999.

Table 1. Perinatal mortality rates, pre- and post-intervention in Macedonia

	<i>Pre-intervention 1997-1999 (3 years)</i>	<i>Post-intervention 2000-2001 (2 years)</i>	<i>% of decrease</i>
Perinatal Mortality rate* (per 1000)			
All	27,4	21,5	27,4
>1000 gms	23,6	16,9	28,0
Fetal Mortality Rate* (per 1000)			
All	14,1	11,6	17,7
>1000 gms	11,8	9,3	21,0
Early Neonatal Mortality Rate** (per 1000)			
All	13,5	10,0	26,0
>1000 gms	12,0	7,7	36,0

Source: Evaluation of the National Perinatal Program in Macedonia. Health Sector Transition Project 2002.

* Denominator=all births

** Denominator=livebirths

As a comparison, in Table 2 the same mortality rates in the same period, as well as in the period from 2002-2005, are presented, exploring another source of data.

Table 2. Perinatal mortality rates in Macedonia in the period from 1997-2005

	<i>Period I preintervention 1997-1999 (3 years)</i>	<i>Period II postintervention 2000-2001 (2 years)</i>	<i>% of decrease periods I/II</i>	<i>Period III postintervention 2002-2005 (4 years)</i>	<i>% of decrease periods II/III</i>
Perinatal Mortality rate* (per 1000)					
All	20,6	18,3	12,6	18,1	1,1
Fetal Mortality Rate* (per 1000)					
All	11,2	10,7	4,7	10,6	0,9
Early Neonatal Mortality Rate** (per 1000)					
All	9,4	7,6	23,7	7,5	1,4

Data source: Eurostat

* Denominator=all births

** Denominator=livebirths

As it is obvious, there are some differences in the perinatal data between the two sources. It is due to the different methodology in collection. It was also a reason plus to think about improvement of data collection system.

What else should we find within the Table 2?

The improvement didn't follow the same line in the years after, what suggested that the sustainability of the Project was not ensured and that remained as an objective for the further activities and plans.

External considerations that affected the project

It is noteworthy that all results of this project were achieved despite the obstacles that were endangering the continuous activities such as:

- Frequent change of the directors of the major three institutions. More than 8 changes of these people took place during the project. Although most of them were supportive of the project, each new director needed time to understand the changes connected with the project. This slowed down some of the activities;
- Frequent change of the Ministers of Health;
- Change of local directors in University clinics and Medical centers;
- The conflict in Macedonia in 2001 compromised some of the major activities in the western parts of the country and postponed visits of the International Consultant. Modules for education in this regions were also procrastinated;
- Primary failure to include obstetricians in the process of changing the approach towards perinatology/ perinatal care;
- Primary opposition of neonatologists who did not participate and felt endangered by the new trainees in Australia.

Finally, the executive summary of the Report "Evaluation of the national perinatal program in Macedonia (2002) showed (14):

The evaluation of the National Perinatal Strategy for Macedonia was undertaken in January 2002, two years after trainees first arrived for educational training at Royal Prince Alfred Hospital in Sydney. The major component of the strategy was given to the educational intervention alone with training-the-trainers approach (15). Equipment was only commissioned in January 2002. Thus, the impressive reduction in Perinatal Mortality Rate could largely be attributed to education.

Achievements:

- An overall decrease of 27% in the PMR, when careful data collected from 16 hospitals (>93% births) were compared 3 years before intervention 1997-99 with 2 years after starting intervention 2000-01 (27.4 to 21.5 per 1000 births) and
- Decrease of 36% in early neonatal deaths in babies >1000g (12.0 to 7.7 per 1000 live births), reflecting the postnatal thrust of the program.

The educational methods used have been based on evidence of effectiveness and the content emphasized four themes, namely perinatal skills, educational theory, change management and basic epidemiology with an evidence-based approach to practice. The intervention has increased the capacity of Macedonian doctors to practice the best-evidence perinatal medicine and improve the outcomes. Sustainability is predicted by the "train the teachers" approach, with concurrent strengthening of the infrastructure and organizational framework.

Training of carefully selected doctors and nurses in modern neonatal care in a foreign country (Australia) was very important, in order to recognize the great differences in current approach. This was not envisaged as possible by delivering a program entirely within Macedonia and is attribute to the young Macedonian trainees that they could accept and then implement such vast changes in practice in the face of considerable opposition initially.

Continuous and supportive involvement of the Australian teachers, both doctors and nurses, with the Macedonian teachers during the handover to a sustainable, self directed

program was of invaluable importance. This was achieved by the 4 modules delivered in Macedonia during the second half of 2000. The ability to provide a dynamic educational program, readily modified by the perceived needs of Australian and Macedonian teachers as they each became more familiar with the needs in Macedonia.

The readiness of the World Bank and IPU to provide additional support for further intensive training in Sydney, ensuring a sufficient number of trained doctors and nurses in the tertiary institutions (9/14 doctors and 5/20 nurses-midwives in Sydney, and 5/14 doctors and 11/20 nurses-midwives through CME in Skopje) where there was the ability to influence tertiary and district hospital management, according to up to date evidence based protocols in perinatal care in the future.

The results were compared in two periods, before the Implementation (1997-1999) and after it (2000-2001). The same methods were used.

The survey for the minimal data set was performed in 1999 for the purpose of creating the strategy, its implementation and evaluation. The same indicators and data were collected during the second period by the participants of the Cohort 1 at the CME center in 2000 and 2001. The trainees including doctors and nurses from 16 hospitals undertook an exercise in data collection. They examined the original data from the labor ward books and the special care nursery admission books (well kept and reliable sources of births and deaths) and extracted weight, gestation, gender, living or dead, cause of death, onto simple data sheets for each death, countered all births by weight categories in 500 gm increments for each year starting from 1997-2001. The database enabled calculation of baseline statistics prior to intervention for the 16 hospitals where 93% of births occurred in Macedonia.

Conclusions and recommendations

These striking results are consistent with the high penetration of implementation of evidence into practice that was observed at the 12 maternity units and 2 pediatric units that were assessed. They were consistent with the rigor of the assessment techniques required for certification of the 115 successful trainee doctors and nurses and anonymous questionnaires and evaluations from the trainees which indicated a high level of acceptance of the educational curriculum, teaching and assessment methods. At the end, over 50% (43/82) of doctors and about 30% (72/243) of nurses/midwives who cared for neonates and infants in Macedonia have been certified. This was the first time that teams doctors/nurses were educated together, with the same methods and in the same time for the same purpose. Meanwhile, after the equipment distribution, three more cohorts were trained and participants certified.

The practices which were improved only following the education were connected with: thermoregulation, breast feeding, safe sleeping, feeding, treating jaundice, infection control, resuscitation, hypoglycemia, respiratory distress, apnea, stabilization for transfer, rights of the child, etc.

The involvement in this training program was a life-enriching experience to both trainees and educators. Over eight months doctors and nurses from very different backgrounds, dealing with different challenges in their day-to-day life have learned from each other, supported each other and solved the problems together. Contact is maintained by e-mail ensuring ongoing support of the program and informal news of how changes are being implemented.

The evaluation of the ten teachers, who were trained in Sydney with a train-the-trainer approach, indicated a skilled team of doctors and nurses, competent in delivering a curriculum using modern, innovative teaching methods and multi-faceted assessment techniques. The educational program was sustainable providing the goals set before the program.

The future goal is to decrease PMR to <10 per 1000. This requires attention to the obstetric/midwifery component of perinatal health. The environment for change is ripe to rapidly gain improved health outcomes for mothers and babies from further investment. This is a National imperative and should be part of the National Health Strategy.

The success of this Perinatal Program is due to many and represents a truly excellent example of teamwork and of collaboration among the Ministry of Health of Macedonia, in particular the International Project Unit, and the World Bank, UNICEF and the Royal Prince Alfred Hospital in Sydney. It remains a special attribute to the key administrators and advisors in the IPU, the teachers and the trainees.

The principles and the ingredients to a long term Perinatal Strategy have been suggested within the report. The blueprint stands as an example for reform in other acute care systems. This is the most obvious example how the training process can make difference in the health care system at all.

Exercise

Task 1:

Working under a supervision of the lecturer, the students should be mainly focused on two fields:

- Interactive discussion on the steps of the process of implementation of the strategy, after the group working on the presented case-study for improving the Perinatal Health care in Macedonia through education
- Group work on different educational methods of adult learning and their advantages/disadvantages. Specifically should be discussed the educational methods and their impact on the overall improvement of the mortality rates in Macedonia.

Task 2:

Students should use additional recommended readings in order to increase their knowledge and understanding of the process of change management. As output, students should write a seminar paper on change proposal, related to some health problem in their own countries. In addition, student should be encouraged to make an investigation regarding some evidence-based practice that is not implemented yet in the hospitals in their countries. They should be asked to search the literature (Internet) about the guidelines and evidence-based medicine papers regarding some specific topics and their implementation in the clinical practice. The main issue of their strategy should be a plan of education for implementation of change. Focus should be put on the learning objectives, learning strategies and assessment.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	An Alternative View of Health Promotion and Disease Prevention in Eldercare
Module: 5.11	ECTS: 1
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Key words	Public health, eldercare, health promotion, disease prevention
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none">• contrast traditional health promotion and disease prevention activities for older adults with a concentric model of interaction and interdependence between the individual, their community, and the society in which they live;• cite four areas in which the older adult directly impacts health promotion and disease prevention;• describe the importance of access to care and social connectivity in health promotion and disease prevention in the elderly;• increase knowledge of the value of selected immunizations in eldercare;• understand the importance of Hospice and Palliative Medicine in promoting a culture of caring and respect at the end of life; and• recognise the importance of public health and a chronic care model of care to the successful implementation of health promotion and disease prevention activities in eldercare.

<p>Abstract</p>	<p>Eldercare is a specific component of the health care life cycle. As our societies age, there is a growing recognition of the value and importance of providing quality care for our older adults. Traditional approaches to health promotion and disease prevention focus on lifestyle change, screening tests, and immunizations. This paper highlights the interconnectivity of three areas: the individual, the community, and society, to facilitate effective health promotion and disease prevention in Eldercare. While health promotion and disease prevention is a public health construct, interacting areas of the lives of older adults influence the success or failure of these programs. Each area can promote quality health care or become a barrier to effective disease prevention strategies.</p>
<p>Teaching methods</p>	<p>Teaching methods: <i>Lecture 1:</i> Health Promotion/Disease Prevention in Eldercare – The Essence of Public Health. <i>Lecture 2:</i> Evidence-based data on the benefits of selected immunizations in Eldercare. <i>Lecture 3:</i> Disease-specific recommendations for prevention and control of diabetes mellitus, hypertension, hypercholesterolemia, and colon cancer. <i>Exercise 1:</i> Students will select one of the following topics (diabetes mellitus type II, hypertension, colon cancer or hypercholesterolemia) and develop a practical program for patient self-education to assist an older adult on how to better control or avoid certain health problem. <i>Small group discussion:</i> The role of hospice and palliative care in promoting quality of life at the end of life. <i>Exercise 2:</i> Students will identify practitioners and/or a care centre where hospice and/or palliative medicine are practiced. <i>Practicum:</i> Students will visit a local or regional hospice centre for the purpose of understanding the relationship of patient and families to the care program. Students will interview staff to better understand each staff member’s role and attitude toward the residents with whom they work. Students will accompany an appropriate staff member during their daily rounds in the facility.</p>
<p>Specific recommendations for teachers</p>	<p><i>Question and answer session to follow each lecture.</i> A question and answer session will follow each lecture to help students’ clarify key aspects of each topic. <i>Lecture 1:</i> Provides an overview of how health promotion and disease prevention in Eldercare directly relate to the practices and principles of public health. Audiovisual equipment useful. Summary handout to students in attendance based on this paper. <i>Lecture 2:</i> Focuses on the role of immunizations in Eldercare and their impact on morbidity and mortality. Audiovisual equipment useful. Summary handout to students in attendance based on this paper.</p>

	<p><i>Lecture 3:</i> Summarizes selected disease specific recommendations to promote health and prevent disease in older adults. Cite specific screening tests, timeframes and management goals. Highlight evidence-based recommendations related to diet, exercise, and medical therapy.</p> <p><i>Exercise #1:</i> Regarding diabetes, hypercholesterolemia, or hypertension, students should identify dietary and exercise lifestyle changes that affect disease onset and control. They should note disease specific tests, screening timeframes and management goals. They should also cite steps to promote medication adherence. Regarding colon cancer, they should identify dietary and screening recommendations.</p> <p><i>Exercise #2:</i> Faculty should identify programs and individuals engaged in hospice and/or palliative care within the community or region. They should have a working knowledge of what types of services are provided.</p> <p><i>Small group discussion:</i> Mandatory participation. Interactive session. It is expected that students will have read the reference material pertaining to this topic prior to the session.</p> <p><i>Practicum:</i> Mandatory participation. Faculty will identify one or more centres or individuals providing hospice and/or palliative care that will allow student visitations. They will arrange for specific health professionals to work with students to achieve the programmatic goals.</p>
<p>Assessment of students</p>	<p><i>Pre/Post tests in association with each lecture</i> Each student will complete a ten question pre-lecture test. This test will be repeated after the lecture is completed. Each post-test represent 10% of a student's grade.</p> <p><i>Small group discussion:</i> Mandatory participation. The small group discussion represents 20% of the student's grade.</p> <p><i>Practicum:</i> Mandatory participation. Synthesizing the material presented in class, the assigned readings, and their practicum experience, students will write a two-page paper describing how end of life care relates to health promotion and disease prevention. The summary paper represents 50% of a student's grade.</p>

AN ALTRNATIVE VIEW OF HEALTH PROMOTION AND DISEASE PREVENTION IN ELDERCARE

Peter A. DeGolia

As our societies age, there is a growing recognition of the value and importance of providing quality care for our older adults. People do not become “seniors” in a void; they evolve into their elder years over time bringing with them an accumulation of physical and mental conditions that represent unique challenges for the health care provider. Older adults are more diverse and complex individuals than younger cohorts. The aim of this paper is to highlight the interconnectivity of three areas: the individual, the community, and society, and to discuss their impact on health promotion and disease prevention in older adults.

Aging Societies

The term *elderly* is applied to persons 65 years of age or older. This definition does not showcase the variation that exists in the rate of aging or the incidence of chronic age-related disease within this population. The prevention of disease and disability, as well as the optimization of a person’s quality of life are the primary goals of patient care with this age group. The objectives of this care change and are influenced by a person’s functional status, level of disability, additional years of life expectancy, and the presence of fatal diseases. Goals and objectives of care change as a person ages. A person who is considered *young-old* (65 years to 74) may have goals of care similar to middle aged adults. For example, with a life expectancy of more than 10 years, primary preventive care that sought to prevent the onset of disease, screen for common diseases, and treat early disease would be appropriate. Dietary counseling to prevent diabetes and heart disease would fall into this category. A screening mammogram to identify breast cancer also would be appropriate. The *old-old* (75 years to 84) are more likely to be influenced by the presence of chronic and disabling diseases, such as heart failure or Alzheimer’s disease. Issues pertaining to quality of life become a more prominent feature. Functional status and steps to prevent disability are prominent goals of care for this group. The *very-old* (85 years and greater) are likely to pursue a more cautious approach to therapeutic interventions. Weighing benefits and consequences such as discomfort or harm during diagnostic or therapeutic interventions is paramount. Dialysis in a person with advanced Alzheimer’s disease with less than two years survival may not be appropriate.

As a population ages, the focus of care shifts from management of acute illness to chronic diseases such as functional disabilities, diabetes, hypertension, urinary incontinence, heart failure, and impaired cognition. Societies across the world are aging. Even in developing countries the number of older adults is growing at a rapid pace. The current level and pace of people aging varies widely by geographic region, and usually within regions. However, virtually all nations are now experiencing growth in their number of elderly adults. Europe is still the “oldest” region of the world. International comparison data supplied by the U.S. Census Bureau highlights the world’s 25 oldest countries (percent of population 65 years and over). In 2000, three South Eastern European countries were ranked #7 (Bulgaria at 16.5%), #15 (Croatia at 15%), and #19 (Serbia at 14.8%). Bulgaria will more than double its “aging index” – people aged 65 years and over per 100 people aged 0-14 – from 13.3% in 2000 to 27.8% in 2030. (1)

As with other developed countries, southeastern Europe is experiencing a change from conditions of high fertility and high mortality to low fertility and low mortality. The

consequence of this change is an aging population. This process is known as “demographic transition.” Summary demographic data as recent as August 24, 2006, describes these changes as they apply to each country in South Eastern Europe. In every country, the rate of birth is expected to decline from 2005 to 2025, while the young-old, old-old, and very-old age cohorts increase substantially. (2)

“Epidemiologic transition” is another process taking place in these countries. It describes the long-term change in leading causes of death from infectious and acute diseases to chronic and degenerative diseases. As children survive childhood infections and acute illness such as infectious diarrhea and dehydration that once caused death, they are increasingly exposed to risk factors associated with chronic disease and accidents. In 1996, Kalache noted that as fertility declines and the population ages, the preeminent causes of death shift from those associated with childhood mortality to those associated with older age. Frenk showed in 1989 that the increase in older adults shifts morbidity profiles of a given country from acute disease to chronic and degenerative diseases (1). A review of cause-specific mortality explains this development. This data shows that cardiovascular diseases are the primary cause of death among the men and women of South Eastern Europe. In Bulgaria, for example, over two-thirds of all deaths in the elderly are due to cardiovascular diseases. The older the age cohort, the more pronounced the finding. Malignant neoplasm is a distant second. Life expectancy is expected to increase on an average of 4 years between 2005 and 2025 (2).

As life expectancy increases, the quality of a longer life becomes a central issue for both personal and social well-being. How are we spending our additional years of life? The answer to the question of whether people are living healthier lives or spending an increasing portion of those years with disabilities, mental disorders or ill health will have a profound impact on national health, retirement, family systems, and the demand for long-term care services. Healthy life expectancy will become an important marker of a society’s well being as the life expectancy is today.

Traditional Health Promotion / Disease Prevention in Older Adults

Health promotion in the United States has been narrowly focused on advocating for lifestyle changes that enable a person to achieve a more optimal state of health. The World Health Organization defines health promotion more broadly as a process of enabling people to increase control over, and to improve, their health. The Ottawa Charter for Health Promotion defines basic principles of health promotion (3), (See appendix).

Disease prevention attempts to prevent and control acute (often infectious) disease, but is primarily focused on chronic disease. Heart disease such as hypertension or heart failure, cancer, and diabetes are common examples. In the US, these diseases account for 7 of every 10 deaths and affect the quality of life of 90 million Americans. Chronic diseases are among the most common and costly health problems, yet most preventable. Eating nutritious foods, being physically active, and avoiding tobacco use can prevent or control the devastating effects of these diseases (4).

Preventive services are applicable to older adults. Even the very-old can benefit from certain specific interventions. Preventive interventions are classified as primary, secondary and tertiary. Primary prevention refers to the prevention of disease, such as when an influenza vaccine is given to a frail elder. Early detection of asymptomatic disease, such as screening for colon cancer through the use of hemocult cards, represents secondary prevention. Tertiary prevention is activity that optimizes health once a disease process is

detected. Surgical removal of a focal breast tumor that has not metastasized is an example of this type of prevention.

An Alternative View: Interactive and Interdependent Systems of Care for Older Adults

Following the usual application of preventive services is problematic in the elderly. It is difficult to know which preventive services will benefit which subset of older adults since many studies evaluating the benefit of health promotion and disease prevention services exclude people 65 and older. Complicating preventive service intervention are the wide variations in health status of this population, individual and family issues regarding the value of extending life in old age, and the risk-benefit considerations associated with the effect of limited life expectancy. Screening decisions should incorporate the patient's values and preferences. Prevention activities should focus on increasing the percentage of life that is lived in good health rather than prolonging life spent in poor health (5).

An alternative view to health promotion and disease prevention in the older adult is one that recognizes the biological realities of aging. Health and vigor sustained in youth cannot be maintained as we age. Age-determined physiologic declines are unavoidable. Medicine has successfully converted lethal diseases into chronic diseases. These chronic diseases are often associated with considerable frailty or disability. The result is a more diverse geriatric population with greater morbidity. Community and societal interventions play a greater role in health promotion and disease prevention as we age. While counseling patients to avoid behaviors that are known to shorten lives (such as smoking alcohol or drinking excessive amounts of alcohol) is important, activities that minimize harm and maximize benefit to improve quality of life (such as eliminating potentially harmful or inappropriate medications, providing vaccinations to prevent influenza or pneumococcal pneumonia, or emphasizing comfort and the relief of suffering at the end of life) become more important (6).

Figure 1. Interactive and interdependent systems of care for elder adults



The interaction between these three important spheres can be viewed in terms of three concentric circles. In the center is a sphere representing the individual. The axiom “eat right, eat less, and exercise more” typifies the role of health promotion and disease prevention for the individual. These behavioral activities are cost-effective and scientifically proven to

promote health and improve the quality of life (7). Surrounding the individual is a sphere that represents the community in which the older adult lives. The degree of supportive services and access to health care will impact the quality of life. The effective management of chronic diseases requires access to medical services and, at times, home nursing services. Availability of rehabilitation and personal care services can help overcome acquired disabilities and delay functional decline. Society is the third sphere that embraces the other two areas. Social support for specific health promotion and disease prevention activities benefits older adults. Immunizations save lives in older adults. Social campaigns to discourage smoking are effective. Seat belts save lives and campaigns to promote their use are effective. One of medicine's most important missions is to allow terminally ill patients to die with as much dignity, comfort and control as possible. In patients for whom a cure is not possible, there is still an enormous amount of care and support that can and should be provided for patients and their families.

Health Promotion/ Disease Prevention in Older Adults: The Individual

The traditional approach to treatment is to focus on the individual patient, with minimum consideration of the family, community, or society. The individual is important, but not to the exclusion of other factors that impact our lives. Factors affecting health promotion and disease prevention in older adults include the doctor-patient relationship, self-management of chronic diseases, acceptance of responsibility for care, and disease-specific interventions.

Older adults are more likely to suffer from chronic illness and impairment in function, are more likely to take multiple medications, and on average are more likely to die than younger adults. Consequently, health promotion and disease prevention activities are often overlooked, forgotten, or underemphasized in senior care. On the other hand, the overenthusiastic application of health promotion and disease prevention guidelines developed for young or middle-aged adults to frail adults with a limited life expectancy is also inappropriate. The concepts of life expectancy and quality of life are critical for health care providers to consider when discussing health promotion and disease prevention activities with their older patients (8).

The doctor-patient relationship is one of the most unique and privileged relations and its impact on the health and welfare of the patient is not to be underestimated. A physician's knowledge of a person's health status together with their values toward prolongation of life, maintenance of function, and comfort or the relief of pain and suffering can help guide the level of intervention pursued. For example, knowledge of a patient's progressive neurological decline due to Alzheimer's disease, as well as knowledge of the literature indicating placement of artificial feeding tubes does not prolong life in this subset of people, can impact the outcome of a medical intervention that, on the surface, may seem to promote health.

Patient self-management has been shown to be a key component of effective chronic care and improve patient outcomes. Reduction of hospitalizations, emergency department use, and overall managed care costs have been cited. With self-management, the patient takes an active role in monitoring his/her condition and making necessary cognitive, behavioral, and emotional changes to maintain a satisfactory quality of life. The physicians support this process by addressing health literacy issues, understanding problems from the patient's perspective, promoting goal-setting and problem-solving strategies for patients, and making office system changes such as close follow-up to review action plans and goals, as well as group visits emphasizing education (9, 10).

Screening for disease at an early age, counseling about a healthy lifestyle, and chemoprophylaxis are three of five domains recommended for health promotion and disease prevention activities. Individuals can perform disease-specific activities that will delay or prevent acute or chronic diseases and promote successful aging. The United States Preventive Services Task Force (USPSTF) can guide busy clinicians in this regard. The goal of the task force has been to reduce confusion among practitioners pertaining to the effectiveness of preventive medicine interventions. The Task Force website offers complete evaluations and recommendations (11). Blood pressure monitoring is effective for health promotion and disease detection. Screening tests are advised based on the life expectancy of the individual, effectiveness of treatment for early detected disease, and the accuracy of the diagnostic test. Examples of other areas emphasized by the task force include the following activities:

1. Breast cancer screening. Nearly 50% of all breast cancers occur in women over 65 years of age. While studies have shown a reduction of 20% to 35% in mortality for women 50-69 years of age who have had mammograms, no studies have evaluated women older than 75. The USPSTF recommends screening up to age 70 unless co-morbid conditions limit life expectancy making this procedure less beneficial. Other agencies cite life expectancy of at least 10 years. The American Geriatrics Society recommends at least 5 years life expectancy to age 85.
2. Vision and hearing. The USPSTF recommends routine vision screening with a Snellen chart and screening for hearing impairment by history or referral. This recommendation is well accepted by geriatricians.
3. Dementia. The USPSTF recommends evaluation of elders with suspected cognitive impairment based on direct observation (non-adherence to treatment plans of care, confusion or difficulty following instructions) or concerns raised by family members or caregivers.

Mark Twain once stated: “The only way to keep your health is to eat what you don’t want, drink what you don’t like, and do what you’d rather not” (12). Smoking and excessive alcohol uses are well documented as behaviors that shorten lives. Dietary control for community-dwelling seniors with specific diseases (diabetes or heart failure, for example) can help prevent morbidity and disease progression (13). Physical function declines irreversibly with advancing age, yet aerobic and anaerobic exercises are considered the cornerstones of health promotion in the elderly. The ability to perform this activity is often difficult for many older adults. Falls prevention and safe driving are two other common areas that should be addressed in older adults.

Chemoprophylaxis includes recommending aspirin for people at high risk for coronary heart disease. Physicians must weigh the risk of gastrointestinal hemorrhage or stroke with the benefits of preventing myocardial infarction or ischemia. The use of cholesterol lowering drugs such as statins in primary cardiovascular prevention in the elderly is controversial. The PROSPER study of subjects with a mean age of 75 and a cholesterol of 220 mg/dL treated with a statin medication showed a significant difference in primary outcome (myocardial infarction, stroke, coronary or cardiovascular accident death) but no significant difference in secondary outcomes (cognition, disability, hospitalization, or all-cause mortality). Statins appear to be most effective in patients with cardiovascular disease (14).

Combating non-compliance with medication use and lifestyle changes, as well as systematically reviewing all medications (prescription, over-the-counter, or herbal) and discarding unnecessary medications are appropriate health promotion / disease prevention

activities with older adults. While encouraging older adults to follow disease-specific guidelines to promote health and prevent disease is important, addressing non-compliance and working with patients to follow through with important lifestyle changes may have the greatest impact. Greater physician mentoring and guidance in order to attain the goal of a healthier and higher quality of life is needed. In the United States, adverse drug events are the fifth most frequent, and the most common preventable, health problem among the elderly in the US. Nearly 28% of hospitalizations of elderly patients are related to medication errors (15). The active review and elimination of unnecessary medications is an important health promotion and disease prevention activity for this population.

Health Promotion/ Disease Prevention in Older Adults: The Community

Chronic disease management requires access to health care services. The lack of transportation is a major public health problem facing the elderly. Often older adults rely on others to provide access to shopping, banking and medical care. Without access to health care, many problems afflicting the elderly go untreated or under treated. Chronic diseases are among the most common and most expensive health care problems, yet most preventable. Patients with chronic diseases have difficulty coping with their disorders, managing their medications properly, adapting their diets, and following other lifestyle changes known to promote good health and prevent a worsening of a disease process. Community support and interventions are often necessary to improve the quality of life in older adults. Programs that provide services to seniors, whether in the home or at community centers, can lessen the burden carried by family members, ensure the delivery of care that may otherwise not be provided, and detect problems early that could spiral into an avoidable hospitalization. Safe and appropriate avoidance of hospitalizations in the elderly should be viewed as an important health promotion/disease prevention activity. The hazards of hospitalization experienced by hospitalized older adults are well documented (16).

Health Promotion/ Disease Prevention in Older Adults: Society

Immunizations and system changes to promote patient safety are the remaining two of five domains recommended in health promotion and disease prevention. Annual influenza vaccination reduces mortality and morbidity in the elderly. Pneumococcal pneumonia vaccination for persons over age 65 has been shown to be effective. These are recommended by the USPSTF. Health care system changes to promote patient safety include standing protocols for influenza and pneumococcal vaccinations, electronic medical records that cross check potentially adverse drug-drug and drug-food interactions, and information technology that facilitates the accurate transfer of clinical information across health care settings. Most recently, the use of telemedicine technology to provide vital signs and patient responses to disease-specific questions transmitted via telephone lines from a person's home to the doctor's office is another example of evolving health promotion and disease prevention activity. In Cleveland, this technology is being used to identify weight changes and early symptom onset of homebound heart failure patients. Early detection results in early intervention to prevent heart failure exacerbation, morbidity and hospitalization.

End of life care is not often considered a health promotion/disease prevention activity. Yet dying is an event we all will face. Dying with dignity, free of pain and suffering, is a basic human right. Health care professionals can help promote a culture of caring by actively controlling end of life symptoms and seeking to relieve pain and suffering. Throughout most

of our life medical decision-making is straightforward. When we become ill, we seek medical advice and treatment. Following the prescribed treatment plan returns us to our previous state of health. However, as our health declines, medical decision-making becomes more complex. Patients with multiple medical problems, who are dependent on others for activities of daily living and personal care, or who have terminal conditions, often face difficult treatment choices. These choices are made difficult because some medical interventions for people with terminal illness or long-term chronic conditions offer little benefit. At the same time these interventions can be harmful, cause pain, or increase the burden of living. Promoting dignity and comfort at the end of life, and preventing interventions that can cause harm require health professionals to discuss treatment options with their patients. Working with patients and families to develop goals of medical care helps promote comfort and dignity at the end of life. Cure, stabilization of functioning, and preparing for a comfortable and dignified death are three medical goals that should be reviewed with patients with terminal disease or chronic co-morbid conditions (17).

Conclusion

Health promotion and disease prevention in older adults is complex, but effective. There is an interconnected relationship between the individual, their community, and the society in which they live that profoundly influences quality of life and successful aging. The partnership between patients and their primary health professionals is the foundation of successful health promotion/disease prevention activity. Physicians, through the therapeutic doctor-patient relationship, can strongly motivate patients to adhere to healthful lifestyles, accept recommendations and actively participate in the management of their chronic diseases. The USPSTF serves as a resource for practitioners, offering sound, evidenced-based recommendations for guiding patient care. Concepts such as life expectancy and quality of life guide health care professionals in their discussions with patients and families. Medication management, proactive telemedicine monitoring, and promoting a culture of caring at the end of life constitute new health promotion and disease prevention activities in this age group.

APPENDIX A

Basic principles of health promotion as outlined by The Ottawa Charter for Health:

Prerequisites for health: The fundamental conditions and resources for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity. Improvement in health requires a secure foundation in these basic prerequisites.

Advocate: Good health is a major resource for social, economic and personal development and an important dimension of quality of life. Political, economic, social, cultural, environmental, behavioral and biological factors can all favor health or be harmful to it. Health promotion action aims at making these conditions favorable through advocacy for health.

Enable: Health promotion focuses on achieving equity in health. Health promotion action aims at reducing differences in current health status and ensuring equal opportunities and resources to enable all people to achieve their fullest health potential. This includes a secure foundation in a supportive environment, access to information, life skills and opportunities for making healthy choices. People cannot achieve their fullest health potential unless they are able to take control of those things that determine their health. This must apply equally to women and men.

Mediate: The prerequisites and prospects for health cannot be ensured by the health sector alone. More importantly, health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by nongovernmental and voluntary organizations, by local authorities, by industry and by the media. People in all walks of life are involved as individuals, families and communities. Professional and social groups and health personnel have a major responsibility to mediate between differing interests in society for the pursuit of health.

Health promotion strategies and programs should be adapted to the local needs and possibilities of individual countries and regions to take into account differing social, cultural and economic systems.

Health Promotion Action Means: Build healthy public policy Health promotion goes beyond health care. It puts health on the agenda of policy-makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health.

Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organizational change. It is coordinated action that leads to health, income and social policies that foster greater equity. Joint action contributes to ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments.

Health promotion policy requires the identification of obstacles to the adoption of healthy public policies in non-health sectors, and ways of removing them. The aim must be to make the healthier choice the easier choice for policy-makers as well.

Create supportive environments: Our societies are complex and interrelated. Health cannot be separated from other goals. The inextricable links between people and their environment constitute the basis for a socioecological approach to health. The overall guiding principle for the world, nations, regions and communities alike is the need to encourage reciprocal maintenance - to take care of each other, our communities and our natural environment. The conservation of natural resources throughout the world should be emphasized as a global responsibility.

Changing patterns of life, work and leisure have a significant impact on health. Work and leisure should be a source of health for people. The way society organizes work should help create a healthy society. Health promotion generates living and working conditions that are safe, stimulating, satisfying and enjoyable.

Systematic assessment of the health impact of a rapidly changing environment - particularly in areas of technology, work, energy production and urbanization is essential and must be followed by action to ensure positive benefit to the health of the public. The protection of the natural and built environments and the conservation of natural resources must be addressed in any health promotion strategy.

Strengthen community action: Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities, their ownership and control of their own endeavors and destinies.

Community development draws on existing human and material resources in the community to enhance self-help and social support, and to develop flexible systems for strengthening public participation and direction of health matters. This requires full and continuous access to information, learning opportunities for health, as well as funding support.

Develop personal skills: Health promotion supports personal and social development through providing information, education for health and enhancing life skills. By so doing, it increases the options available to people to exercise more control over their own health and over their environments, and to make choices conducive to health.

Enabling people to learn throughout life, to prepare themselves for all of its stages and to cope with chronic illness and injuries is essential. This has to be facilitated in school, home, work and community settings. Action is required through educational, professional, commercial and voluntary bodies, and within the institutions themselves.

Reorient health services: The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments. They must work together towards a health care system that contributes to the pursuit of health.

The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. Health services need to embrace an expanded mandate that is sensitive and respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components.

Reorienting health services also requires stronger attention to health research as well as changes in professional education and training. This must lead to a change of attitude and organization of health services, which refocuses on the total needs of the individual as a whole person.

APPENDIX B

Case Presentation

In 1992, Alexander Bevkoff was a 62 year old general laborer approaching retirement. He had a history of diet controlled hypertension, osteoarthritis of his shoulders and knees, regular alcohol use (a beer after work and 2 glasses of schlivavitz at home), and smoked 2 packs of cigarettes a day (which he had done for 30 years). He walked frequently on his job and often moved heavy supplies. Together with his wife, he lived in a high rise apartment building on the 5th floor. In 1987, his new physician encouraged him to reduce his alcohol consumption and to stop smoking. Mr. Bevkoff did not follow these recommendations. Over the years, he visited his doctor's office every six months for routine examinations.

In 1997, at age 67 years, Mr. Bevkoff retired, became less physically active and began to spend more time at home and in his neighborhood. He reduced his use of tobacco to 1 pack per day but gained 3 kilograms. On routine screening his blood pressure was noted to be elevated, as was his cholesterol. Mr. Bevkoff was instructed to start antihypertensive medication and dietary control for hypercholesterolemia. He did not change his diet and occasionally forgot to take his medication. Over the next several years he visited his physician more frequently with improved control of his blood pressure and cholesterol.

In 2002, at age 72 years, Mr. Bevkoff presented to his doctor's office with bilateral lower extremity edema, increased shortness of breath, and intermittent left anterior chest pressure while climbing two flights of stairs to his apartment, and waking up at night feeling short of breath. In addition, he complained of indigestion and heartburn for which he took an antacid routinely. For the past two months he developed worsening knee pain and began to take a

Non-Steroidal Anti-Inflammatory Drug (NSAID) routinely. His doctor diagnosed him with new onset CHF and admitted him to the local hospital. While there he developed a urinary tract infection from the foley catheter that was inserted into his bladder on admission. One night he fell while trying to get out of bed and injured his shoulder. He was discharged home on the following medications: ACE-Inhibitor, beta-blocker, nitrate, diuretic, low dose aspirin, statin, and proton pump inhibitor. Over the course of the next several years, he continued to gain weight, remained sedentary, and began using NSAID medications intermittently for worsening knee and shoulder pain. Three years ago he developed urinary hesitancy and was started on an alpha-adrenergic antagonist.

In 2007, at age 77, Mr. Bevkoff is having gradual problems with short-term memory and his balance. His gait is unsteady at times and he feels “lightheaded” when he stands up. After a fall one evening while at home he went to the local urgent care and was placed on medication for vertigo. At that time he also complained of insomnia and was instructed to take a tablet of diphenhydramine at bedtime. At the doctor’s office today, his wife notes that he is again developing swelling of his lower extremities and she is afraid he is developing heart failure again. She is also concerned about his worsening mental status with periods of acute confusion. She reports he needs increased direction to care for himself.

Case discussion

Does this sound like an unusual situation? In fact it is not. This is a fairly common scenario of a person gradually developing significant ailments that, in time, become severe enough to warrant treatment. It is also common that one treatment intended to “cure” or control the first problem results in a new problem that goes unrecognized as iatrogenic in origin. Consequently a new medication is added to treat the new problem started by the previous medication. In the case presentation above, Mr. Bevkoff was at risk for several significant problems – both immediate and long term. His environment and occupation placed him at risk for severe osteoarthritis. His lifestyle put him at risk for hypertension, coronary artery disease, and cognitive impairment, as well as gastrointestinal and pulmonary diseases. When he began taking NSAID medication to control arthritis pain he precipitated congestive heart failure related to his poorly controlled hypertension. This etiology was not noted and he was not instructed to stop using NSAIDs. This problem reoccurred several years later. During his stay in the hospital he developed iatrogenic problems not uncommon for older adults – a urinary tract infection due to prolonged catheter placement, probable delirium associated with a strange environment and withdrawal from daily alcohol use that also resulted in a fall. He was discharged on multiple medications, yet he was non-adherent with 1 or 2 before his admission. As he aged he developed symptoms of prostate hypertrophy and cognitive impairment. He was placed on medications (alpha adrenergic antagonist and diphenhydramine) that can precipitate delirium and worsen cognition. He continued on a proton pump inhibitor even though there was no indication for continued use. These medications directly reduce vitamin B12 absorption placing Mr. Bevkoff at further risk for cognitive problems. We do not know whether or not he continued to consume alcohol and at what rate. Finally, we are beginning to get a picture of caregiver stress. His wife notes that Mr. Bevkoff is declining in Activities of Daily Living¹, the consequence of which is increased care and direction by her.

1 Activities of Daily Living are learned behaviors we perform in our daily lives. These include ambulation, bed mobility and transfers, toileting, bathing, dressing and grooming.

While we do not know his functional level in Instrumental Activities of Daily Living² but can anticipate that these abilities are impaired.

EXERCISE

Task 1.

Based on this case study, develop your own case study that would illustrate the principles cited in this paper.

Recommended readings

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11. Website of Unites States Preventive Services Task Force. Available from: www.preventiveservices.ahrq.gov (Accessed: April 19, 2007).
12. Mark Twain, 19th Century American Novelist and Social Commentator. Twain, M. Pudd'nhead Wilson's new calendar. In *Following the Equator*, vol. II. New York, NY. Harper and Brothers, 1907:137.

2 Instrumental Activities of Daily Living are tasks we perform routinely and require executive function skills derived directed through the frontal lobe of our brain. These include the ability to manage finances, grocery shop, and clean house, use the telephone, and perform yard work.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Oral Health and Oral Health Promotion
Module: 5.12	ECTS: 0.5
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Key words	Oral health; health promotion; oral hygiene; health behaviour; dental health surveys
Learning objectives	<p>The educational objectives of this module are:</p> <ul style="list-style-type: none"> • To increase the awareness of health professionals about the positive effects of oral health promotion programmes on oral health of a population; • To sensitise health professional for developing an attitude about promoting oral health as a very important task of their work. Health professionals represent a bridge to policy-makers in the sense of thought-transference and implementation of research achievements into practice. <p>After completing this module participants should be capable to:</p> <ul style="list-style-type: none"> • Assess the data currently available; • Collect additional data; • Analyse interpret and present the data; and • Formulate a policy response to the results.
Abstract	<p>World Health Organization recognizes oral health as an important component of general health, and furthermore, oral health is essential for well-being. The majority of oral diseases is related to lifestyles and reducing these mostly chronic diseases relies much on changing behaviour. Changes for the better in behaviour can and do occur, but require commitment and expertise within health promotion. Customs, practices and lifestyle issues play a role in the oral health of a community and should be considered when national policies and programmes are being formulated.</p> <p>Oral health and general health share common factors related to diet, the use of tobacco, and the excessive consumption of alcohol and the solutions to control oral disease are to be found through shared approaches with integrated chronic disease prevention.</p>

	<p>Oral health promotion is an integral part of general health promotion. Together, oral health promotion and general health promotion address the inseparable issues of systemic and oral diseases, general and oral hygiene, general and oral health care attitudes, and general health services as well as dental services. Thus, oral health promotion and oral disease prevention should embrace what is termed ‘the common risk factor approach’; leading to the integration of oral health promotion into broader health promotion.</p> <p>Each country should produce a thorough description of its population in terms of demographics, socioeconomics, health, diet, nutrition, and cultural factors affecting oral health knowledge, attitudes, beliefs, and behaviours. The case of Slovenia is used as an example.</p>
<p>Teaching methods</p>	<p>For the purposes of this training programme a workshop will be executed. The whole programme will be carried out as a discussion led by moderator. After every activity specific learning objectives will be determined for every participant and until the next workshop their professional tasks should be performed. Their achievements will be reported (within 10 minutes) and discussed with other participants at the next meeting. The formulated document should be submitted to policy-makers.</p> <p>Resources: The computer room for 20 participants needs to be assured. Statistical package SPSS for Windows should be installed on every computer and if necessary, programme should be also installed to the personal computers of the participants. Equipment: data show for PowerPoint presentation, overhead projector, paper, pencils. The refreshment for participants could be provided.</p>
<p>Specific recommendations for teachers</p>	<ul style="list-style-type: none"> • work under teacher supervision/individual students’ work proportion: 67%/33%; • facilities: a computer room; • equipment: computers (1 computer on 2-3 students), LCD projection equipment, internet connection, access to the bibliographic data-bases; • training materials: recommended readings are mainly available in the internet; • target audience: master degree students according to Bologna scheme. <p>It is recommended that participants (group of 15 to 20) are all familiar with statistical package SPSS for Windows.</p>
<p>Assessment of students</p>	<p>Changes in attitude of participants will be examined with the attitude test. The questionnaires will be applied at the beginning of the first meeting and at the end of this training course, or essay, discussing professional impact.</p>

ORAL HEALTH AND ORAL HEALTH PROMOTION

Barbara Artnik

Theoretical background

World Health Organization (WHO) recognizes oral health as an important component of general health, and furthermore, oral health is essential for well-being (1). The majority of oral diseases is related to lifestyles and reducing these predominantly chronic diseases relies much on changing behaviour. Changes for the better in behaviour can and do occur, but require commitment and expertise within health promotion. Customs, practices and lifestyle issues play a role in the oral health of a community and should be considered when national policies and programmes are being formulated.

It has also become clear that risk factors for oral diseases are often the same as those implicated in the major general diseases (2). Oral health and general health share common factors related to diet, the use of tobacco, and the excessive consumption of alcohol and the solutions to control oral disease are to be found through shared approaches with integrated chronic disease prevention.

Oral health promotion is an integral part of general health promotion. Together, oral health promotion and general health promotion address the inseparable issues of systemic and oral diseases, general and oral hygiene, general and oral health care attitudes, and general health services as well as dental services. Thus, oral health promotion and oral disease prevention should embrace what is termed 'the common risk factor approach'; leading to the integration of oral health promotion into broader health promotion concept as reported earlier (3). As a result, any advances in the evaluation of oral health promotion programmes are likely to benefit the development of health promotion in general.

Each country should produce a thorough description of its population in terms of various factors affecting oral health knowledge, attitudes, beliefs and behaviours. This information should be analysed in relation to known and acceptable oral health strategies used in other countries so as to establish the potential appropriateness of establishing such interventions. International exchanges of information are important in this context (1).

Healthy behaviour

Appropriate oral hygiene performed by individuals reduces dental plaque and improves gingival health. Teeth can be brushed several times a day but for a sufficient maintenance of oral hygiene is necessary to brush them at least once a day before sleeping. Dentists should be visited at least once a year for professional checking and treatment if needed. Dental visits are also important for eventual additional information about good oral hygiene of an individual. Proper oral health care includes as well healthy dietary habits. Sweets and soft drinks contain a large amount of sugar and should be avoided (4).

Many of the direct risk factors for oral diseases are known. A reduction or elimination in the effects of risk factors is possible through appropriate knowledge and behaviour such as preventive self-care, limiting high-risk behaviours like use of tobacco and alcohol, taking part in professionally provided preventive, diagnostic and therapeutic care, and having a supportive environment (e.g. community water fluoridation). In order to confront negative behaviours through education and health promotion so as to improve the oral health status of the population, action is necessary not only at the individual level but also at the levels of the health care professions and society.

General and oral health education and promotion

Preventive dental services can improve health only if they are used by the public and the oral health care providers (1). Appropriate use of self-care and professionally provided services requires both, the dissemination of information to the oral and general health care providers, and to the public at large. Studies on services provided by dental practices have shown that the majority of services are for the restoration of diseased teeth rather than for prevention (5, 6). The dissemination of knowledge to the public is also critical in order to stimulate appropriate utilization of dental services and self-care behaviours. Knowledge of factors related to caries and periodontal disease is poorer among older adults than among younger adults (7). The regular use of dental services is associated with improved knowledge. This demonstrates the importance of education provided by dental practices and other sources.

According to several studies there is a significant relationship between general health and oral health on the one hand and socioeconomic and cultural factors on the other. A European and North American survey (8) showed that people of lower education and lower income families and individuals with little or no education were more likely to be edentulous than others. A Swedish study (9) indicated a strong relationship between general health, social factors and oral health among women at retirement age. Moreover, chronic disabling medical conditions, social and psychological factors such as social participation, and negative life events had an important influence on oral health (10). It was also reported (11) that deprivation indices were sensitive to variations in oral health behaviours and could be used to identify small areas with high levels of need, and that they had a major role to play in research into features of people and places and how these promote and/or damage both oral and general health. A worldwide study by Parkin and Muir (12) revealed that tobacco and alcohol use heightened the risk of oral cancer, especially in older adults.

Social and economic factors need to be addressed in both general and oral health promotion. Predisposing risk factors such as gender, age, geographical location, culture and racial/ethnic status are seldom modifiable but they strongly influence oral health status and must be acknowledged in the development of programmes aimed at reducing risk factors for oral diseases and conditions. A lack of perceived need is a prime example of a predisposing attitude.

Socioeconomic and demographic factors are consistently associated also with seeking and obtaining professional dental services. Persons with low income, low educational levels, no insurance coverage, or residing in locations with few health care providers are less likely to have visited a dentist during the past year than others (13). Other indirect influences include individual enabling factors such as: educational and income levels; transportation; lifestyle, including smoking and alcohol consumption; and community support, such as financial assistance programmes and the availability of appropriate health care providers. The removal of barriers to both self-care and professionally provided strategies is necessary if a reduction in the burden of oral impairments in the population is to be achieved. This requires an oral health care delivery system that is different and more inclusive than what is traditional in most countries.

In order to maintain and improve the oral health of adults it is necessary to move beyond the focus on oral health as being primarily dependent on individual lifestyle choices. The social contexts of these choices remain hidden if an exclusively individual approach is adopted. The amount of control that people have over their own health is overestimated.

The maintenance of oral integrity places enormous challenges on the behaviours not only of individuals but also of health care providers and the system, and requires the continuation and improvement of research, education, community programmes and clinical care (1).

Preventive oral care programmes in Europe

Over the past 20 years, a marked decline in the prevalence of oral disease has been observed in several Western European countries. In the adult population, fewer adults are now edentulous and more maintain their functional dentition as measured by having at least 20 natural teeth present. In children, improved oral health is seen in the systematic decline in dental caries and a continually growing number of caries free individuals. This is ascribed to changing life-styles and living conditions, a more sensible approach to sugar consumption, improved oral hygiene practices, use of fluorides in toothpaste, fluoride mouth rinsing or topical application of fluorides, and systematic school-based preventive programmes.

Such positive trends of lower dental caries experience are observed also in children in Slovenia where school oral health programmes were established and maintained up to recent time. However, the general pattern is that the prevalence rate of dental caries in children has remained high in most of South, Central and Eastern Europe (14-16).

Because of the economic and political changes in Eastern Europe, oral health systems are now in transition. Prior to 1989, oral health care for children was provided by public health services and most countries of the region had established school dental services. Since 1989, privatization and decentralization of oral health services have taken place and most public health programmes have been brought to a halt. This change in systems has had a negative impact on utilization of oral health services. In Eastern Europe, high numbers of children attend the dentist with dental emergencies (pain/problems) rather than for preventive reasons. By contrast, the example of Slovenia is interesting since the country consolidated preventive oral care programmes for children in kindergartens and schoolchildren throughout the years of socio-political transition.

Recent surveys carried out in Eastern Europe also revealed that the dental self-care capacity of schoolchildren needs to be improved (17, 18). For example, studies in Poland showed that only 64 % of schoolchildren brushed their teeth at least twice a day (18). In addition, 70 % of children had sweets every day or several times a week. School health education programmes may be instrumental in development of healthy lifestyles in oral health as well as general health. Several studies conducted in Eastern Europe have shown that in addition to involvement of parents, schoolteachers may assist in this process of oral health promotion.

Case study – oral health promotion in Slovenia

High level of oral health promotion in children

In the past decades, caries prevention in children has been carried out in Slovenia systematically and on a large scale, mainly in the form of fluoride treatment (tablets, topical application, brushing with fluoride gel), education for better oral hygiene, and an extensive fissure-sealing programme (19) (Table 1).

Fluorides have been used for the prevention of dental caries for more than 40 years. In the 1950s and 1960s, fluoride tablets were the mainstay of our preventive programme. After 1968, their use began to decline, and between 1970 and 1975 they were largely replaced

by topical fluoride application, performed in dental clinics customarily twice a year. Since 1980 tooth brushing with concentrated fluoride preparations (F-gel), performed under the supervision of dental hygienists, has been the most widespread measure; it is carried out by children aged 7-15 years in primary schools twice a month or around 16 to 18 times a year. Since about 1985, the vast majority of the population has been using fluoridated dentifrices.

Table 1. Preventive programme in Slovenia

Period	Programme
1957-	Fluoride tablets for children aged 0-11 years and expectant mothers (discontinued in 1970 for mothers)
1968-75	Topical application of 2 % NaF in children aged 7-15 years
1980-	Toothbrushing with amine fluoride gel twice monthly in schools, supervised by dental hygienists. Widespread use of fluoride containing dentifrices
1983-	Competitions held in primary schools "Let's have clean teeth"
1986-	Fissure sealing on a mass scale

Source: Vrbič, 2000

An extensive dental health education programme, which also includes supervised tooth brushing in groups, is implemented in schools and day-care centres for pre-school children. During dental health education classes, held in so-called "prevention rooms", children are taught the correct way of brushing their teeth. In 65 % of primary schools, competitions for healthy teeth have been organized periodically since 1983 (19). The oral health education programme is carried out by dentists, nurses and dental hygienists, with ample assistance from teachers, parents and other health care personnel, united in the Slovenian Society for Oral Health (Founded in 1992 with the aim of promoting oral health, the society organizes annual celebrations of Oral Health Day, which are also attended by representatives of the Ministry of Health and the WHO. On this occasion, the status of oral health in the country is analysed and appropriate future measures are planned).

Fissure sealants were adopted for large-scale use in Slovenia in 1986, after a 5-year trial conducted in four school dental clinics in different parts of Slovenia (20, 21). Treatment starts at the age of 6 years with sealant placement on all sound first permanent molars directly upon eruption. Treatment then continues with sealing of newly erupted molars and, if necessary, premolars until the age of 18.

Slovenia has a well-organized public dental health service. Set up after the World War II, the public dental health service has functioned efficiently throughout the post-war period, and the preventive programme has been systematically implemented. From 1945 to 1992, all Slovenian dentists were employed by the public dental health service and private practice was not allowed. The public dental health service covered the dental care needs of the entire population. The school dental service is part of the public dental health service. Most large primary schools in Slovenia have their own dental clinics, located on the school premises. In 1991, Slovenia became an independent country, and in the following year, private practice was legalized. Since then, a number of school dentists have left the public dental health service to work in the private sector. After 1991, the social and political

system in Slovenia underwent considerable changes, yet the public dental health service continued to function without major problems. This was mirrored in the caries prevalence, which continued to decline during the transition period (19, 22). In some Eastern European countries, the recent social and political changes have created much more serious difficulties in the field of health, and caries levels have remained fairly high.

It is likewise impossible to determine with certainty which factors have been the most influential for the caries decline in children in Slovenia. However, the probability is that these were mainly fluoride treatments, improved oral hygiene and fissure sealing.

Supervised brushing with concentrated fluoride gel is currently carried out in most primary schools (70 %). This has been the most widespread form of fluoride treatment in Slovenia since 1980. Oral hygiene in children and adolescents up to 18 years of age improved over the past decade. This is confirmed by the findings of regular dental examinations, performed by school dentists, in which the presence of dental plaque and gingivitis is recorded. The improvement is understandable since competitions in oral hygiene maintenance have been conducted in primary schools continually for 16 years. Twenty percent of primary schools participated in the competition in 1983, compared to as many as 65% in 1998. These competitions receive considerable attention from the public; the presentation of awards, organized in a different town each year, is attended by about 2500 schoolchildren and teachers. There is no doubt that oral hygiene has improved because of the popularity of the competition (19).

Aside from the above-mentioned measures, Slovenia has an extensive oral health education programme, which won the 1997 Bright Smiles/Bright Futures Award, sponsored by the International Association of Paediatric Dentistry (23).

In 1998, as many as 86 % of Slovenian 12-year olds had sealants on one or more teeth. The proportion of 12-year-olds with sealed teeth in individual regions ranged from 62 %, observed in one region, to 100 % in four of the nine geographic regions of Slovenia. The average (86 %) is among the highest national averages reported worldwide in the literature so far. In 1998, the highest average sealant rate mentioned in the literature was 80 %, reported for Ireland (24). The beginning of large-scale use of sealants in Slovenia in 1986 coincided with the appearance of a clearly declining caries trend, which has continued to the present. Thus we may conclude that sealants have played a major part in the caries decline in Slovenia. More than 95 % of sealants are applied in school dental programmes and the rest by private dentists. Fissure sealing is free of charge for persons under 25 years of age. All the preventive measures mentioned (with the exception of sealant placement on first permanent molars directly after eruption) are implemented in an organized and consistent manner mainly in primary schools and much less so in the pre-school period. This is probably the main reason that the caries decline has not become apparent in the primary dentition (19).

These experiences from Slovenia and other Western European countries clearly indicate that schools provide significant platforms for control of oral disease in children and they are relevant settings for promotion of oral health.

Challenges for the future

The WHO oral health goals have been formulated for the year 2020 as part of the so called WHO Health21 policy for Europe (25). By this year, at least 80 % of 6-year-olds should be caries free and on average no more than 1.5 DMFT should be observed for children of age

12 years. In South Eastern Europe, such goals can only be achieved if oral health promotion and oral disease prevention programmes are implemented at community level. Important demonstration programmes are now established in several countries with the technical support of the WHO. The school oral health programmes are organized according to the concepts of the WHO Health Promoting Schools Project. The evaluation of demonstration programmes may thereby be most instrumental to the development of national oral health programmes and the experiences may also be shared by health professionals and health care planners across countries.

In Slovenia, development of public dental care network for children and adolescents is necessary. A new preventive dental care programme with well-defined responsibilities of all parties concerned should be adopted and should comprise the content, volume, quality, time, monitoring, and financial sources allocated for these purposes. We should not forget the public health measures that should be taken, like fluoridation (e.g. salt), dental health education integrated in health promotion (kindergartens, schools etc.), education of the professionals etc. Such a programme could improve the situation, reduce the differences between the regions, and improve dental health education.

Adults at high risk for poor oral self-care in Slovenia

In contrast to oral health in children, systematic information on the oral health behaviour profile of the adult population is needed in order to support the planning and evaluation of oral health promotion programmes for the public.

In general population, prevalence of poor oral self-care was estimated on average to be 6.9 % (26). The results of the study show that poor oral self-care is unequally distributed among adults in Slovenia. Higher prevalence than average was found in men, in age groups 40-49 and 50-59, in participants with uncompleted primary, primary or vocational educational level, in participants working as heavy workers in rural economy or industry, and those unemployed (job seekers), in participants self-classified in lower or labor social class, in participants from rural residence communities, and in participants from eastern Slovenia. Individuals, and the group as a whole, who are at the highest risk, are people, hardly attainable for educational activities. This population group has unfulfilled baseline socioeconomic conditions for healthy lifestyle.

Since the degree of oral care is rather low in Slovenia according to the collected data, it could be assumed that almost 7 % of Slovene population has been insufficiently informed about the preventive dental care and are not aware how important the oral health is for their overall wellbeing. Because they do not feel the need to take care of their teeth properly they have not developed a dental care friendly lifestyle. This group of people is therefore highly prone to teeth infections, decay and various teeth conditions as well as different health problems that are indirectly connected with the oral health.

Distribution of teeth brushing frequency by gender shows that adult males are much more ignorant towards their oral health than females and are therefore more prone to tooth decay and various oral conditions. The results are more or less the same in similar studies (27-31).

Older people also tend to take less and less care of their teeth compared to younger. Percentage of respondents aged 50-59 who are neglecting their oral health is almost doubled compared to the respondents aged 25-29. These huge differences can be explained with the fact that younger generations (especially those born after 1975) were taking

part in organized dental education in preschool care institutions, schools and community health care centers. Still we can not be entirely satisfied with the awareness of preventive dental care in the age group 25-29 because the basic research report on health behaviour in Slovene adults (32) show that around 32 % of respondents from this age group have not visited dentist for the last 12 months. We have expected much lower share of adults from this age group neglecting their oral health because they had been subjected to extensive dental-health prevention programmes (leading to higher awareness), but obviously we have been wrong. The interesting thing is that the lowest percentage has been reached in the age group 30-39 (28 %). It could have been due to the fact that young adults aged 25-29 do not feel the need to visit dentist because they know their teeth had been taken care of in their childhood so they do not worry about them; but they are subconsciously aware of the need to have their teeth regularly examined for prevention reasons and they start doing it after they reach their 30-ies.

We are even less happy with the widespread drinking of soft drinks amongst the population. The problem lies in uncontrolled consumption of fast sugars between meals that can have potentially disastrous effects on oral health. It usually affects younger adults (25-29 year olds: 39 %, 30-34 year olds: 37 %) and falls under average level no sooner than in the age group 50-54 (32).

People with higher socioeconomic status tend to have more positive attitude towards preventive health care and vice versa. If we take into account the level of poverty in Slovenia (13.6 %) (33), we can clearly see the close connection between the oral health care and socioeconomic situation in the country.

Future perspectives

In Slovenia, renewed national goals for good (oral) health in the next decade should be set up. It is important to permanently monitor oral health status of adults (in the general frame of monitoring health behaviour), especially the frequency of consuming soft drinks which becomes an important issue in Slovenia (not only because of poor oral health but also because of obesity). Besides that, additional questions about protective means and applications in oral cavity should be included in health surveys on risky health behaviour. This is recommendable because protective means can play an important role in oral public health, as reported earlier (31). A special attention should be given to the oral health promotion for men with low educational level belonging to the lowest social classes, as well as of healthy living and lifestyles on general, especially for low socioeconomic groups, and for elderly people (financial and physical accessibility). People should be motivated to take care of their general and oral health actively, whereas the society should enabled them to do so.

Exercise

For the purposes of this training programme four tasks will be executed (one task for every learning objective). The whole programme will be carried out as a discussion led by moderator. After every task specific learning objectives will be determined for every participant and until the next meeting their professional tasks should be performed. Their achievements will be reported (within 10 minutes) and discussed with other participants at the next meeting.

Task 1:

Stimulating introduction at the first meeting will be led by moderator: key words will be used as a target to sensitise the participants that oral health promotion is an integral part of general health promotion. Discussion: The assessment process of the availability of data.

Task 1 they have to achieve until the Meeting 2:

- To inventory the data that are already being collected and that can be used to assess the oral health status in different population groups;
- To assess the informative value of these data;
- To make provisions for generating new data.

Task 2:

At the second meeting the reports should be presented by every participant. Discussion: Existing data sources. The results of the first workshop will determine whether additional data need to be collected or just data from different registries or surveys should be linked.

Task 2 they have to achieve until the Meeting 3 (if necessary):

- To add variables to existing data sources;
- To link data from different registries.

Task 3:

At the third meeting the reports should be presented by every participant. Methodological guidelines should be discussed and refined. It has to be decided:

- Which indicators will be used;
- Should the analysis be limited to measuring the effect of lower socio-economic status on poor oral health of people of lower socio-economic status, or should it also aim at measuring the total impact these differences have on the oral health of the population;
- The choice of an adequate level of analysis and the application of multilevel analysis.

Task 3 should be accomplished until the Meeting 4:

- To analyse differences in oral health;
- To interpret the results carefully;
- To prepare the results for clear and understandable presentation.

Task 4:

At the fourth meeting the results have to be presented clearly and understandably (e.g. to use graphical displays) by every participant. The discussion: Formulating a public health policy response to the results:

- To what extent has the state identified oral health promotion as an important part of general health promotion until now;
- What are the objectives for any interventions;
- Who are the main groups with a concern for poor oral health;
- What are their interests, priorities, and commitments;
- What is the context within which interventions need to be considered;
- etc.

The formulated document should assure that public health policy satisfies identified needs and finally it should be submitted to policy-makers.

Follow up workshops on health policy development should be performed every six months.

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Recommended readings

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Skin Cancer Prevention and Screening in the Republic of Macedonia
Module: 5.13	ECTS: 0.25
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Key words	Skin cancer, melanoma, dermatoscopy, early diagnosis
Learning objectives	After completing this module, students and public health professionals should : <ul style="list-style-type: none">• assess the epidemiological situation of skin cancer or other type of cancer in their own country;• be able to understand the essentials, methods and techniques of prevention programs in cancer control;• estimate the economic and social impact of the disease;• be familiar with new technologies used in the process of early diagnosis and creation of electronic patient record;• be aware of importance of national strategies for prevention and cancer control.

<p>Abstract</p>	<p>Skin cancer is among the most common types of cancer. The incidence of skin cancer is very high and raising worldwide, especially its most serious and aggressive form, melanoma. Severe childhood sunburn and long term sun exposure over many years are the leading risk factors for skin cancer. Macedonia is situated in the region with high UV index of radiation and has an average annual incidence of skin cancer, compared with other countries in Europe and in the world. Almost all skin cancers are preventable and they are highly curable if detected and treated early. Even malignant melanoma is almost 100 percent curable if detected early, before the cancer has invaded into the deeper layers of the skin.</p> <p>Since the year 2005 a new technology, dermatoscopy, has been introduced in the routine practice at the Clinic of Dermatology at the Clinical Center in Skopje. This new method of skin cancer detection makes possible diagnosis of melanoma in <i>in situ</i> stadium. It was the starting point for multiple activities and programs, which the Clinic has undertaken within the last two years, for prevention, screening and early detection of the skin cancer, as well as managing further appropriate cure. A new dermato-oncology unit was founded within the Clinic of Dermatology. Currently it is engaged in: clinical protocols of diagnosis and prevention, educational activities and informative campaigns, education of medical staff for working with this category of patients, selection of patients into groups (patients with low and high risk for developing skin cancer) and their follow-up in regular intervals, creating medical records in electronic form for each patient, promotion of dermatoscopy as a method, use of modern information and communication technologies (telemedicine, teledermatology) and active participation in the international activities for skin cancer control.</p>
<p>Teaching methods</p>	<ul style="list-style-type: none"> • lectures • seminars • presentations • group discussions
<p>Specific recommendations for teachers</p>	<p>This module should be organised within 0.25 ECTS credit. Students can make, a practical work assignment, a review of literature/databases and prepare a report on cancer/specific disease prevention programs in their own organisation /region/country.</p>
<p>Assessment of Students</p>	<p>The final mark should be based on oral exam and structured essay.</p>

SKIN CANCER PREVENTION AND SCREENING IN THE REPUBLIC OF MACEDONIA

Suzana Kamberova, Marija V'lcikova-Laskoska, Nebojsa Pesic

Introduction

Skin cancer is one of the most frequent malignancies. It is conventionally divided into two major groups: non-melanoma (NMSC) and melanoma (MSC) skin cancer. Basal cell carcinoma and squamous cell carcinoma constitute the NMSCs. NMSCs are frequent diseases which account for 90-96% of all skin carcinomas, and melanoma participates with only 1-4% in all cases of skin carcinomas (SCs), but 70-80% of the mortality rates contribute to this most aggressive form.

Skin cancer is predominantly, but not exclusively, a disease of white skinned globe population. Blacks, Asian, Hispanic and Native American population seem to have lower incidence of melanoma, no significant rise in incidence rate, acral body region distribution and no apparent evidence of the role of UV radiation in the etiology of this carcinoma.

There are much more data on the incidence and epidemiology on melanoma than of the NMSC. Mortality from NMSC's is almost always from SCC (squamous cell carcinoma), a form of cancer strongly linked to cumulative lifetime sun exposure, whereas melanoma is connected with intermittent and excessive sun exposure (sun burns) especially in the early childhood. A small number of skin cancers may be from other causes, such as exposure to some chemicals, arsenic in contaminated drinking water in etiology of basal cell carcinoma, infection with human papilloma viruses, etc. There is evidence of a link between skin cancer and diet. Some authors have pointed out that people who eat a high fat diet have a few times greater risk of developing premalignant lesions and skin cancer than those eating a low fat diet. On the other side, a healthy diet rich in vegetables, fruits and grains, contains nutrients and compounds that strengthen the immune system, including its ability to fight tumors, and may help prevent skin cancer and other forms of cancer. An interesting study was published recently - the combination of exercise and caffeine increases destruction of precancerous cells that have been damaged by the sun's ultraviolet-B radiation, according to a team of researchers at Rutgers University. Some of the damaged (precancerous) skin cells die naturally through apoptosis -- the process that occurs when the body orders damaged cells to die. But the rate of cell death among the precancerous cells was the highest in the group that drank caffeine and exercised (1).

It is widely accepted that the incidence rates of melanoma are rising worldwide. Some geographic distribution differences are noted. It is estimated that there were 132 000 cases of melanoma diagnosed world-wide in the year 2000 and 37 000 deaths caused by this disease. In Europe, the same year, it is estimated, there were 35 000 new cases which resulted in 9000 deaths of melanoma. The annual worldwide burden of melanoma is unevenly split between high - resources countries, on one side, and low- and medium-resource countries, on the other. The death/ incidence ratio is strikingly different in these two groups (140 000 cases and 25 000 deaths in the first and 28 500 cases and 12 000 deaths in the second group), (2).

The highest incidence rates of melanoma are reported in Australia (Queensland) and New Zealand, especially among the European and Israel immigrant population (annual incidence is more than double the highest rates recorded in Europe) (3). The incidence of melanoma has doubled in Europe between 1960s and 1990s. In the mid 1990s melanoma incidence rates were by far the highest in northern and Western Europe, but mortality rates were higher in

males from eastern and southern Europe. Melanoma rates are still rising in all Europe, but the mortality rates seem to level off in northern and western, but not in Eastern Europe. The explanation of this trend lies in a growing public awareness of UV radiation (UVR) and early symptoms of the disease in North and less in West Europe countries and detection of melanoma in earlier stage (*thin* melanomas).

Little data are published about epidemiology features and melanoma prevention in the countries with intermediate-risk populations, like the Republic of Macedonia, which have average annual incidence rate of melanoma compared with other geographical regions in the world (4). In the neighboring countries from the same region there are also not many studies on this subject. For example, in Croatia there is an average annual increase of incidence rate of melanoma of 8%, and in Slovenia melanoma skin cancer in the last four decades has been multiplied 7 times among men and 4 times among women (5-6).

Almost all skin cancers are preventable and highly curable if detected and treated early. Even the most dangerous type of skin cancer, the malignant melanoma, is almost 100 percent curable if detected early, before the cancer has invaded into the deeper layers of the skin. Otherwise, it can easily spread to the lungs, liver and other vital organs if not properly treated. Melanoma arises in 80 to 90 percent of the cases *de novo* (on previously normal skin) and in only 20-10 percent in a preexisting nevus. It is suggested that SSM (superficial spreading melanoma) is more often seen type in a connection with a nevus and that nodular melanoma develops on a normal skin. Therefore, any new lesion, that appears after the age of twenty, should be examined by a specialist.

ABCDE rule/ symptoms for recognition of malignant melanoma (7)

ABCDE rule/ symptoms help patients and doctors in early recognition of malignant melanoma. If a mole or pigmented spot shows any ABCDE symptoms patient should see and consult the doctor at once. The five basic ABCDE symptoms are the following:

A = Asymmetric configuration of the pigmented lesion (one half of the mole does not match the other half);

B = Border of the lesion is irregular (edges of the mole are ragged, notched or blurred);

C = Color of the lesion is non-homogenous (the mole's pigmentation is uneven or changes, with various shades of tan; brown and black, as well as blue, white and red);

D = Diameter greater than 6 mm.

E = Elevation /infiltration of the lesion.

There is also a dermatoscopic ABCD algorithm that means: A for asymmetry, B for abrupt cut off of the edge of the lesion, C for evaluation/presence of the six colors and D for different dermatoscopic structures.

Although the ABCDE rules are very helpful for early distinction of suspicious lesions there is some percent of malignant pigmentary changes that lack these features. In addition, any new lesion which is up to 3 mm in diameter simply cannot be diagnosed as suspicious only by unaided clinical inspection.

Basal and squamous cell cancers

Basal cell cancer is seen as nodule (pale, wax-like, pearly nodule) or ulcer (irritated patch or sore that won't heal), which has a long evolution over many years. It is the most common skin cancer (8).

Squamous cell cancer is a keratotic skin lesion with underlying infiltration. It grows more quickly than basal cell cancer and appears as red or pink patch that may have a scaly or crusted surface and an open sore in the center or persistent open sore that gradually enlarges and may bleed (8).

Early detection saves lives

People have a greater risk for skin cancer if they have a genetic inheritance predisposing them towards the disease and/or live in an environment that is “rich” in risk factors. The type of the skin seems to be of crucial significance (white population) in combination with exposure to UV radiation during life. Most of the cases of skin carcinoma (of any kind) appear on open parts of the body (face, neck, lower extremities). *Risk factors* for melanoma skin cancer are:

- Excessive exposure to sunlight (UV radiation), sun damage (burns);
- Fair skin, freckles, skin photo type 1 or 2, blond or red hair;
- multiple or more than 2 atypical moles on the skin;
- familial or personal history of melanoma / NMSC;
- compromised immune system; age (older people are at higher risk although melanoma also appear in the young, even children);
- gender (male predominance);
- some inherited skin diseases (Xeroderma pigmentosum).

Early detection is very important because almost all skin cancers can be completely cured if detected early enough. Each individual is recommended to attend the doctor for examining of the skin at least once a year, especially high risk persons for skin cancer. They also have to perform monthly skin self-examinations of all skin surfaces and mucous membranes, and to protect themselves from UVR (7).

Melanoma prevention and early detection in the Republic of Macedonia

In our country, there was no adequate management of the patients with melanoma, in the last decades of the 20-th century. Patients were diagnosed often in the late stadium of the disease, with distant metastasis already present, and sometimes without previous consultation with a dermatologist at all. The detection of melanoma was confined to clinical inspection and excision biopsy in suspicious cases (almost always when it was too late).

There were only few efforts for public education campaigns, detection of the risk factors and target population groups or for early diagnosis. Most of the population, even a great percentage of the highly educated, believed that it is dangerous to excise a pigment lesion (nevus). Even the local traditional healers took their part in this process, performing an act of healing by “natural ointments“.

Bearing in mind that skin carcinoma, even melanoma, has its chance to be healed completely, if detected in an early stage (*in situ*), we were looking for the best method to achieve this goal.

The facts promoted by WHO state that 40% of carcinomas can be prevented and 1/3 can be cured if early detected. All we need is to find the way and means to do that. The outbreak of new technologies helped us in our quest (9).

During screening examinations, some melanomas may remain unnoticed by the clinician. Some simply lack clinical features suggestive of melanoma. Performing total-body skin

examination and comparing the findings to baseline photographs is the only technique that can aid in identifying new or changed lesions. The suspect lesion can then be evaluated further with the new technologies to determine whether biopsy or excision is warranted. One of these new techniques for early diagnosis is dermatoscopy. With the aid of a dermatoscope clinicians can make the diagnosis of melanoma even if they lack classic “ABCD” features (10-11).

In 2005, at the Clinic of Dermatology, University “Ss. Cyril and Methodius” Faculty of Medicine, Clinical Center in Skopje, dermatoscopy was introduced for the first time into clinical practice. It is a world-wide used method for detection and differential diagnosis of melanoma and other melanocytic and non-melanocytic pigmented skin lesions. The method is almost a century old but it entered in routine medical praxis in the late 1980s when more cheaper and hand-held dermatoscopes were made. Today, it is in vivo method which combines optical instruments and digital cameras imaging techniques. It visualizes skin epidermal structures not seen with naked eye. These structures have generated new terminology and clinical criteria for assessing pigmentary lesions. The technique is sensitive, specific, non-invasive and comfortable for the patient.

The introduction of the method in the public health institutions in Macedonia was a starting point for the Department of Dermato-oncology within the Clinic of Dermatology to initialize a series of activities related to prevention and early detection of skin cancer, particularly of melanoma.

Primary prevention – our objectives

There are four basic components of cancer control:

- Prevention
- Early detection
- Diagnosis and therapy
- Palliative care

Our aim was to start both primary prevention program, which is a long term task, and a wide campaign in the whole country for early detection. Also we want to create better conditions for proper diagnosis and treatment of these patients.

Primary prevention means prevention of the development of the malignancy itself, and secondary prevention is prevention of death in patients with already existing malignancy (early detection).

To have a functional primary prevention it is necessary at first to identify the risk factors inducing skin carcinoma and to present them to the public. We have used most frequently a form of a media-aided regular distribution of information. We started a number of medical guided campaigns (newspaper interviews, TV educational programs, open contact programs, printed materials/booklets for patient’s use) for understanding and avoiding the risk factors and for promoting the self-inspection/examination practice.

The accent was put on a well established relation of melanoma /NMSC to a sun exposure, especially excessive sun exposure.

The Republic of Macedonia is a country situated in the Mediterranean Region, in Southern Europe with very high UV index during summer months, with average rate of 7 to 9. The predominant photo type of the skin in our population is 2, rarely 1 and 3 (highly susceptible to sun damage).

To attract more patients, who might be unaware of health risks we started (in addition to our regular patients) weekly screening and consultant examinations of the skin of subjects, who responded to our call for preventive care and early cancer detection. Part of the consultations were payment - free, in order to examine subjects who are in a difficult socioeconomic situation (and only seek medical care when they have to) or simply those who needed additional motive to see a specialist. Our aim was to select subjects that belong to the risk population groups. The public response to our initiatives and campaigns was excellent and far above our expectation.

We divided the healthy group of patients into two major categories:

- patients with high risk for developing a skin carcinoma (one or more risk factors present); and
- patients with low or minimal risk for melanoma.

A regular short or long term follow up (on 3 and on 6 months intervals) in our Department was suggested to the patients from the first group. Skin protective measures (Box. 1) and regular self skin examination (SSE) once a month was recommended to the patients from the second group.

Special attention was given to children prevention and work with parents on the issues of best sun protection for this target group.

Creating conditions for international cooperation with people/organizations who work in this field of interest was our next priority. We made contacts and begun activities and exchange of experiences and data. The first Basic Seminar for Dermatoscopy was organized in June 2007 in Skopje, at the Clinical Center, for the medical professionals (mostly dermatologists) from our country. Our team of experts performed the lectures, with an invited lecturer, Primarius Dr. J. Bandic, ORS Hospital (Oncology Research Surgery), Belgrade, R. Serbia.

We were also, for the first time, a part of an international initiative regarding skin cancer prevention, as representatives of our country. In May 2007, we joined other European countries in a project called *Euromelanoma day* in organization of the European Academy of Dermatology and Venerology (EADV). The idea was to do a free of charge skin examination of volunteers in all dermatology centers from the participating countries on the same day of the month of May every year in order to raise the public awareness for early detection and recognition of melanoma.

Currently we carry on a study for assessment of our population's behavior regarding sun protective habits (old and newly formed) and knowledge of the early signs and symptoms of the skin carcinomas. According to the information gathered we shall find out the weak spots of our educational programs and in the future we can focus on their correction.

A few activities of this kind are going on at the moment, and include a particular target groups. Multiple - choice questionnaires were made and distributed randomly with topics that are related to a specific aspect of the issue in focus, affecting that particular group. For example, a material was distributed among parents of the children in low grade classes in elementary schools and kindergartens in the region of Skopje regarding the children's sun protection and sun damage. Similar questionnaire will be given to all dermatologists in the Republic to evaluate their skill and willingness to do a regularly total body examination of the skin of patients, who would come for another skin disease. American Academy of Dermatology previously reported that only a few (30%) respondent dermatologists customarily perform this examination, and that 49% reported screening of patients thought to be at higher

risk. Performing of this screening is highly recommended because, as the recent studies have shown, higher skill of dermatologists compared with other professionals in diagnosing of pigmented skin lesions is followed by detection of an earlier stage melanoma(12,13).

To achieve a change in a population behavior 3 to 5 years at least are needed. This is a continuous process and we are still working on that.

Box 1. Skin protective measures against cancer

- | |
|--|
| <ul style="list-style-type: none">• Limit sun/ UV exposure time;• Protect the skin with clothing, long sleeve shirt and long pants;• Seek shade, especially between 10am and 5pm;• Use sunscreen with sun protective factor (SPF) of 15 and higher;• Wear sunglasses and broad brim hat to protect face, ears and neck;• Protect children;• Avoid other sources of UVR (tanning beds and sun lamps). |
|--|

Secondary prevention

In the field of early detection of skin carcinoma, especially a fatal melanoma, we are investing much more effort. Prior to the introduction of dematoscopy method we registered between 5 to 7 melanoma cases at our Department per year. Since then the number of seen and diagnosed patients with melanoma as well as with NMSCs has multiplied several times

Between December 2005 and July 2007 (approximately a twenty-month-period) we have diagnosed 32 new cases of melanoma, which were confirmed by histopathology later. A case study of this material indicates the following:

Women predominate, 19 cases (59,4%), compared to men, 13 cases (or 40, 6%), which is opposite from the European and world statistics. Average age for females was 50,7 years, the youngest patient being 21 years old, the oldest 74. The average age in males was 57, 4 years, the youngest was 29 years old, and the oldest 80.

Majority of the cases were from the big city centers, most of them from the capital, town Skopje (43,7 %). Only 3 patients were from the countryside. Surprisingly, one third of the patients were highly educated (34%), among them even four medical doctors (12,5%). The average delay from the first sign of the suspicious lesion to the visit of our Department was 2 years (two patients reported a slowly growing dark maculae in a period of 20 years). The main reasons for the delay were fear of carcinoma diagnosis, lack of time, as well as dogma that it might be more dangerous and one should never excise a skin carcinoma.

In two male patients there was a positive family history of melanoma (father died of melanoma in both cases). There was only one case with multiple melanocytic nevi on the skin, and all other cases had predominantly very clear skin with 0-20 nevi on their whole body. One patient (80-years-old) had removed 15 basalomas in the last decade and during the follow up period (post operationem pro melanoma) he developed another two new pigmented basal cell carcinomas.

Skin cancer was most frequently found on the extremities, 28,1% on the upper, and 25% on the lower limbs (Tab. 1). There was a slight predominance of the lesions on the right half of the body (60%).

Table 1. Site (location) of the skin cancer detected in patients at the Clinic of Dermatology, Medical Faculty in Skopje, in the period from December 2005 to July 2007.

Site/ location	Patients with a diagnosed skin cancer	
	Number	%
Upper limbs	9	28.1
Lower limbs	8	25.2
Back trunk	6	18.7
Stomach	3	9.3
Chest	2	6.2
Face	4	12.5
T o t a l	32	100.0

The leading symptom was itching, followed by bleeding of the lesion. In the majority of the cases a member of the family noticed the lesion (a wife or daughter, usually) and reported it as slowly enlarging. Only two patients were detected during routine examination for other skin disease. Almost all patients were with skin photo type 2 or 1 and with history of sunburn in the past, frequent excessive sun exposure during weekends and holidays in the previous years. Freckles on the skin of the open parts of the body, light brown hair and blue or green eyes were found in 80% of the cases.

To our deepest regret the majority of cases that we detected, at the time of the diagnosis were nodular (thick) melanomas (67%). Only 21% were SSMS (superficial spreading melanomas) or thin melanomas (<4 mm), and 12% had Lentigo maligna melanoma (without a nodus formation) on the face. We did not find any acrolentiginous melanoma. We compared our results with the study carried out in the nearby region in BIH, at the Cantonal Hospital in Zenica where 99 melanomas were detected during the period 1996-2006. The nodular melanoma was the most frequent type (72,72%), which is similar with our findings (67%). They had less of Lentigo maligna melanoma (only 2,02%) compared to our melanoma patients. BIH study also indicates that there is a need of active prevention and educational programs in that population (14).

We have created a specific database (a kind of a clinical skin cancer register) for all the patients at our Department with their personal history and disease related facts. The advent of digital imaging equipment has made it easy to store, retrieve and compare images of melanocytic lesions over time. This includes dermatoscopic images. All data are saved in a digital form and are easily reproducible at the patient's next visit. This is crucial for early detection in patients who are on a follow up protocol (early notice of a changing pigment lesion). From these records we can also gather many epidemiologic facts for a further research and statistical and other use.

Future goals and perspectives

There are many open questions to be answered in the time to come. We are at the beginning of a long road. Some practical issues that have to be pointed out as our further goals consist of tasks, such as:

- Promoting our Department of Dermato-oncology within the Clinic of Dermatology at the Medical Faculty in Skopje as a referent center for prevention and early detection of skin carcinoma on the territory of the whole country. There will be the main database

with all the relevant information about screening and early detection, follow-up and further treatment of patients with skin cancer in Macedonia and a center for planning and coordination of all future activities;

- Establishing a new Society for Dermatoscopy and Early Detection of Skin Carcinoma that will include highly specialized medical professionals working in all bigger centers in the Republic. They will spread and promote cancer prevention programs and will be specialized in early detection of carcinoma of the skin;
- Forming of a multidisciplinary team of specialists in the Clinical Center, Medical Faculty in Skopje and in other countries in the SEE Region and broader, with dermatologists, surgeons, pediatricians, oncologists, histopathologists, epidemiologists, psychologists and others, which will work together on managing of this group of patients with melanoma/other skin carcinoma;
- Connecting with an on-line consultation forums and working groups (teledermatology, teledermatoscopy), for exchange of information, experiences and knowledge. Our databases are specific, containing clinical and dermatoscopic images, which makes this e-health form of collaboration an option highly convenient and necessary for our practice.

The strategies for early prevention are divided into two groups of activities:

- Rising population awareness for the early symptoms and signs of skin carcinoma which would lead them to seek advice from a doctor or a specialist dermatologist as soon as a suspicious mole or other change on the skin is noticed; and
- Creating national and regional screening programs for asymptomatic population enhances the chances of a patient for a complete cure.

This second issue will be of special interest for us in the future, to strengthen the collaboration with the relevant institutions in the government and health departments, as well as with international organizations which offer financial and other kind of support for cancer control programs in the developing countries. We wish the results of our work to influence on better health policy, which will promote more efficient cancer prevention and control programs in the Republic of Macedonia and other countries in SEE Region, Europe and the world.

Exercise

Task 1:

Students are required to create a sample questionnaire for gathering data to assess people's behavior related to risk factors for development of skin carcinoma, and their knowledge of adequate sun protection.

Task 2:

Students are required to collect available information on cancer (melanoma and other types of cancer) screening programs from one high developed country in northern or western Europe, or in the world, and to compare them with the same programs in a developing country. They are asked to compare the incidence and mortality rates.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Global Public Health Threats and Disaster Management
Module: 5.14	ECTS: 1
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Key words	Environmental and public health; disasters; natural disasters; accidents; disaster planning; emergency medicine.
Learning objectives	After completing this module students and public health professionals should: <ul style="list-style-type: none">• understand public health importance of disasters and disaster management;• be aware of needs for public health preparedness and response;• define/classify major crisis, emergencies and disasters using relevant definitions and criteria;• increase knowledge about epidemiological aspects of main disasters and their public health consequences;• list and describe different phases of disaster management;• improve their knowledge and skills for quantitative risk assessment;• describe and understand the needs for hazard, vulnerability and emergency plans in different phases of disaster management;• describe different response activities.

<p>Abstract</p>	<p>Major emergencies, disasters and other crises do not respect national borders and never occur at convenient times. The magnitude of human suffering caused by these events is huge, and many aspects of people’s lives are affected – health, security, housing, access to food, water and other life commodities, to name just a few. That is why it is vital to strengthen public health preparedness and response to different natural and man-made disasters. Disaster management has a crucial role in mitigation of disaster consequences. The aim of disaster management is to support countries in building their emergency response capacities, stressing a multisectoral and comprehensive approach in terms of risk reduction. Since the risk is a function of the hazards to which a community is exposed and the vulnerabilities of that community, the risk can be modified by the level of the emergency preparedness of the community at risk. The challenge is to put in place systematic capacities such as: legislation, plans, coordination mechanisms and procedures, institutional capacities and budgets, skilled personnel, information, and public awareness and participation that can measurably reduce future risks and losses. Emergency preparedness is a programme of long-term activities whose goals are to strengthen the overall capacity and capability of a country to manage efficiently all types of emergencies. It requires development of emergency plans, training of personnel at all levels and in all sectors, education of communities at risk, and monitoring and regular evaluation of these measures. The main goal of this module is to give more detailed and comprehensive approach to the definition of the major incidents, scientific evidence for public health importance of specific type of emergencies/disasters and basic elements for disaster management with special emphasis to risk assessment and emergency preparedness programmes.</p>
<p>Teaching methods</p>	<p>Teaching methods should include: lectures, interactive small group discussion, seminars, tutorials and case studies. Students should apply the new knowledge by working in small groups identifying public health preparedness and response priorities and respective reduction plans. Basic skills like quantitative risk assessment have to be trained.</p>
<p>Specific recommendations for the teachers</p>	<p>This module should be assigned by 1.0 ECTS from which 70% should include work under the direct supervision of teachers including lectures and guided discussion, and 30% is individual work of the students – case studies and writing assignments; searching Internet in order to find the latest available data regarding frequency of events, International Health Regulation (2005), strategies, plans and preparedness.</p>
<p>Assessment of students</p>	<p>Assessment could be based on multiple choice questionnaire (MCQ), structured essay and case problem presentations.</p>

GLOBAL PUBLIC HEALTH THREATS AND DISASTER MANAGEMENT

Elisaveta Stikova, Pande Lazarevski, Ilija Gligorov

Introduction

Technological innovation and economic development of the past century have brought improved living standards and longer lives to most of the population. Nevertheless, these developments have not eliminated or decreased threats to human health and security.

Threats to health security are many and diverse. They include sudden shocks to health and economies from emerging diseases, humanitarian emergencies, effects of climate change or environmental degradation, bioterrorism, natural disasters and other acute health risks.

Threats to health and security are multiplying and moving faster than ever before. Tackling the health effects of these threats involves working collectively to improve preparedness and effective responses when they occur.

In a globalized world, they cross national borders and threaten our collective security. In recent years, the world has faced numerous events that put at risk the health and security of people and societies. Some of these events have triggered public health emergencies with cross-border consequences; others have had a more local, but still severe, impact on affected communities.

Within the traditional categories of health threats, such as epidemic prone diseases and natural and technological health hazards, there are scenarios of new or re-emerging threats, such as an influenza pandemic or the accidental release or deliberate use of biological and chemical agents or radio nuclear material, creating a sense of insecurity and a climate of fear and posing new challenges to national health systems and governments.

Some communicable diseases, such as severe acute respiratory syndrome (SARS), influenza, HIV/AIDS, increasing incidence of multi-drug resistant TB cases and other, have the potential to cause sudden, large-scale harm to the health and welfare of entire populations from developed and developing countries.

Food safety and food security, access to safe water and sanitation, air pollution and affordable energy supply, climate change and other related phenomenon are also intimately linked to health and health security in a number of ways.

There are many other threats to public health that are closely linked to individual behaviour, such as suicide, interpersonal violence, road crashes and accidents at work and at home. Public health recognizes well the link between the health of individuals, communities and countries and their safety and security of their living environments. The question of whether these are health security issues is worth further discussion.

The enjoyment of the highest attainable standard of health as a state of complete physical, mental and social well-being is one of the fundamental rights of every human being. On the other hand, health of all peoples is fundamental to the attainment of peace and security. This is because UNDP identifies health security as one of the seven components of human security. The other categories encompassing most of the threats to human security are economic, food, environmental, personal, community and political security (13).

There are four criteria that have influence on the links strength between health and human security. These include:

- a) scale of the disease/injuries burden;
- b) urgency for action;
- c) scale of the impact on society;
- d) interdependencies or externalities with potential to cause ripple effects.

By applying these criteria the following four health challenges stand out as closely linked to human security:

- global epidemic prone disease;
- natural disasters:
 - hydrometeorological disasters
 - geophysical disasters
- accidental and deliberate outbreaks:
 - toxic chemical agents;
 - radionuclear accidents.
- environmental disasters:
 - climate change;
 - foodborne diseases.

Some communicable diseases, such as severe acute respiratory syndrome (SARS) and influenza, have the potential to cause sudden, large-scale harm to the health and welfare of entire populations, including those in high income countries such as Western Europe.

These and other epidemic-prone diseases have therefore been generally considered as threats to health security. Other communicable diseases, such as HIV disease and multydrug-resistant tuberculosis (TB), avian influenza A/H5N1 outbreaks with human cases and threatening influenza pandemic and other new (re)emerging diseases add significantly to the overall disease burden globally and in parts of the European Region.

The eradication of communicable disease threats such as smallpox in the 1970s and poliomyelitis and measles targeted for elimination may paradoxically create novel threat scenarios if the public health capacity required at the national and international levels is not maintained.

Natural disasters can have significant public health and environmental impacts which, depending on the event, may affect more than one country. Extreme storms, for instance, may be very damaging for forests and other natural habitats; forest fires may destroy rich forest ecosystems and adversely affect rare plant and animal species; landslides and snow avalanches often remove or damage the biotic stock of the areas located along their paths. Extreme events can cause a “domino effect” of other, more indirect impacts, such as the mobilisation by floods of toxic substances in the soil that then infiltrate aquifers, the degradation of soils by forest fires, fires and explosions triggered by earthquakes, or a deterioration in water quality caused by drought.

Food safety and food security, access to safe water, clean air and affordable energy supply are also intimately linked to health in a number of ways. Nevertheless, this chapter does not discuss further health security issues even bovine spongiform encephalopathy (“mad cow” disease) and the related variant Creutzfeldt-Jakob disease that threatens our security from the late 1980s onwards.

Europeans regard terrorism as one of the key challenges the European Union is facing today. The numerous terrorist attacks using explosives around the world, including the Madrid train bombings on 11 March 2004 and the underground London bombings on 7 July 2005 and elsewhere in the world made it clear that terrorism is a threat to all states and to all peoples. The world can't forget the terrorist attacks on 11 September 2001, the anthrax attacks of autumn 2001 in the United States of America, the deliberate use of nerve gas (sarin) in Japan - Matsumoto incident on 27–28 June 1994 and the deliberate use in the Tokyo subway on 20 March 1995 and many other terrorist attacks around the world (7).

Terrorists target our security, the values of our democratic societies and the basic rights and freedoms of our citizens. Terrorists may resort to non-conventional means such as biological, chemical and nuclear weapons or materials. Some of these materials have the capacity to infect, harm and injure thousands of people, contaminate soil, buildings and transport assets, destroy agriculture and infect animal populations and eventually affect food and feed at any stage in the food supply chain. The risk of “bioterrorist” attack has been statistically low, but its consequences can be devastating. If a deliberate introduction of deadly pathogens or a naturally occurring disease outbreak were to occur in the European Union or be imported from a third country, it is possible that it could spread across borders and have considerable economic and social impact.

Although chronic conditions related to such lifestyle factors as smoking, drinking, an unhealthy diet, unsafe sex, insufficient physical activity or obesity bring much more suffering, disability and loss to the people of the European Region than do communicable diseases, they do not have a direct health security dimension. Other threats to public health are also closely linked to individual behaviour, such as suicide, interpersonal violence, road crashes and accidents at work and at home.

The likely effects of a major incident are dead and missing of the overall population or of some more vulnerable population's group, mental and physical injuries, mental and physical diseases, secondary hazards (fire, disease etc), contamination of environmental media such as water, air pollution, soil... Displacement of people, damage to infrastructure, breakdown in essential services, loss of property and loss of income are other connected consequences of the major incidents and disasters that influence on the global and public health security (3,4).

In respect to this, every country should strengthen its national public health preparedness capacity. The term “preparedness” covers all aspects, such as: prevention, protection, response and recovery. The term also covers the steps taken to minimise the threat of natural and man-made disasters including deliberate release of chemical, biological and radiological agents.

Definitions

There are so many different kinds of public health threats. They differ in terms of their nature, duration, level of damage, cost... Leading by methodological purpose it's very important to make very clear definition and strict distinction in terms of the name of the events, sources and etiological agents. Some most important definitions are given below.

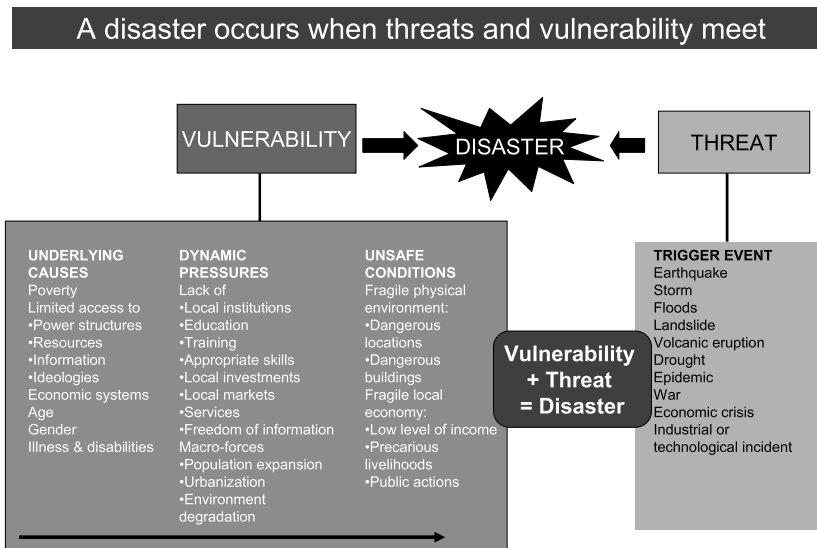
Emergency is a state in which normal procedures are suspended and extraordinary measures are taken. Emergency presents a sudden occurrence of demanding event that may be due to epidemics, to natural, to technological catastrophes or to other man-made causes. WHO and the IHR (2005) define emergency as an “extraordinary” event that could spread internationally or might require a coordinate international response. Events that may

constitute a public health emergency of international concern must be detected, assessed, notified and reported.

Major incident is an emergency that cannot be managed within normal working practices. If you require special provision to handle it, it's a major incident. Major incident means an incident where its location or number, severity and type of life casualties require extraordinary resources.

Disaster means serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope using its own resources (WHO). A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk (1). Disasters combine two elements: events and vulnerable people. A disaster occurs when a disaster agent (the event) exposes the vulnerability of individuals and communities in such a way that their lives are directly threatened or sufficient harm has been done to their community's economic and social structures to undermine their ability to survive. A disaster is fundamentally a socio-economic phenomenon. It is an extreme but not necessarily abnormal state of everyday life in which the continuity of community structures and processes temporarily fails. There is a problem of definition which affects the interpretation of vulnerability to disasters. Therefore, a list of important questions often cannot be answered clearly: When does a disaster begin? Who decides about shortcomings in the coping capacity of a society? When does the disaster end? What are the appropriate indicators for disasters? In addition, many definitions do not take differing vulnerabilities of population groups into account. A disaster occurs when the threats and vulnerability meet. The balance between the component of vulnerability and threats is essential for disaster occurrence.

Figure 1. The main components of vulnerability and trigger threat's events in disaster occurrence



Source: *Preparing WHO for better action in crisis, WHO*

The term disaster can enter into the database of the UN's International Strategy for Disaster Reduction (ISDR), only if at least one of the following criteria is met:

- a report of 10 or more people killed;
- a report of 100 people affected;
- a declaration of a state of emergency by the relevant government;
- a request by the national government for international assistance.

A disaster is “a disruption of the human ecology that exceeds the capacity of the community to function normally”.

There are 5 different elements/constituents of a community that should be affected in terms of the disaster's definition:

- People;
- Property (infrastructure, possessions and assets, public, private and cultural);
- Services (governmental, NGO);
- Livelihoods of the people (e.g. urban/ rural);
- Environment (air, water, soil, built and natural, urban and rural).

Crisis is an event or series of events which represents a critical threat to the health, safety, security or wellbeing of a community or other large group of people, usually over a wide area. Armed conflicts, epidemics, famine, natural disasters, environmental emergencies and other major harmful events may involve or lead to a humanitarian crisis.

Hazard is any phenomenon that has the potential to cause disruption or damage to people and their environment. A hazard might lead to a disaster.

Risk is defined as a probability of harmful consequences, or expected losses (deaths, injuries, property, livelihood, economic activity disrupted or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerabilities.

Risk is a function of the hazards to which a community is exposed and the vulnerabilities of that community. The risk exposure decreases proportionally to the level of the local preparedness of the community at risk. It is expressed by the following notation:

$$\text{Risk: } \frac{\text{Hazard probability X Vulnerability}}{\text{Local Capacity (Preparedness)}}$$

Vulnerability encompasses the conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards. The vulnerability can be defined as a degree to which a population or an individual is unable to anticipate, cope with, resist and recover from the impact (expected loss) of a disaster.

Emergency Preparedness designates all those activities that aim at preventing, mitigating and preparing for emergencies, disasters and other crises. Emergency preparedness is a programme of long-term activities whose goals are to strengthen the overall capacity and capability of a country or a community to manage efficiently all types of emergency and bring about an orderly transition from relief through recovery, and back to sustained development. It requires development of emergency plans, training of personnel at all levels and in all sectors, and education of communities at risk. In terms of emergency preparedness all these

measures should be monitored and evaluated regularly. Emergency prevention and mitigation involves measures designed either to prevent hazards from causing emergencies or to lessen the likely effects of emergencies (1, 4).

Classification of major incidents and emergencies

There are so many criteria for classification of major incidents and emergencies. Regarding their nature they have been divided in two big categories – *natural and man-made* major incidents/emergencies.

In terms of their occurrence they can appear *suddenly or insidiously*. The major incidents/emergencies can cause *mechanical or medical* casualties and the most affected group can be adult population or children.

As a consequence of the emergency the social structure can be intact or destroyed. In the first case we speak about *simple* and in the second one about *compound* emergency/disaster.

A *compensated* type means that emergency/disaster can be managed by additional resources mobilisation. *Uncompensated* emergency/disaster means that it can't be managed by additional mobilisation of available resources.

Numerous and different classifications by type and origin of disasters are available and they have been reviewed.

The US Center for Disease Control (CDC 1989) identified three major categories of disasters:

- *geographical events* such as earthquakes and volcanic eruptions;
- *weather-related problems* including hurricanes, tornadoes, heat waves, cold environments and floods;
- *human-generated problems* which encompass famines, air pollutions, industrial disasters, fires and nuclear reactor incidents.

The classification by *World Disaster Report 1993* (4), compiled many different aspects of classification in 3 main groups:

I. Two main categories classification:

- natural (weather and geological events);
- no natural (human-made) technological and purposeful events caused by people [transport, war, fire/ explosion, chemical and radioactive release].

II. Three categories classification:

- geographical events (earthquakes and volcanic eruptions);
- weather-related problems (including hurricanes, tornadoes, heat waves, cold environments and floods);
- human generated problems (famines, air pollutions, industrial disasters, fires and nuclear reactor incidents).

III. Four main categories classification:

- sudden natural (avalanche, cold and heat wave, earthquake, aftershock, floods, volcanic eruption, storm etc.);
- long-term natural (epidemics, drought, desertification, famine, food shortage etc);
- sudden human-made (structural collapses, building collapse, air disaster, land disaster, industrial/technological disaster, explosions – chemical, nuclear, mine explosions, pollution, acid rains, fires etc.);

- long-term human-made (national civil strife and civil war, international war-like encounters, displaced population, displaced persons, refugees etc.).

EM-DAT distinguishes two generic categories for disasters: *natural* and *technological*. These are then divided into 15 main categories, each covering more than 50 sub-categories.

Natural disasters are split into two groups:

- *Hydro meteorological disasters*: avalanches/landslides, droughts/famines, extreme temperatures, floods, forest/scrub fires, windstorms and other disasters, such as insect infestations and wave surges.
- *Geophysical disasters*: earthquakes, tsunamis and volcanic eruptions.

Technological disasters comprise three groups:

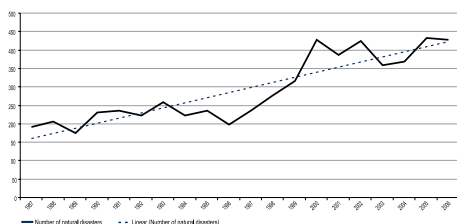
- *Industrial accidents*: chemical spills, collapses of industrial infrastructure, explosions, fires, gas leaks, poisoning and radiation.
- *Transport accidents*: by air, rail, road or water means of transport.
- *Miscellaneous accidents*: collapses of domestic/non-industrial structures, explosions and fires.

Some epidemiological characteristics of natural disasters – global overview

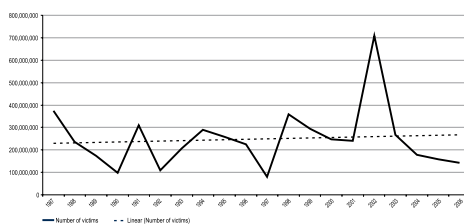
Over time, natural disasters are not stationary and may exhibit various kinds of trends, cycles, or seasonal patterns. The evolutions of these patterns can be summarized and made evident by using trend lines showing long-term movements in natural disasters time series data. The linear trend lines that we present in the following figures demonstrate simply the general orientation of the numbers.

Figure 2. Natural disaster occurrence 1987-2006

a) number of disasters



b) number of victims (deaths+affected)



Source: Annual Disaster Statistical Review: Number and Trends 2006. CRED, Brussels, 2007.

During the period between 1987 and 1997 the number of disasters varied generally between 200 and 250, but in 2000-2006 the number of disasters increased by nearly a multiple factor of two. An increase of this magnitude can be partially explained by increased reporting of disasters, particularly by press organizations and specialized agencies.

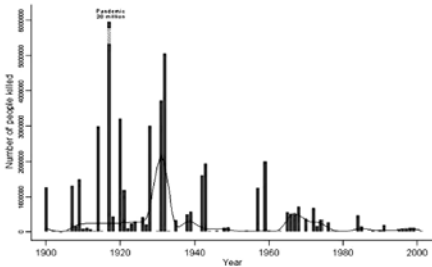
During the period between 1987 and 2006 the number of victims registered in the natural disasters was ranged between 100,000,000 and 300,000,000 persons in almost all years. The highest number of victims in 2002 (more than 700 000 000 deaths and affected people) was due to the droughts that affected 300 million people in India and 60 million in China. In the

same year China was affected by a wind storm with 100 million affected people and a flood that affected 60 million people.

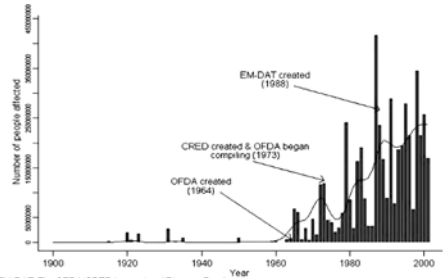
It's very important to stress that natural disasters are connected with less mortality rate (smaller number of deaths) in the period of 1900-2000, but the last century data have shown that the number of affected people is continuously increased.

Figure 3. Number of deaths and affected people in natural disasters in period 1900-2000

a) number of deaths



b) number of affected people



Source: EM-DAT. The OFDA/CRED International Disaster Database

In 2006, a total of 427 natural disasters occurred around the world. China, USA and India were the most affected countries by natural disasters in 2006. The most frequent natural disasters are floods. In 2006, 254 floods were reported, which accounted for 59% of all reported disasters.

Table 2. Occurrence by major type of natural disasters in 2006

Major types of natural disasters	2006
Geological	36
Floods & related	254
Droughts & related	60
Windstorms	77
Total	427

	Country	No. of Natural disasters
1	China P.Rep.	38
2	United States	31
3	India	21
4	Philippines	20
5	Indonesia	20
6	Afganistan	13
7	Viet Nam	11
8	Pakistan	9
9	Bangladesh	8
10	Romania	8

Source: Annual Disaster Statistical Review: Number and Trends 2006.CRED, Brussels, 2007.

In terms of the geographical distribution of total number of victims by continents it's very important to emphasize that Asia remains the most affected region with over 119 millions reported victims (83% of all reported victims).

Table 3. Most affected continents and countries by natural disasters- number of victims

Continent	2006	2005	2000-04 Average
Africa	21.858.117	21.779.142	38.802.923
Americas	1.446.491	8.291.822	5.405.748
Asia	119.050.089	127.513.978	283.120.528
Europe	259.900	529.359	1.452.740
Oceania	37.886	28.278	48.351
Total	142.652.483	158.142.579	328.830.291

Continent	2006	2005	2000-04 Average
Africa	15.32%	13.77%	11.80%
Americas	1.01%	5.24%	1.64%
Asia	83.45%	80.63%	86.10%
Europe	0.18%	0.33%	0.44%
Oceania	0.03%	0.02%	0.01%
Total	100%	100%	100%

Source: Annual Disaster Statistical Review: Number and Trends 2006.CRED, Brussels, 2007.

In 2006, the three deadliest disasters were the earthquake in Indonesia in May (5,778 killed), Typhoon Durian in the Philippines in December (1,399 killed) and the European heat-wave in July (3 392 killed).

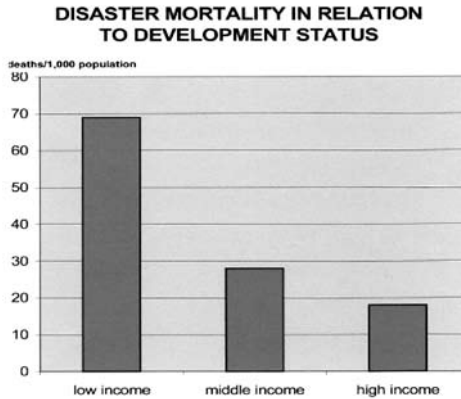
The most significant disasters in terms of economic damages were: the flood in India (US\$ 3.39 billion), Typhoon Bilis in China (US\$ 3.32 billion) and the Indonesian earthquake (US\$ 3.1 billion)

Table 4. Top 10 of 2006 most significant disasters by economic damages (in US\$ million)

	Disaster type	Country	Economic damages
1	Flood	India	3.390
2	Wind Storm (Typhoon Bilis)	China P. Rep.	3.325
3	Earthquake (Yogyakarta)	Indonesia	3.100
4	Extreme Temperature (heat-wave)	China P. Rep.	2.910
5	Wind Storm (Typhoon Saomai)	China P. Rep.	2.510
6	Wind Storm (Typhoon Shanshan)	Japan	2.500
7	Wind Storm (Tornado)	United States	1.200
8	Wind Storm (Tropical Storm Larry)	Australia	1.180
9	Flood	United States	1.000
10	Extreme Temperature (cold-wave)	Russia	1.000

Source: Annual Disaster Statistical Review: Number and Trends 2006.CRED, Brussels, 2007.

In 2005, the hurricane Katrina resulted in the highest damages ever reported for a hydrometeorological natural disaster: almost US\$ 129 billion. The same year, two other hurricanes, Wilma and Rita, caused damages estimated at more than US\$ 21 billion and 16 billion, respectively.

Figure 4. Disaster mortality in relation with developing status

Source: WHO-role in disaster and emergencies. *Strengthening National Capacities*, WHO, 2005.

In terms of disaster mortality there is scientific evidence that dying is higher in less developed countries.

Statistical data show that mortality is higher in less developed and developing countries in comparison with developed countries. It means that poor countries and population more suffer and they need better programs for vulnerability reduction and public health preparedness as a prerequisite for mitigation of the consequences (17).

Over the last decades, the WHO European Region has been affected by numerous events that have endangered health and security. Some of these events have created crises and public health emergencies of an international nature, others have been more localized. Newly emerging public health risks like avian influenza have sparked international concern, and health is increasingly discussed in terms of its potential implications for the national security and safety of people, and national health systems.

Several serious crises have affected the Region; between 1990 and 2006, 1469 events – disasters and crises – caused 95 700 deaths, and affected more than 42 million human beings. Extreme temperature events and earthquakes accounted for the highest mortality rates, whereas floods – although the most frequent events – caused a relatively lower mortality.

Table 5. Natural disasters and accidents in the WHO European Region, 1990–2006

Type of events	Number of events	Deaths	Affected population	Economical cost (thousands US\$)
Flood	344	3593	11 566 509	66 093 052
Extreme temperature	112	52119	1 389 529	9 024 788
Drought	31	2	14 865 575	14 297 309
Wildfire	58	228	286 969	3 540 357
Earthquake	102	21 840	5 875 138	3 022 549
Accidents	609	16 856	137 638	11 697 048
Landslide and avalanche	57	2 084	90 196	156 589
Windstorm	170	1 397	8 063 234	33 114 822
Total	1483	98 119	42 274 788	168 149 414

Source: *Towards Health Security*, WHO, 2007; EM-DAT: Emergency Disasters Data Base

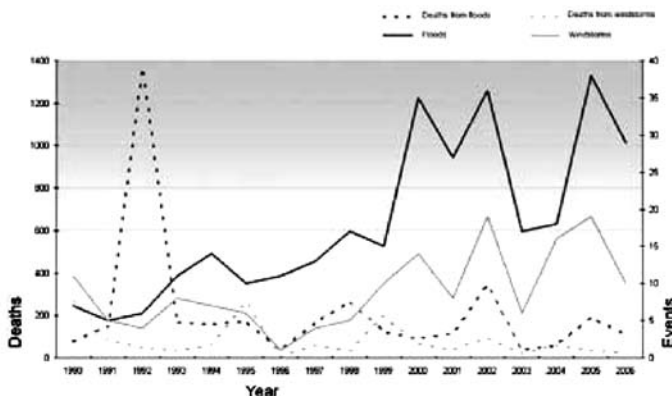
Natural disasters and technological accidents are not always singular or isolated events. They can occur in complex combinations and/or in rapid succession, thereby triggering multiple effects (for example, forest fires that cause soil erosion or heavy rainfall that causes the breach of dams holding back hazardous wastes). Future policies should consider an integrated approach to addressing these issues. More integrated policies, in particular regarding land use planning but also in sectors that are vulnerable to disasters and accidents, such as transport and industry, could also help to reduce the socio-economic and environmental costs of such events.

The environmental impacts of natural disasters and technological accidents are often difficult to assess. In some cases environmental impacts are not apparent immediately after an event. The impacts may be considerable in the short term but disappear over time due to the ability of some natural systems to recover relatively quickly.

Time trends of natural disasters – specific overview by type of disasters

According to EM-DAT, floods comprised 43 % of all disaster events for the period 1998–2002. During this period, Europe suffered about 100 major damaging floods, causing some 700 fatalities, the displacement of about half a million people or 1.5% of European population and at least 25 billion euro in insured economic losses (3,12).

Figure 5. Frequency of floods and windstorms with numbers of related deaths in the European region in 1990-2006



Source: Towards Health Security, WHO, 2007

Floods can also have important beneficial effects for river ecosystems, groundwater recharge and soil fertility. Over the past five years floods affected an estimated land area of one million square kilometres.

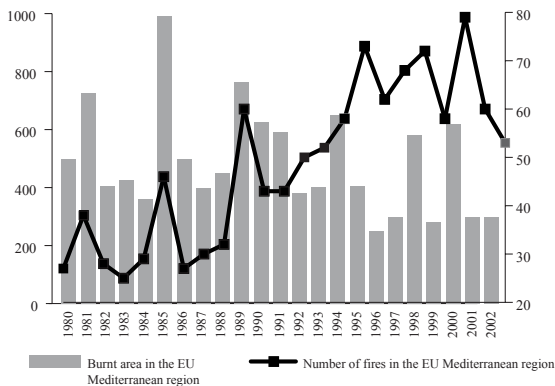
Storms are among the most costly types of disasters. Until the summer 2002 floods in central Europe, windstorm *Daria* in January 1990 and then storms *Lothar* and *Martin* in late December 1999 held the record for Europe’s most expensive disasters in terms of insured losses, at nearly six billion euro and around 6.7 billion euro, respectively. The three storms killed around 220 people in total. Major storms occur most frequently in autumn and winter and can happen in rapid succession.

Forest fires, like drought (which can be a contributing factor), mostly affect

Mediterranean and Black Sea countries but occur throughout Europe, including as far north as northern Norway. In the five Mediterranean Member States of the European Union — France, Greece, Italy, Portugal and Spain — the area burnt in forest fires has varied between 200 000 and 600 000 hectares a year over the past 20 years. In that period the total number of fires reported has risen sharply from around 20 000/year to 60 000/year, although this may partly reflect improved reporting procedures.

Between 1998 and 2002, 62% of forest fires occurred in the Mediterranean biogeographical region even though this makes up only 14% of the total European land area.

Figure 6. Numbers of fires and burnt area from 1980-2002 in some EU countries



Source: *Mapping the impacts of recent natural disasters and technological accidents in Europe. Environmental issue report No 35.EEA, Copenhagen, 2003.*

The summer of 2003 was particularly bad for forest fires in much of southern Europe.

Portugal experienced its worst forest fire season in 23 years as at least 215 000 hectares (5.6% of its total forest area) burned. The French regions of Var, southern Corsica and Upper Corsica were also seriously affected by fires, with between 1.1% and 2.5% of their total area being completely burnt.

Forest fires often claim human victims, especially among fire fighters. The summer 2003 fires in Portugal, for instance, caused 15 deaths. Economic losses generated by fires are estimated at 1 000–5 000 euro/hectare burnt, but other costs such as landscape loss, with consequences for rural and eco-tourism, are much harder to quantify.

In environmental terms, the most significant impact of forest fires is destruction of valuable species and their habitats. The summer 2000 and 2006 heat wave in south-eastern Europe encouraged the spread of fires in Croatia, Bulgaria, Romania, Macedonia and especially Greece where flames reached almost all forests on the island of Samos.

In Europe, earthquakes have killed far more people than any other extreme event and have caused extensive damage. Europe's major earthquake-prone areas are in the Mediterranean and Black Sea basins, along the active fault lines between the Eurasian and African plates.

The most dramatic events in recent decades include the 1977 earthquake in Romania, which seriously affected the capital, Bucharest; the 1980 earthquake in southern Italy, which

killed 4 500 people and left more than a quarter of a million homeless; the Izmir earthquake in Turkey in August 1999, which killed an estimated 17 000 people and caused more than 15 billion euro in losses and many other like this one that took place in Turkey in April 2003 and in Algeria in May 2003.

In Europe, droughts do not trigger famines and thus, do not kill people. However, human, environmental and economic impacts can be devastating, especially when droughts are associated with heat waves. The fatal effects of heat waves were demonstrated during the summer of 2003, when temperatures in some areas (France, western Germany, south-west England) climbed to record highs. A heat wave across much of Europe during August 2003, considered the warmest August month on hemisphere, claimed possibly as many as 35 000 lives, with France alone recording almost 15 000 deaths, mostly among elderly people.

Droughts can have very heavy economic impacts, especially when they last a long time. In the late 1990s, a drought that particularly affected the central and southern parts of Spain caused losses of more than 800 million euro in the cereal, olive oil and livestock sectors (more than 50% of the total value of these crops). The combination of a long drought and a heat wave that swept across Eastern Europe in 2000 reduced the corn output of Romania by one third and significantly diminished agricultural yields in Hungary, Croatia and Serbia (USDA, 2000).

The environmental impacts of droughts can be exacerbated by unsustainable trends in water use. The worst combination appears when drought strikes freshwater ecosystems already weakened by excessive water withdrawals. For example, Lake Iliki, some 100 km northeast of Athens, has been reduced to a third of its original size, partly by a severe drought in 2000 but also as a result of increasing drinking water demand. Likewise, Lake Dojran, located between Greece and Macedonia, is at risk of drying up, thus threatening one of the richest inland fishing stocks in Europe. Droughts can cause deterioration of water quality in rivers, lakes and reservoirs by exacerbating algal blooms that reduce the oxygen available for aquatic species.

Droughts may also trigger soil erosion, mainly in Mediterranean areas. One way this happens is through a reduction in vegetation cover caused by forest fires or by increased plant mortality due to water stress

Technological disasters

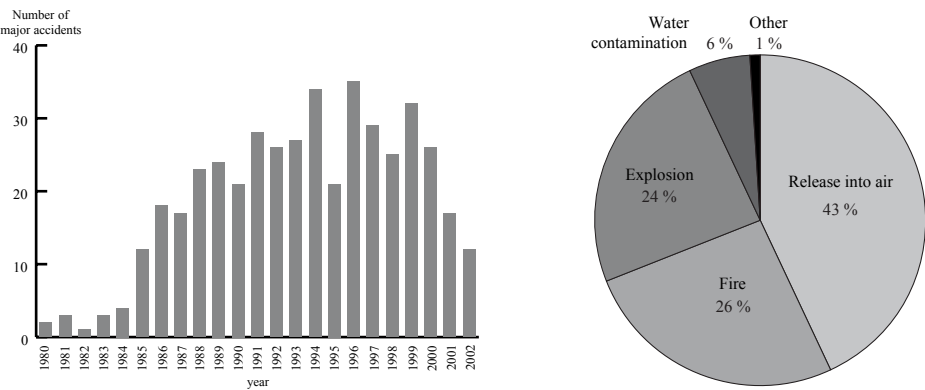
Compared with disasters of natural origin, most technological accidents do not tend to cause many deaths or much economic damage. However, their catastrophic potential, especially in environmental terms, can be much greater than that of natural events. The worst non-natural disasters resulting in human suffering and death have been caused by wars, transport and industrial activities. At first, industrial disasters mainly affected people engaged in specific occupations, but later, particularly after the Second World War with the rapid growth and expansion of the chemical industry and the use of nuclear power, these occurrences led to serious danger even to people outside work areas, and to the general environment.

The first documented chemical disaster with industrial origins was described by Bernardino Ramazzini in 1600s (8). Today's chemical disasters differ in the way they happen and in the type of chemicals involved (5). Their potential hazard is a function both of the inherent nature of the chemical and the quantity that is present on site. A common feature is that they usually are uncontrolled events involving fires, explosions or releases of toxic substances that result

either in the death and injury of a large number of people inside or outside the plant, extensive property and environmental damage, or both (8).

Figure 7 presents the data for technological incidents by type and frequency of their occurrence in the period between 1980 and 2002. The most prevalent technological accidents are connected with releases of toxic substances in air (43%). Fire and explosion participate in the structure of technological accidents with almost equal parts (26% and 24%). The geographical and temporal impact of fires and explosions alone tends to be relatively limited but can be greatly magnified if, in a ‘domino effect’, they result in toxic substances being released to air, water or soil (3, 12).

Figure 7. Major technological accidents and their distribution by type in period 1988-2002



Source: *Mapping the impacts of recent natural disasters and technological accidents in Europe, 2003; Major accident reporting system (MARS) managed by MAHB Major Accident Hazards Bureau*

Fires or explosions account for half of all industrial accidents recorded in Europe over the past two decades. They are also the most dangerous type of industrial accident. The impact of industrial accidents can vary widely depending on the intensity and persistence of any hazardous substances involved. Airborne toxic pollutants can be very damaging for flora and fauna, but the strongest environmental impacts are seen when toxic substances are released into rivers and other watercourses, with possible contamination of drinking water resources or lethal consequences for aquatic ecosystems and especially for fish. The impacts can be transboundary if international rivers or lakes are affected.

By methodological needs technological accidents can be divided in five groups:

- Overt disasters
- Slow-onset disasters
- Mass food poisonings
- Transnational disasters
- “Developing” disasters

Overt disasters are environmental releases which leave no ambiguity about their sources and their potential harm. Examples are Seveso and Bhopal. Seveso’s accident took place in 1976 and it caused contamination of several square kilometres of populated countryside

by the powerfully toxic 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). More than 700 people were evacuated, and restrictions were applied to another 30,000 inhabitants. Bhopal represents, probably, the worst chemical industrial disaster ever. It happened in 1984 when gas leak caused a deadly cloud to spread over the city of Bhopal, in central India, leaving thousands of dead and hundreds of thousands injured in the space in few hours. One of the most impressive and instructive examples of the slow-onset disasters is “Minamata disease”. In 1953 unusual neurological disorders similar to that due to poisoning by alkyl mercury compounds began to strike people living in fishing villages along Minamata Bay, Japan. A source was found in a factory discharging of mercury into Minamata Bay and the subsequent biological transformation into organic compound into the fish that were used as food. Outbreaks of food poisoning can be caused also by toxic chemicals released into the environment through the use of chemicals in the handling and processing of food. One of the most serious episodes of this type occurred in Spain in 1981 when previously unknown syndrome with signs of toxic pneumonitis, and gastro-intestinal symptoms affected over 20 000 persons with 315 deaths. The illness was found to be associated with the consumption of inexpensive denatured rapeseed oil, sold in unlabelled plastic containers that caused contamination with polychlorinated biphenyls (PCBs). Similar poisoning was reported in Japan and in Taiwan and dioxin poisoning was detected in Belgium. An obvious example of transnational disasters is Chernobyl, whose contamination reached from the Atlantic Ocean to the Ural Mountains. The Chernobyl disaster in 1986 is regarded as the worst accident in the history of nuclear power. The explosion in the plant resulted in radioactive contamination of the surrounding geographical area, and a cloud of radioactive fallout drifted over western parts of the former Soviet Union, eastern and western Europe, some Nordic countries and eastern North America. Large areas of Ukraine, the Republic of Belarus and the Russian Federation were badly contaminated, resulting in the evacuation and resettlement of over 336 000 people (6, 1).

The occurrence of ‘developing’ disasters is connected with industrialization and modernization of agriculture in developing countries and application of imported or adopted technology and products, which are quite different from those in which they were intended to be used. It was estimated that about 500,000 acute pesticide poisonings occur annually, resulting in about 9,000 deaths, and that only about 1% of the deadly cases occur in industrialized countries, although those countries consume about 80% of the total world agrochemical production (5).

Disaster management

Nobody dies by “disaster”. During the crises, emergencies or disasters people die of well recognisable, often banal causes that in other circumstances could be prevented. This is the main reason for better preparedness for appropriate response to crises and disasters.

There are four essential phases in the management of disasters: preparedness or warning phase, response or emergency phase, rehabilitation and recovery (16). More appropriate disaster management means more detailed planning as follows:

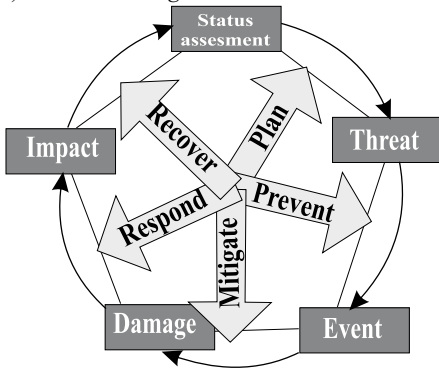
- *Anticipation;*
- *Assessment;*
- *Prevention;*
- *Preparation;*
- *Response:*
 - *Specific incident algorithm;*

- Command and control;
- Safety;
- Communication;
- Triage;
- Treatment;
- Transport.
- Recovery;
- Post Incident Audit.

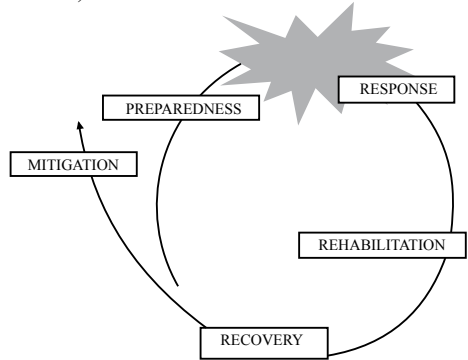
Main phases of disaster management – planning, prevention, preparation (mitigation), respond and recovery are closely linked. Focus of action of each of these phases is placed between different periods in relation of disaster events or hazard spectrum (15). Good preparedness and response planning and activities are essentially important for disaster risk reduction or mitigation in the next cycle of hazard spectrum. This is shown on the following schemes:

Schemes 1. Disaster management and disaster reduction activities

a) Disaster management



b) Disaster reduction activitiest



Source: *Preparing WHO for better action in crises. WHO, 2005.*

Anticipation

This involves taking a proactive approach to major incident management. It means that the expert and responsible people should identify the possible hazards and predict the possibility for their occurrence. For example, the presence of a river may increase the likelihood of flooding in a district for which planning should be undertaken. Another one is connected with occurrence of the highly pathogenic H5N1 influenza virus and increase of the likelihood for mutation and appearance of the more easily transmissible human to human strain with bigger pandemic potential.

Assessment

Assessment is a crucial management task which contributes directly to effective decision-making, planning and control of the organized response. Assessment of needs and resources is required in all types of disasters, whatever the cause and whatever the speed of onset (15, 17).

Assessment is needed during all identifiable phases of a disaster: from the start of emergency life-saving through the period of stabilization and rehabilitation, and into long-term recovery, reconstruction and return to normalcy.

Three general priorities are to be identified for early assessment: location of problem, magnitude of problem and immediate priorities. The assessment process is as follows:

- identify information, needs and resources;
- collect data;
- analyze and interpret;
- report conclusions;
- design/modify disaster response.

For better public health preparedness we need information for better risk determination and appropriate quantitative risk assessment.

The purpose of risk analysis is to guide communities in planning for protecting health and safety. It is possible to be done by developing and maintaining 3 sets of plans:

- hazard reduction plans
- vulnerability reduction plans
- emergency preparedness plans

The main task of these plans is prevention, preparation and response in case of preparedness for disaster occurrence and appropriate handling if disaster appears.

There are many different approaches for estimation, but it seems that USA Federal Emergency Management Agency (FEMA) approach is the most valuable and useable approach for now (9).

FEMA approach to hazards assessments is composed by 5 different steps with proposed very strict measurable scales and criteria for estimation as well as scale for overall ranking (16, 9). These different scales and proposed criteria for application of FEMA hazard analysis are based on:

- History of disaster
- Vulnerability of the population/properties
- Maximum threat for affecting/damaging
- Probability of occurrence
- Trends in occurrence

History - the occurrence of a potentially damaging event

Criteria	Class	Score
0-1 times in the past 100 years	Low	2
2-3 times in the past 100 years	Medium	5
4 or more times in the past 10 years	High	10

Weighting score = 2

There have been 4 pandemic influenza in the past 100 years so that the score for **HISTORY** is $10 * 2 = 20$

Vulnerability - the people (and property) damaged as a result of the incident

Criteria	Class	Score
< 1%	Low	2
1-10%	Medium	5
> 10%	High	10

Weighting score = 5

Applied to pandemic influenza, it would be expected that about 25% of the population would be affected so that the score for VULNERABILITY is $10 * 5 = 20$

Maximum threat - the maximum numbers of people (and property) damaged in a worst case scenario

Criteria	Class	Score
<1%	Low	1
1-4.9%	Low	2
5-25%	Medium	5
>25%	High	10

Weighting score = 10

Applied to pandemic influenza, it would be expected that 25% of the population would be affected so that the score for VULNERABILITY is $10 * 10 = 100$

Probability - the chance per year of the event (expressed per 1000)

Criteria	Class	Score
<1	Low	1
1-4.9	Medium	3
5-9.9	Medium	7
10-19.9	Medium	8
20-100	Medium	9
>100	High	10

Weighting score = 7

Applied to pandemic influenza, it would be expected that ~ 1 in 20 years there will be a pandemic so that the score for PROBABILITY is $9 * 7 = 63$

Trend

CRITERIA	SCORE
Likely to increase	10
Possibly increase	5
Stay the same	0
10-19.9	5
20-100	10

Weighting score = 2

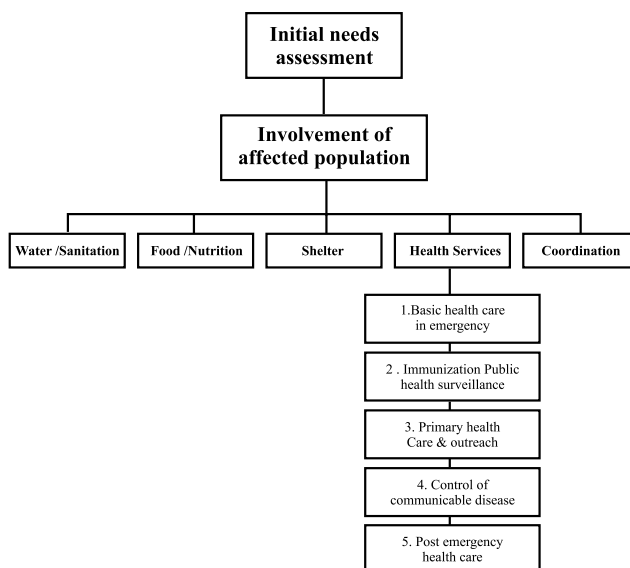
Applied to pandemic influenza, it would be expected that ~ 1 in 20 years there will be a pandemic so that the score for TREND is $2 * 0 = 0$

Overall ranking – determination of the risk

Parameter	Class	Raw score		FEMA weighting		Weighted score
History	>4/100 years	10	*	2	=	20
Vulnerability	>10%	10	*	5	=	50
Maximum threat	>25%	10	*	10	=	100
Probability	10-100/1000	9	*	7	=	63
Trend	Stay same	0	*	2	=	0

On the basis of available data, it can be determined that overall ranking for pandemic influenza is 233 of maximum rank of 260. It means that the risk for pandemic influenza occurrence and weighted score is very high.

The initial assessment of the health situation should be followed up with more detailed assessment during the rehabilitation and recovery phase as shown in the following flow diagram:



Prevention

This describes those activities that can be implemented following the risk assessment to stop the designated major disaster/incident from occurring (or minimising its likelihood) – these are examples of **hazard reduction programmes**.

Reduction is “identifying and analysing long-term risks to human life and property from natural or non-natural hazards; taking steps to eliminate these risks if practicable and, if not, reducing the magnitude of their impact and the likelihood of their occurring” (10).

Risk reduction methods are based on the principles of acceptance, avoidance, and mitigation. Some examples of hazard reduction plans are remediation of contaminated land before building on or building barriers to reduce a flooding risk.

Preparation

This describes those activities, whose implementation as soon as there is advance warning of an imminent threat will minimise the impact of the incident. Activities include

both forecasting and implementing the precautionary measures.

It involves both organisations and individuals who are involved in the response, recovery and post-incident audit phases.

The processes of interagency working are also clarified including how they will be controlled and how they will work with each other. Roles are clearly delineated for organisations and individuals.

These are examples of *vulnerability reduction programmes*. Vulnerability reduction describes those activities whose implementation is designed to minimise the consequences of a natural hazard event. This is achieved by lowering the vulnerability to natural hazards and /or reducing the number of elements at risk. Measures will usually be aimed at modifying behaviour.

Some examples of vulnerability reduction plans are designing earthquake proof buildings or heat wave watch scheme.

Response

This describes those activities whose implementation in the immediate aftermath of a major disaster/ incident will provide health and social care (to casualties/ those affected by the incident), and will rehabilitate or reconstruct the physical structures of the community. Essential elements of the response include equitable access to adequate safe water, hygienic sanitation, and food and shelter, and protection of affected populations from ill-health and violation. Responses should give priority to the most vulnerable people: women (especially when pregnant), young children, older people and persons who are disabled or chronically ill.

It includes how the *emergency preparedness and response plan* is activated (including Alert and Standby). There are many different emergency plans, some of them being:

- generic (all hazards) or specific;
- single agency or multi-agency;
- local, regional or national;
- business continuity plans.

All-hazards plans approach is based on the premise that an organisation's (service's) response to the range of potential major incidents. Single generic plan can provide a basic structured response for any incident – clearly it will ensure that it is flexible and robust enough to deal with the usually expected hazards including sites (airports, sports stadium and industrial complexes) and substances (including chemicals, fuel, electricity and flooding).

Specific plans approach is designed to meet specific needs. It is developed following the risk assessment and decision by that service/ organisation that managing a specific risk requires a specific plan. Plans may be risk specific, site specific or organisation function specific (13).

Multi-agency /integrated emergency plan aims to ensure that the activities of all services/ organisations involved in managing a major incident operate in an integrated manner.

Specific preparation for emergencies and crises alleviates their impact on health systems and decisively reduces the level of suffering, spread of epidemics, and number of deaths. For the health sector, preparedness typically means assuring resiliency of: health facilities to extreme conditions, availability of priority hospital services (focusing on trauma, women's health, child care and chronic conditions), management and triage of mass casualties, evacuation

of the injured and quarantine procedures, capacity for search and rescue operations, and the ability to establish disease surveillance and control measures rapidly. The key requirement is that those who need to respond are ready to do so. Careful planning is essential in order to assign responsibilities, identify challenges, introduce special procedures, and establish fall-back mechanisms.

Preparations and training should focus on identifying essential staff, establishing roster systems, testing procedures, and stockpiling essential supplies.

Response activities include many different actions as follows:

- Development of specific incident algorithm;
- Command and control;
- Safety (self, scene and survivors);
- Communication;
- Scene assessment;
- Triage;
- Treatment;
- Transport.

Command and control

This identifies who is in charge of the individuals/ organisations involved in managing the incident. Effective command requires good communication both horizontally between incident officers and vertically (up and down the individual service chains of command).

It is usually based on *bronze (operational)*, *silver (tactical)* and *gold (strategic) levels of command*.

On arrival at the scene of an event, the emergency services will take appropriate immediate measures and assess the extent of the problem, under the command of their respective officers. This is the *bronze* management level.

Silver is a tactical level of management introduced in order to determine priority in allocating resources, to plan and co-ordinate when a task will be undertaken, and to obtain other resources as required. Most, but not all, of the tactical functions will be discharged at or close to the scene of the incident.

The purpose of the *gold* or strategic level of management is to establish a framework of policy within which Tactical Commanders will work, to give support to the Tactical Commander(s) by the provision of resources, to give consideration to the prioritisation of demands from any number of incidents (18).

Safety

This embraces the rescuer's own safety, the safety of the scene and the safety of the casualties (in that order of priority).

Communications

This involves the process of communication between individuals/ organisations at bronze and between bronze and silver/ gold as appropriate.

Scene Assessment

The information required at this stage is contained in the acronym METHANE (16). The initial information to be passed from the scene assessment of a major incident that should be done is:

- *M* -Has a major incident been declared
- *E* -What is the exact location (grid reference)
- *T* - What type of incident is it (e.g. rail, chemical or road)
- *H* - What hazards are on site (current and potential?)
- *A* - How is incident accessed (i.e. approach direction)
- *N* - Numbers of casualties (type and severity)
- *E* - Emergency services (present and required)

Triage

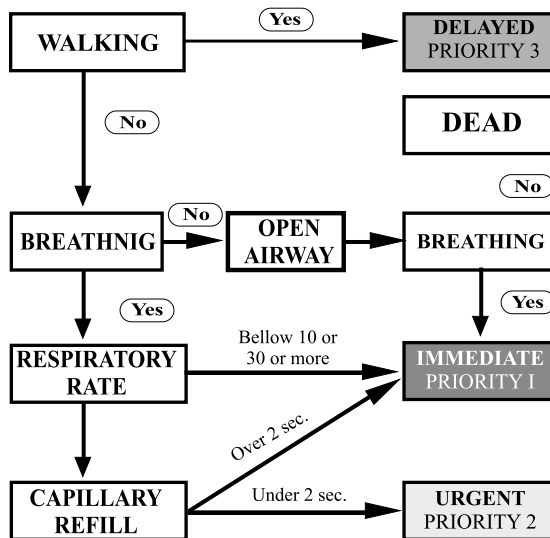
Triage activities (sieve and sort) are undertaken to sort casualties into priority groups for treatment (13). Whenever the numbers of casualties exceeds the numbers of skilled rescuers present, then the following triage principles should be used:

- Get the right patient to the right place at the right time
- Do the most for the most
- Triage is a dynamic process

The aim is to prioritise the casualties into groups on the basis of the treatment required:

- *Priority 1* (immediate) Casualties who require life-saving procedures
- *Priority 2* (urgent) Casualties who require procedures within 4-6 hours
- *Priority 3* (delayed) less serious casualties who do not require treatment within the times given above
- *Priority 4* (expectant) Casualties whose injuries are so severe that either they would not be expected to survive or their treatment would require so much input from existing resources that it would compromise the survival of other less seriously ill casualties

Figure 8. The adult triage priority



* If you are unable to obtain a capillary refill and the pulse is over 120 beats then the patient is PRIORITY 1.

Treatment

This involves applying those medical interventions that will enable the patient be stabilised prior to scene evacuation.

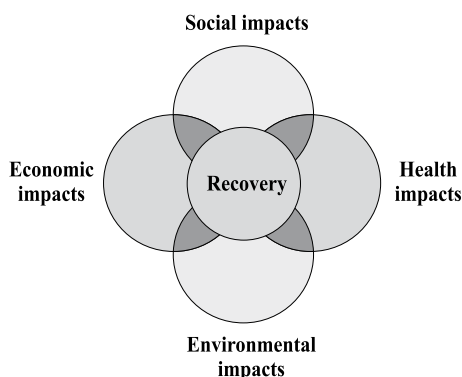
Transport

This involves getting the right patient, to the right facility at the right time.

Recovery

This encompasses all those activities designed to “address the enduring human, physical, environmental, social and economic consequences of major disasters/ incidents.” Its objective is to rebuild, restore, and rehabilitate the community and all possible disasters’ impacts.

Figure 9. The component parts of the recovery challenge



Source: Global Health Network Supercourse Project.

Recovery means that the crises are resolved. The recovery phase begins at the earliest opportunity after the onset of the disaster, running simultaneously with the response phase and continues until disruption has been rectified, demands on services have returned to normal levels, and the needs of those affected (directly or indirectly) have been met.

The common objectives of recovery (and response) are:

- saving and protecting life;
- relieving suffering;
- containing the emergency – limiting its escalation or spread;
- providing the public with warnings, advice and information;
- protecting the health and safety of personnel;
- safeguarding the environment;
- protecting property;
- maintaining normal services at an appropriate level;
- promoting and facilitating self-help in the community;
- facilitating the physical, social, economic and psychological recovery of the community.

From a health perspective the crises are resolved when essential health systems have been repaired and rebuilt; when the major health needs of the most vulnerable populations

receive attention; and when the health-care environment is secured for both patients and health personnel. To achieve this, a health sector recovery plan is essential. Such plans focus on essential lifelines to those in need, the restoration of services in primary health centres and hospitals, rehabilitation of laboratory services, disease surveillance and public health programmes. They include the identification of vital staff, their support and training, and the provision of essential supplies and equipment.

The specialty of emergency medicine meets the scientific, clinical and organisational need for a medical discipline that has a primary concern with emergencies. Emergency medical care of a high standard should be available to every person in need in all situations and at all times. The scope of activities is early diagnosis and treatment of all life, organ or limb-threatening conditions. Objective of emergency medicine is to provide an integrated system of pre-hospital, in-hospital emergency care, to reduce the mortality, morbidity, disability and suffering associated with injury and sudden illness and to study the epidemiology and management of major incidents and disasters.

The provision of high quality emergency care requires physicians with specialised training. Unfortunately this kind of education is not available in all Western-Balkan countries. The implementation of EU standards of training in emergency medicine and pan-European examination should be one of the national health care priorities (13).

Post Incident Audit

This involves conducting an assessment of the management of the incident to identify lessons learned. By definition, audits are an independent assessment and evaluation of an institution's activities.

The purposes may include gaining an understanding of the service's/ organisation's operations, evaluating the adequacy of the control structure for potential key issues and areas of concern, providing on-going feedback to management, validating and reviewing data for completeness, accuracy, and authorisation, benchmarking, or assessing a data centre for security, operations, application maintenance, and system implementations.

Potential health sector response strategies - Implementing the legal framework

The first legally binding WHO instrument, the International Health Regulations (IHR), has been revised in 2005. This revised version, IHR (2005), constitutes a renewed legal framework for WHO to collectively address public health emergencies of international concern, of whatever nature (infectious agent, chemical, nuclear, etc.) or origin (natural, accidental, deliberate). IHR (2005) came into force on 15 June 2007. WHO has a mandate to support the countries in preparing their health systems to cope effectively with the health aspects of crises and to strengthen their public health readiness. It requires complex prevention and preparedness strategies. Good governance and good management of health systems are particularly the most important prerequisites for effective operational crisis response.

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HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Quality Improvement in Health Care and Health Promotion – Health Grants
Module: 5.15	ECTS: 0.25
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Key words	Health care, health promotion, health grants
Learning objectives	After completing this module students and public health professionals should have: <ul style="list-style-type: none"> • increased their understanding of how to arrange a competition of practice-oriented projects in health care • explored the similarities and differences between existing public offers of health grants and the selection procedures • an idea of how the selection procedure can be optimized • an idea of how an independent jury should be put together.
Synopsis (Abstract)	The public offer of health grants is a possibility to get an overview of project activities within a certain region. Innovative, economic and qualitative highly valued approaches can be made familiar to the general public by this procedure. If applicable, such problem-solving approaches can be taken over by other projects in a modified form. In so far the identified projects can serve for quality improvement in various fields of health care and health promotion.
Teaching methods	Teaching methods include lecture and intensive group discussion.
Specific recommendations for teacher	The module should be organized within 0.5 ECTS, out of which a third is the lecture and supervised group discussion. Two-thirds are individual work: searching the internet in order to find public offers of health grants in their own (and adjacent) countries.
Assessment of students	Written design of how to offer a health grant.

QUALITY IMPROVEMENT IN HEALTH CARE AND HEALTH PROMOTION – HEALTH GRANTS

Jürgen Breckenkamp, Ulrich Laaser

Introduction

The public offer of health grants is a possibility to get an overview of project activities within a certain region. Innovative, economic and qualitative highly valued approaches can be made familiar to the general public by this procedure. If applicable, such problem-solving approaches can be taken over by other projects in a modified form. In so far the identified projects can serve for quality improvement in various fields of health care.

Based on accomplished inquiries further eight “Health Grants” could be identified, which can be compared with the awarding procedure of the North Rhine-Westphalian Health Grant. Beside the grants, which have been awarded since the mid- or end of the nineties, there also are relatively young grants, which have been offered since 2002. Half of the prizes are being offered regionally. With the other grants different potential applicant groups, such as organization units of local governments, which operate in the field of public health, or institutions insured at a professional (insurance) association, are being addressed.

Grants, which are concentrated on one working field of a professional group, such as the Physician-Right-Prize, were not the goal of the inquiry. Therefore, some of these grants will be shortly presented, just as an example for the multitude of public offered prizes.

The North Rhine-Westphalia Health Grant

In 1994 the Regional Health Conference (RHC) has made the decision to found the Project Association “Healthy North Rhine-Westphalia”. The content wise framework of the Project Association was determined by the WHO health goals for Europe and the health goals for North Rhine-Westphalia, for the first time formulated at the State Health Conference.

The Project Association Healthy North Rhine-Westphalia is embedded into the European network “Regions for Health”, in which origination the state North Rhine-Westphalia took a major part.

In annual announcements invitations are made to participate in the Project Association. The announcement is limited to North Rhine-Westphalia and therefore implies that projects which are active outside the regional borders, have at least a relevant part of the project work done in North Rhine-Westphalia or for the people of that region.

The Project Association should announce projects and project ideas, which stand out for innovative approaches, quality and also economic efficiency. The conceptional orientation, the announcing procedure and the procedure of selecting the projects for the Project Association was determined by members of the Regional Health Conference and the Preparing Committee of the RHC, respectively. The Project Association has been accompanied by the Preparing Committee of the RHC ever since.

The announcements for participating at the Project Association “Healthy North Rhine-Westphalia” take place at the annual turnover. The announcements consider projects with public health relevance. Here it is of no significance whether the applications come from institutions such as sickness funds, regional associations of statutory health insurance physicians, pension scheme holders or from private (registered) doctors or self-help groups. Projects considering basic medical research do not accord to the pre-determined objectives, and therefore will not be affiliated to the Project Association.

The admission to the Project Association takes place by a qualitative selection procedure.

Therefore, the Preparing Committee of the RHC hired a working group for project selection, which consists of members of the Preparing Committee, members of the ministry, and one external scientist. The more practical orientation of the work group guarantees, considering the practical orientation of the Project Association that the project ranging occurs considering the current economic and political developments.

Every application for affiliation to the Project Association NRW goes through a multi step process. The stocktaking of the submitted projects serves for the description of the spectra of applications. This means, that the number of applications is being analyzed which an institution (e.g. insurance companies) is presented with, and which organizations of the health-care system the announcement didn't reach at all or didn't reach enough. It is being analyzed, which topic fields (e.g. fighting cancer) the applications cover and if they regard to the 10 prior health goals for North Rhine-Westphalia. Since 1998, as an attachment to the - in respect of content - not limited so-called "General Announcement", the "Focus Announcement" was organized. It is being checked in how far the focus of the announcement matches the applications. Besides, it is being checked in how far the applications correspond to the formal guideline. Here, important aspects are completeness of the submitted papers, information about project-financing and realization-stage of the project plan. The realization stage means that, on one hand the realization of the project idea should already have been started and that the financings are secured. On the other hand a project character has to be recognizable and the described project mustn't be a part of the regular care.

In a second step, the hired work group makes a selection of the projects, based on health-scientific and health-political assessment. The results of the working group are being presented to the Preparing Committee of the State Health Conference. The committee decides about the affiliation to the Project Association and to whom the awards go. Since the Association's founding, the grant has been given out annually. Every year at the award ceremony the health minister of North Rhine-Westphalia gives out one or more first, second and third prizes. Besides the grant, the projects affiliated to the Project Association especially profit by the continual public relation of this association (1, 2, 3).

Initiated by a recipient of the NRW Health Grant project, the State Ministry of Health founded the Quality Forum of NRW and organized three events in 2003. Against the background of tight financial resources, the goal of the "Quality Forum in Health Care" is to establish a discussion forum which should present good examples from the practice ("from the practice – for the practice") and serves to make contacts on a certain professional level. The introducing event had been themed: "defining of position and perspectives", followed by two further events with the subjects "making quality transparent – quality reports" and "patient security and risk management". With the regular conducting of quality forums on regional levels, North Rhine-Westphalia has taken over leadership in the meantime. Comparable approaches for other regions could not be investigated. The "Hamburger Forum" organized in Hamburg by many institutions (among others, the General Medical Council of Hamburg, Department of Labor, Health and Social Issues of the free and hanseatic city Hamburg, the German organization for care professions, the regional association of Bremen, Hamburg, and Schleswig-Holstein), takes place on irregular basis every few years and can barely cope with the needs of a contemporary information exchange. (4, 5, 6, 7).

The Jannsen-Cilag Future Grant

Since 1997 the Jannsen-Cilag Future Grant has been given out in irregular periods. Unlike the NRW Health Grant projects can not apply but have to be proposed. In order to limit the number of proposals from the beginning, a checklist has been added to the papers for the Future Grant, which helps proving the proposal beforehand. But, not all of the criteria have to be fulfilled by the projects:

- “It concerns an institution, organization or individual, which positively stimulates the German health-care system by a project or idea and has rendered outstanding services to people.
- The project is no longer in the planning phase, yet has already been realized to some extent.
- The project promotes social thinking and is being quickly accepted by people concerned (social tolerance).
- The project financially makes sense; the cost-benefit relation is justifiable (economic practicability).
- The project also makes a general economical sense, as it increases the welfare in the affected area (people’s economical profit).
- The project can be well embedded into the existing social environment and contributes to the improvement of coexistence of people (social integration-ability).
- The project contributes to the establishment of German’s health care future (future potential)” (8).

There are seven jury members, which are named in the announcement. They check the submitted proposals according to the above-mentioned criteria. Patents and new products are excluded from the awards. Also projects which are still in the planning-phase are not being considered. To be considered the planned project has to be realized at least to some extent.

The Future Grant awards three projects with 5000 € each without the intention to range them as first, second, and third prize. The most important advantage of this grant is, as well as the advantage of the NRW Project Association and the NRW Health Grant, that the awarded projects become very well known (8).

The Bavarian Health Promotion and Prevention Grant

The Bavarian Health Grant is being offered by the State Agency for Health annually since 2002 for “realization of innovative ideas and for exemplary services in the field of health promotion and prevention” (9).

Individuals, institutions, initiatives, associations, firms and others can apply. Only one project can be submitted per institution/individual. The participation in the competition is limited to projects from the region of Bavaria.

Regarding to the content, the grant is oriented towards projects in following fields:

- projects “which occupy with health promotion and prevention, for example in the fields of ‘psychosocial health’ (e.g. mental health, welfare), ‘lifestyle’ (e.g. nutrition, exercise), or ‘areas of life’ (environment, arranging the living-space, e.g. in kindergartens, schools, firms, associations, communities),
- which were developed and realized in Bavaria,
- which were finished not longer than 18 month ago,
- which can be presented on posters” (9).

The excluding criteria arise from the above mentioned orientation of the health prize.

A working group is responsible for perusal and assessment of the projects and presents the projects to the jury. The jury, which consists of scientists and experts from ministries and different institutions of the health-care system elects the projects' order of precedence. The valuation criteria are "project originality", the "issue actuality", the "methodological realization" as well as "indications for a sustainable effect" of the project (9). Five projects are being awarded: the first-place project with 3000 €, and others with 2500 €, 2000 €, 1500 € and 1000 € (10).

The Berlin Health Grant

The Berlin Health Grant has been offered by the AOK sickness fund (AOK Federal Association, AOK Berlin) and the Berlin General Medical Council on a two-year cycle since 1995. The Berlin Health Grant awarding took place in 1995, 1998, 2000, and 2002.

The mottos of the announcements were:

1995 – Man is our measure (11)

1998 – Health goals – strategies for better health (12)

2000 – (Old) age and health – more quality by networked care (13, 14)

2002 – Quality offensive in medicine and care – mistake-avoiding and security-culture (15)

Allowed to participate at the competition are individuals and institutions, associations, self-help groups, people-initiatives etc. with projects from all over the state. All submitted projects take part in a multi-step selection process. A working group, called-up by the initiators is responsible for the evaluation of the applications (inspecting the completeness, proving if the previously given criteria are fulfilled). The results are being prepared for the constituted jury (16). The members of the jury are scientists, experts from different health services and political institutions. The valuation criteria depend on the announcement subject. For the announcement of 2002 (quality offensive in medicine and care – avoiding mistakes and safety culture) the judgment of the jury was made considering the following criteria:

- "documentation of mistakes and unwanted events, as well as their reasons are being presented,
- the measures to avoid mistakes and unwanted consequences are being described in detail,
- concrete results of measures are being presented,
- the approach can be applied to the daily routine of care,
- the measures have a reasonable cost-benefit relation,
- communication and cooperation. Mutual problem-discussion and goal-discussion are guaranteed,
- the project presentation is understandable and conclusive,
- the discoveries will be integrated in further education, which is in internal and external quality circle." (15).

The jury decides about the winners. The awards are 15.000 € for the first, 10.000 € for the second and 5.000 € for the third prize. Additionally up to 50.000 € go to special awards (17). The presentation of the award-winners in printed media indicates as well as in other health grants, that public relation besides the grant presents an important component of the awards (18, 19).

The Regional AOK-Health Grant

Since 1997 the AOK-Rhineland has been giving out the Regional Health Grants for the administrative districts of the cities Cologne and Düsseldorf. In this way 13 prizes are being given out. The awarding takes place every two years. It hasn't been decided yet if there will be further announcements because of the quantitative decrease in applicant numbers depending on small regional unities.

Predestinated for participating are self-help groups, associations for people with disabilities, kindergartens, schools, universities, educational-organizations, companies, environmental-groups, sport-associations, physicians, hospitals etc. (20, 21).

The content wise orientation of the announcements is health promotion. Here:

- “healthy nutrition, exercise, stress-handling,
- drug-prevention, drug-avoidance, medication-usage,
- accident-prevention, traffic-security”

are named as activity-fields as well as

- “self-help promotion,
- company-health promotion,
- (and) social and ecological environment” (20).

The first step is to get an overview of the submitted projects, which the professional service marketing does. The applications then are being prepared for the jury by the professional service. That means, missing documents are being requested and, if there are any lacks of clarity, necessary clarifications with the applicant are made.

The jury decides about the awarding. The jury gathers scientists, experts from institutions of health services, and presenters of communities, politics, media and celebrities.

As a rule, three grants are being given out. The first prize is 1000 €, the second prize 800 € and the third prize 700 €. But, the jury can turn away from this procedure (22). Beside the grants these projects profit by the presentation of their activities and reports about the awarding ceremony in the regional press.

The Hamburg Health Grant for Companies, Economy and Administration

In 2003 the Hamburg Work Group for Health Promotion offers the Hamburg Health Grant for Companies, Economy and Administration for the third time. The public offer of the award for health promotion in companies has been taking place in a two year cycle since 1999.

The explicit goal of Hamburg's Work Association for Health Promotion (German: HAG) is the “maintenance and promotion of the physical, mental and social well-being of the Hamburg citizens. Members of the HAG are sickness funds, companies, physician- and dentist-organizations, pharmacy-associations, health care institutions, state-institutional posts, welfare-associations, working groups, parent-, women-, pedagogic- and further associations.

Potential participators can already be diverted from the grant's name: The announcement addresses to all firms and companies as well as to the administration of Hamburg and neighborhood-districts.

For the selection of potential award-winners it is especially being considered:

- “that the status of health promotion in the whole company and not only individual health promotion measures are being considered,

- that already the way itself (and not only the achievement) of a health-promotional goal should be rewarded,
- and that a difference is made between company categories.” (23)

The selection of potential award-winners takes place in a two-step process. In the first step, the documents (application forms) submitted from companies and administrations are being evaluated. For the projects which have been included into the narrow choice, the members of the jury get further information directly from the companies/administrations. Afterwards the jury decides about the awarding. The grant is being given out by the Senator of Environment and Health.

The jury consists of experts from sickness funds, councils, scheme holders, unions and trade unions (24).

The jury considers the following criteria while evaluating the submitted applications:

- “Conceptional embodiment of the company’s health promotion in the entire company (among others: company-goals, eventually company-philosophy; integration and networking with other company capacities and organizations, e.g. health-protection at work).
- Structure and general conditions of a company’s health promotion (among others: central committee, employee-participation, information).
- Health data collecting (among others: hazard-analysis and -judgment, health reporting, quality management etc.).
- Measures of a company’s health promotion (among others: improvements of working environment and labor organization, qualifying etc.).
- Organization for supporting disadvantaged groups or problematic age-groups (among others: people with serious disabilities, adolescents).
- Offering prevention and support to health promoting behavior (among others: sports, care, smoking-addiction treatment etc.)” (23)

Three grants are being given out. The first prize is being awarded with 4000 €, the second with 3000 €, and the third with 2000 €. During the official awarding ceremony the winners are given a chance to present project work. As well the winners are allowed to use the logo of the Hamburg Health Grant as a quality stamp for their activities and for the presentation on memorandums.

The Quality Initiative Grant

The Quality Initiative, (formerly the Lower Saxony Association for Quality Promotion in Health Care) has been offering the Quality Initiative Grant annually since 2002.

Projects, which are for six month or longer in the realization stage and can potentially be taken over into regular care are allowed to apply. Projects, which are being considered for the Quality Initiative Grant are not allowed to have received any other prize.

Conditions for the application are structured by:

- “goal definition,
- project design (chosen method, project-plan),
- project realization - results,
- evaluation, cost-benefit-analysis, in a certain case advice for overtaking into regular care.” (25)

The jury consists of the executive committee of the Quality Initiative and another three members elected from the Initiative, and decides about the awarding. For choosing the grant winners the realization of a “coordinated cooperation of all institutions and professional groups, participating in the care process in a joined force for optimal quality” is the deciding criteria. Such an approach corresponds to the ideas and to the conception of the Quality Initiative, which sees as its duty “promoting creative, patient-oriented, interdisciplinary and inter-institutional approaches (25).

The Quality Initiative Grant awards with 5000 € and is given out during the general meeting (26).

The Quality Grant of the Academy for Public Health Service in Düsseldorf

The Quality Grant of the Academy for Public Health Service in Düsseldorf was given out for the first time in 2002. The public offer of the grant takes place every two years.

This grant-offer addresses to organizational units of a local government, “which carried out and established successful quality-assurance, quality-improving measures and procedures in the field of public health” (27). It is being expected that the projects:

- “present the measures or the procedure,
- document the practical realization and
- represent and evaluate the results.” (28)

A jury decides about the awarding. The jury consists of altogether 12 presenters from the quality-management field of holding regions of the Academy, as well as from the fields of science, practice and politics.

A condition for being awarded is that the projects describes measures and procedures,

- which pursues new methods in internal and external quality-management
- and, which “presents successful procedures which in its conception, realization and evaluation contributes to a professional and material quality gaining for public health.” (27)

The Quality Grant awards 5000 € and is being offered all over the country. Depending on the quality of the applications, one or more applicants are being awarded. The grant is being given out during the annual conference of the Academy. Additionally, the measures and procedures of the awarded projects are being included into the academy’s education-offer and the promotion of the spreading of measures and procedures in public health services.

The BGW Health Grant

The Professional (Insurance) Association for Health Service and Social Welfare (in German, the BGW) has been offering the BGW Health Grant in a two-year cycle since 2001. In 2003 the grant was given out for the second time.

The announcements address to organizations insured at the Association (BGW), “such as, sheltered workshops, workshops for persons at risk, homes for persons with disabilities, daycare centers for persons with disabilities” and “driving services for persons with disabilities” (29). According to this, the first announcement referred to geriatric care organizations and the second one to sheltered workshops. The third request addressed to hospitals. The Association (BGW) writes to every client-organization, so they would all have the same information.

The evaluation is based on a questionnaire form that needs to be completed. The questions are based on “the regulations of the ‘European Network for Company’s Health Promotion’, a cooperation-project with the World Health Organization (WHO)”, (29).

In this context the applicants are being asked about:

- the status of health care
 - in company policy,
 - in personal policy and at work organization,
- the planning stage of measures and available resources for measures,
- organization of health promotion,
- previous results,
- employee-participation.” (29)

The jury consists of two representatives from each, employers and the insured ones, from “the self administration of the Professional (Insurance) Association for Health Service and Social Welfare” (29) and rates the measures according to the practical realization and the embedment into a functional care system.

One institution is being rewarded for its work. The grant covers altogether 30.000 €. The money is to be spent for a specific purpose and can be invested into external consulting, for financing a pursuing project and for investments for the employees’ health promotion (19, 30,31).

Further Grants

Beside the already presented grants there are many further competitions. Yet, there are partially some more special conditions for these grants. A few will be mentioned below. There can be made no request to completeness and the named projects should rather be interpreted as examples.

Since 1992, the *Richard-Merten Grant* is being offered annually. Projects are addressed, which by their approach of using information technologies substantially improve “the quality of diagnosis, therapy, statistics or documentation in health care” (32).

The seven members of the board of trustees prove the submitted proposals considering the following four criteria:

- “The medical benefit for quality-assurance and -improvement of diagnosis and therapy.
- Proved originality and innovation in comparison to the state of affairs.
- Scientific benefit for health care in detail (hospital, practice) or health care in general.
- The possibility to realize proposals for health care in detail (hospital, practice) or health care in general.” (32)

Table no. 1: Health Grants

	The North Rhine-Westphalia Health Grant	The Jannsen-Cilag Future Grant	The Bavarian Health Promotion and Prevention Grant	The Berlin Health Grant	The Regional AOK-Health Grant	The Hamburg Health Grant for Companies, Economy and Administration	The Quality Initiative Grant	The Academy Grant for Public Health Service	BGW Health Grant
Announced since:	1994	1997	2002	1995	1997	1999	2002	2002	2000
Announcing cycle:	annually	irregularly	annually	every two years	every two years	every two years	annually	every two years	every two years
Announcements are planned in future:	yes	yes	yes	yes	open	yes	yes	yes	yes
Election of grant winners by a jury	yes	yes	yes	yes	yes	yes	yes	yes	yes
The grant is being given out by:	The Minister of Health, Social issues, Women and Family	jury	jury	jury	jury	The Senator of Environment and Health	jury	jury	jury
The number of awards:	1st to 3rd award in certain case for several projects	three grants	1st to 5th award	1st to 3rd award, also special grants	1st to 3rd award	1st to 3rd award	one award	one award or several awards	one award
The grant amount altogether:	5.000,00 €	15.000,00 €	10.000,00 €	50.000,00 €	2.500,00 €	9.000,00 €	5.000,00 €	5.000,00 €	30.000,00 €
Indirect / direct public work for grant winners:	Awarding ceremony, Brochure of the Project Association Healthy Region NRW	Awarding ceremony, Brochure	Awarding ceremony, Posters	Awarding ceremony, Presentation of Grant winners in printed media	Awarding ceremony, Presentation of Grant winners in the regional press	Awarding ceremony, presentation during the awarding ceremony, logo of the Hamburg Health Grant	Awarding ceremony	Awarding ceremony, inclusion of project measures into education-offer, spreading of measures in public health service	Awarding ceremony the money is to be spent for a certain purpose

The Richard-Merten Grant awards altogether with 20 000 €.

The journal “Quality Management in Clinic and Practice” of the Frankfurt pmi-publisher has been giving out the *German Grant for Quality in Health Care* annually since 1996. Projects or institutions, which have been gaining exemplary achievements in quality management for a longer period of time are being proposed by the newspaper’s advisory board and experts in the field of quality management. Every member of the advisory board gives its opinion about the proposals. As a part of the German Quality Day in Health Care the award (a medal and a certificate) is being given out. Similar to all other grants the public recognition connected to the awarding is the most important aspect of the prize (33).

The *Young Scientist Award* of the German Stroke Foundation was announced for the first time in 2001, and given out in 2002. The goal of the prize was to award a young physician less than 35 years of age, who had done excellent work in the field of stroke research (prevention, epidemiology, treatment, diagnostic, patho-physiology). Projects on basic research in medicine have not been considered. The project was awarded with 5000 €. It is still not known whether the prize will be given out in future (34).

The Bertelsmann foundation gives out the *Carl Bertelsmann-Grant* on the annual turnover donating 150 000 €. The prize is being given out for innovative approaches in “central socio-political working fields”. In the year 2000, the Grant was dedicated to the theme “reforms in the health-care system”, in 2005 to “corporate culture and leadership behavior” (35) Strictly speaking this grant is not a health grand.

The German Heart Foundation awards with the annual promoting grant “Wilhelm P. Winterstein-Grant” for research work in the field of heart and circulatory diseases. Here a research close to the patient is of special importance. The Heinz Meise Grant is also being given out by the German Heart Foundation. This prize focuses on research work in the field of vascular diseases (36).

At the end of the nineties, the private health insurance companies in cooperation with a publisher were giving out the German Health Grant. In the meantime participating in the Health Grant has been stopped by private health insurance companies considering economic issues (37).

Exercise: Health grants

Task:

Students should search the internet in order to find public offers of health grants in their own (and a adjacent) countries. They should describe the target groups, rate the quality of the selection procedure and gauge the transferability to other areas of the health care system. Students should discuss the possibility of a public offer of a health grant by their own institution and the way of how to implement it.

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ANNEXES

A 1 HEALTH PROMOTION GLOSSARY: Selected Terms and Comments

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Introduction

The field of health promotion and disease prevention has a distinctly uncoordinated terminology. The reason for this is that terms are taken over from different other scientific fields or are created according to historical needs and circumstances in different countries.

The use of different terms to describe the same concept results often in a deep confusion between professionals, researchers, decision makers and citizens. There is a great need to stimulate discussion among professionals and local collaborators to harmonize the meaning on different words and translate the English terms in their own languages.

Language is living and changing: some terms have been omitted and worldwide accepted, many have been modified in the light of experiences and evolution in concepts, some new terms are in current use. The main purpose of any health promotion and disease prevention glossary is to understand as much as possible the basic ideas and concepts which are central to the development of strategies and practical actions.

Therefore, we, as the editors of this Handbook, made a list of selected terms, mainly from the last WHO Health Promotion Glossary, published in 1998 (1), as an updated view of many ideas and concepts in contemporary health promotion and disease prevention areas. To stimulate national and local discussions, we selected some terms used in previous Health Promotion Glossaries and other sources with the list of original references, aiming to simulate in deep-thinking about meanings and to support mutual understanding as a key element for mutual work. If not, the terminology and glossary could be ONLY WORDS...

Selected Terms

ACTION RESEARCH

Describes a wide range of evaluative activities which are used to shape, guide and modify established programmes as they continue or develop (2).

This approach emphasises the quality and relevance of various components of a programme as it relates to its identifiable population in the context of its everyday life. Interactive research methods such as participant observation could be included in such an approach in that they more directly involve the population in the definition and solution of problems from their own point of view.

The additional definition is given by Koelen and van den Ban: „Action research is a research aiming to analyse a specific situation. Research results are immediately fed back into a programme for decision making in that situation“ (3).

ADVOCACY FOR HEALTH

A combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or programme (1,4). This action may be taken by and/or on behalf of individuals and groups to create living conditions which are conducive to health and the achievement of healthy lifestyles.

Health advocacy is the action of health professionals and others with perceived authority in health to influence the decisions and actions of communities and governments which have some control over the resources which influence health (who, 1998). Advocacy is one of the

three major strategies for health promotion and can take many forms including the use of the mass media and multi-media, direct political lobbying, and community mobilization through, for example, coalitions of interest around defined issues. Health professionals have a major responsibility to act as advocates for health at all levels in society.

ALIANCE

An alliance for health promotion is a partnership between two or more parties that pursue a set of agreed upon goals in health promotion (1).

This is a new definition. Alliance building will often involve some form of mediation between the different partners in the definition of goals and ethical ground rules, joint action areas, and agreement on the form of cooperation which is reflected in the alliance.

BURDEN OF DISEASE

The burden of disease is a measurement of the gap between a population's current health and the optimal state where all people attain full life expectancy without suffering major ill-health (5).

Burden of disease analysis enables decision-makers to identify the most serious health problems facing a population. Loss of health in populations is measured in disability-adjusted life years (DALYs), which is the sum of years of life lost due to premature death and years lived with disability. Burden of disease data provide a basis for determining the relative contribution of various risk factors to population health that can be used in health promotion priority setting. In addition, burden of disease studies can reveal disparities in health within populations that indicate underlying social inequities that need to be addressed.

COMMUNITY

A specific group of people, often living in a defined geographical area, who share a common culture, values and norms, and are arranged in a social structure according to relationships which the community has developed over a period of time. Members of the community gain their personal and social identity by sharing common beliefs, values, and norms which have been developed by the community in the past and may be modify in the future. They exhibit some awareness of their identity as a group, and share common needs and a commitment to meeting them (1)

Community is a group of people who identify themselves by their group membership, sharing a common interest, common social institutions and common social control components (3).

COMMUNITY ACTION

Community action for health refers to collective efforts by communities which are directed towards increasing community control over the determinants of health, and thereby improving health (1).

COMMUNITY DEVELOPMENT

The process of involving a community in the identification and reinforcement of those aspects of everyday life, culture and political activity which are conducive to health. The might include support for political action modify the total environment and strengthen resources for healthy living as well as reinforcing social networks and social support within a community and developing the material resources available to the community (2,3).

COMMUNITY INVOLVEMENT

The active involvement of people working together in some form of social organization in the planning, operation and control of health resources and services at local and national levels (6). Community involvement (CI) means the active participation of people living together in some form of community in the process of problem definition, decision-making and action to promote health.

In the context of health promotion, CI is seen as central process of community development.

In context of PHC, CI is seen as an essential prerequisite for individuals and families to assume responsibility for their, and the community's health and welfare through involvement in the planning, operation and control of primary health care.:

Community involvement is a process by which partnership is established between government and local communities in planning, implementation and utilization of health activities in order to benefit from increased local self-reliance and social control over the infrastructure and technology of PHC. Participation in that context is the observable evidence of what kind of CI exists at a particular time and place (7).

COMMUNITY PARTICIPATION

A voluntary contribution by people, but people are not expected to take part in shaping the programme or criticising its contents. It means: (a) to sensitize people and to increase the ability to respond to development programmes, and to encourage local initiatives, (b) people's involvement in decision-making process in implementing programmes, sharing benefits and their involvement in efforts to evaluate its, (c) active involvement of people in the decision-making process, (d) responsibilities of people in assessing the health needs, mobilizing resources and suggesting new solutions, (e) active process, meaning that the people take initiatives and (f) organized efforts to increase control over (8).

CONSCIOUSNESS RAISING

The process by which individuals or communities are made aware of the existence of factors, or are made aware of the relative importance of already known factors in their total environment which may affect health.

The development of the concept has been closely associated with the evolution of the women's health movement, and formed an important part of the overall strategy employed by that movement (2).

DETERMINANTS OF HEALTH

The range of personal, social, economic and environmental factors which determine the health status of individuals or populations.

The factors which influence health are multiple and interactive. Health promotion is fundamentally concerned with action and advocacy to address the full range of potentially modifiable determinants of health – not only those which are related to the actions of individuals, such as health behaviours and lifestyles, but also factors such as income and social status, education, employment and working conditions, access to appropriate health services, and the physical environments. These, in combination, create different living conditions which impact on health. Achieving change in these lifestyles and living conditions, which determine health status, are considered to be intermediate health outcomes (1).

DISEASE PREVENTION

Disease prevention covers measures not only to prevent the occurrence of disease, such as *risk factor* reduction, but also to arrest its progress and reduce its consequences once established (1,9).

Primary prevention is directed towards preventing the initial occurrence of a disorder. Secondary and tertiary prevention seeks to arrest or retard existing disease and its effects through early detection and appropriate treatment; or to reduce the occurrence of relapses and the establishment of chronic conditions through, for example, effective rehabilitation.

EMPOWERMENT FOR HEALTH

In health promotion, empowerment is a process through which people gain greater control over decisions and actions affecting their health (1).

Empowerment may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs.

A distinction is made between *individual* and *community empowerment*. Individual empowerment refers primarily to the individuals' ability to make decisions and have control over their personal life. Community empowerment involves individuals acting collectively to gain greater influence and control over the determinants of health and the quality of life in their community, and is an important goal in community action for health.

ENABLING

Enabling means taking action in partnership with individuals or groups to empower them, through the mobilization of human and material resources, to promote and protect their health.(1).

The emphasis in this definition on empowerment through partnership, and on the mobilization of resources draws attention to the important role of health workers and other health activists acting as a catalyst for health promotion action, for example by providing access to information on health, by facilitating skills development, and supporting access to the political processes which shape public policies affecting health.

EQUITY IN HEALTH

Equity means fairness. Equity in health means that people's needs guide the distribution of opportunities for well-being (10).

Equity in health implies that everyone should have a fair opportunity to attain his or her full health potential and, more pragmatically, that no one should be disadvantaged from achieving this potential (2). This term clearly has moral and ethical dimensions.

EVIDENCE-BASED HEALTH PROMOTION

The use of information derived from formal research and systematic investigation to identify causes and contributing factors to health needs and the most effective health promotion actions to address these in given contexts and populations (5).

These include epidemiological studies about health determinants, health promotion program evaluations, ethnographic studies about social and cultural influences upon health needs, sociological research about the patterns and causes of inequalities, political science

and historical studies about the public policy making process and economic research about the cost-effectiveness of interventions. Among the applications of evidence to health promotion planning is the identification of health promotion outcomes and intermediate impacts that should be addressed in order to achieve the goals of health promotion actions (1). It is important to note that formal evidence alone is not a sufficient basis for effective health promotion. External information can inform, but not replace the expertise of individual practitioners which guides the selection and application of evidence (11).

GLOBAL HEALTH

Global health refers to the transnational impacts of globalization upon health determinants and health problems which are the beyond the control of individual nations (5).

This is a modified definition (12). Issues on the global health agenda include the inequities caused by patterns of international trade and investment, the effects of global climate change, the vulnerability of refugee populations, the marketing of harmful products by transnational corporations and the transmission of diseases resulting from travel between countries. The distinction between global health problems and those which could be regarded as international health issues is that the former defy control by the institutions of individual countries. These global threats to health require partnerships for priority setting and health promotion at both the national and international level.

HEALTH

Health is defined in the WHO constitution of 1948 as “a state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity” (WHO constitution) (13).

Within the context of health promotion, health has been considered less as an abstract state and more as a means to an end which can be expressed in functional terms as a resource which permits people to lead an individually, socially and economically productive life. Health is a resource for everyday life, not the object of living. It is a positive concept emphasizing social and personal resources as well as physical capabilities (14).

HEALTH BEHAVIOUR

Any activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting or maintaining health, whether or not such behaviour is objectively effective towards that end (2).

Health behaviours and risk behaviours are often related in clusters in a more complex pattern of behaviours referred to as lifestyles.

HEALTH COMMUNICATION

Health communication is a key strategy to inform the public about health concerns and to maintain important health issues on the public agenda. The use of the mass and multi media and other technological innovations to disseminate useful health information to the public, increases awareness of specific aspects of individual and collective health as well as importance of health in development (1,15).

HEALTH DEVELOPMENT

Health development is the process of continuous, progressive improvement of the health status of individuals and groups in a population (16).

HEALTH EDUCATION

Health education comprises consciously constructed opportunities for learning involving some form of communication designed to improve *health literacy*, including improving knowledge, and developing *life skills* which are conducive to individual and *community health* (1)..

Health education means a consciously constructed opportunities for learning, together with (representatives of) the target population, involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills that are conducive to individual and community health (2)..

HEALTH EXPECTANCY

Health expectancy is a population based measure of the proportion of expected life span estimated to be healthful and fulfilling, or free of illness, disease and disability according to social norms and perceptions and professional standards (1).

Health expectancy belongs to a new generation or type of health indicator which are currently being developed. These indicators are intended to create measures which are more sensitive to the dynamics of health and determinants. Health expectancy indicators combine information from life expectancy tables and health surveys of populations. They need to be based on life expectancy at country level or a similar geographic area. Examples of health expectancy indicators currently in use are disability free life years (DFLY) and quality adjusted life years (QALY). They focus primarily on the extent to which individuals experience a life span free of disability, disorders and/or chronic disease. Health promotion seeks to expand the understanding of health expectancy beyond the absence of disease, disorder and disability towards positive measures of health creation, maintenance and protection, emphasizing a healthy life span (1).

HEALTH FOR ALL

The attainment by all the people of the world of a level of health that will permit them to lead a socially and economically productive life (9).

Note the difference between Health FOR, WITH and BY people:

- FOR people: technically and professionally dominated services working for the benefit of people;
- WITH people: holistic approach, searching for partnership of experts and people, and health in the scope of general development;
- BY people: self-reliance in the context of participatory democracy and radical structural change, "social justice" and empowering the unprivileged with direct access to the resources necessary for development, and influence in the decisions affecting those resources (6)

HEALTH GAIN

Health gain is a way to express improved health outcomes. It can be used to reflect the relative advantage of one form of health intervention over another in producing the greatest health gain (1).

HEALTH GOAL

Health goals summarize the health outcomes which, in the light of existing knowledge and resources, a country or community might hope to achieve in a defined time period (1). Health goals are general statements of intent and aspiration, intended to reflect the values of the community in general, and the health sector in particular, regarding a healthy society. Many countries have adopted an approach to setting health goals and health targets as statement of direction and intent with regard to their investments for health. WHO has supported the development, and promoted the use of health goals and targets at global and regional, national and local levels (1).

HEALTH IMPACT ASSESSMENT

Health impact assessment is a combination of procedures, methods and tools by which a policy, program, product, or service may be judged concerning its effects on the health of the population (5).

Health impact assessment is usually conducted at the local or regional level, and its primary purpose is to inform the development of policies and programs that will promote better health and reduce health inequalities (17). When used effectively health impact assessment can draw upon a wide range of values and evidence and facilitate intersectoral partnerships and community participation for health promotion. Health impact assessment considers both positive and negative impacts and can be used to identify new opportunities for health promotion. The issues that can be addressed in health impact assessments include the effects of international trade, changes in the regulatory controls that governments can use, access to new information and technologies, threats to the natural environment, and changes in lifestyles and social structures (18).

HEALTHISM

It is used to describe the belief or cultural value that health is more important than all over rewards or satisfactions, in other words the achievement of health is the prime object of living (2).

HEALTH LITERACY

Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health (1).

HEALTH POLICY

A formal statement or procedure within institutions (notably government) which defines priorities and the parameters for action in response to health needs, available resources and other political pressures (1).

HEALTH PROMOTION

The process of enabling individuals and communities to increase control over the determinants of health and thereby improve their health (14).

Health promotion represents a comprehensive social and political process, it not only embraces actions directed at strengthening the skills and capabilities of individuals, but also action directed towards changing social, environmental and economic conditions so as to alleviate their impact on public and individual health.

HEALTH PROMOTING HOSPITALS

A health promoting hospital does not only provide high quality comprehensive medical and nursing services, but also develops a corporate identity that embraces the aims of health promotion, develops a health promoting organizational structure and culture, including active, participatory roles for patients and all members of staff, develops itself into a health promoting physical environment and actively cooperates with its community (19).

HEALTH PROMOTING SCHOOLS

A health promoting school can be characterized as a school constantly strengthening its capacity as a healthy setting for living, learning and working (20).

HEALTH PROMOTION EVALUATION

Health promotion evaluation is an assessment of the extent to which health promotion actions achieve a “valued” outcome (1).

HEALTH PROTECTION

Measures to reduce the negative health influences of harmful conditions at home, at work, or in leisure time (3).

HEALTHY CITIES

A healthy city is one that is continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential (23).

HEALTHY PUBLIC POLICY

An explicit concern for the promotion of health and equity in all areas of policy and an accountability for health impact. Healthy public policy creates a supportive physical and social environment which enables people to lead healthy lives (2).

Healthy public policy is characterized by an explicit concern for health and equity in all areas of policy, and by an accountability for health impact. The main aim of healthy public policy is to create a supportive environment to enable people to lead healthy lives. Such a policy makes healthy choices possible or easier for citizens. It makes social and physical environments health enhancing (1,22).

INEQUALITY, INEQUITY

Inequality and inequity do not have a same meaning. Inequality is just a description of the situation, a measurement of differences in the observed group. Inequity adds to the meaning a clear moral judgement. Inequity implies that the observed inequalities are not accepted and justifiable.

Inequalities may be of different kind but mostly they are connected with social inequalities. It is not possible to discuss social inequalities and health inequalities separately. Most of the health inequities will be of social origin, directly /through poverty, poor nutrition, harmful environment), or indirectly /through insufficient education, unaffordable or inaccessible services, etc.) (2).

INTERSECTORAL ACTION/COLLABORATION

Intersectoral collaboration means a recognized relationship between part or parts of different sectors of society which has been formed to take action on an issue to achieve health outcomes or intermediate health outcomes in a way which is more effective, efficient or sustainable than might be achieved by the health sector acting alone (1,23).

The terms “intersectoral” and “multisectoral” are frequently used interchangeably. In HFA context, however, the preferred approach would be an intersectoral one, that is, coordinated action for health. “Multisectoral action”, in the health field, means health action carried out simultaneously by a number of sectors within and outside the health system (6).

INVESTMENT FOR HEALTH

Investment for health refers to resources which are explicitly dedicated to the production of health and health gain. They may be invested by public and private agencies as well as by people as individuals and groups. Investment for health strategies are based on knowledge about the determinants of health and seek to gain political commitment to healthy public policies (1).

LEADERSHIP

Leadership is the informal power of a member of a social group to be followed by others by virtue of his/her capacity without having means of enforcement. Leadership is related to directing, influencing and controlling of others in pursuit of a group goal (3).

LIFE SKILLS

Life skills are abilities for adaptive and positive behaviour, that enable individuals to deal effectively with the demands and challenges of everyday life (24).

Life skills consist of personal, inter-personal, cognitive and physical skills which enable people to control and direct their lives, and to develop the capacity to live with and produce change in their environment. Examples of individual life skills include decision making and problem solving, creative thinking and critical thinking, self awareness and empathy, communication skills and interpersonal relationship skills, coping with emotions and managing stress.

LIFESTYLE (LIFESTYLE CONDUCTIVE TO HEALTH)

Lifestyle is a way of living based on identifiable patterns of behaviour which are determined by the interplay between an individual’s personal characteristics, social interactions, and socioeconomic and environmental living conditions (1).

These patterns of behaviour are continually interpreted and tested out in different social situations and are therefore not fixed, but subject to change. Individual lifestyles, characterized by identifiable patterns of behaviour, can have a profound effect on an individual’s health and on the health of others. If health is to be improved by enabling individuals to change their lifestyles, action must be directed not only at the individual but also at the social and living conditions which interact to produce and maintain these patterns of behaviour (1).

MANAGEMENT

Management means using resources of all kinds (3M = Men + Money + Materials) so that they jointly as a system reach given objectives and produce attainable results. Management

is following flexible and dynamic procedures. Management is specially used for work with money, but it means also skilful dealing with other persons.

MEDIATION

A process through which the different interests (personal, social, economic) of individuals and communities, and different sectors (public and private) are reconciled in ways that promote and protect health (1).

Producing change in people's lifestyles and living conditions inevitably produces conflicts between the different sectors and interests in a population. Such conflicts may arise, for example, from concerns about access to, use and distribution of resources, or constraints on individual or organizational practices. Reconciling such conflicts in ways which promote health may require considerable input from health promotion practitioners, including the application of skills in advocacy for health (1).

NEEDS ASSESSMENT

A systematic procedure for determining the nature and extent of health needs in a population, the causes and contributing factors to those needs and the human, organizational and community resources which are available to respond to these (5).

Needs assessment is an early step in planning a health promotion initiative. It is accompanied ideally by an assets assessment (resources available to promote health). The scope of needs assessment in health promotion is broad, reflecting an understanding that health is shaped by individual factors and the physical, social, economic and political context in which people live. Information collected may include morbidity and mortality patterns, health-related cultural beliefs, educational attainment, housing quality, gender equity, political participation, food security, employment, poverty and environmental quality. The opportunities for empowerment in health promotion begin in the needs assessment stage. Consulting communities is a key method for understanding factors which affect their health and quality of life, and is a means of recognizing the needs of disadvantaged groups which may not be represented in routine statistical collections. Participatory needs assessment methods, such as Rapid Participatory Appraisal, can be used to engage communities in the process of information collection, analysis and priority setting, and to build future capacity for health promotion (5).

NETWORK

A grouping of individuals, organizations and agencies organized on a non hierarchical basis around common issues or concerns, which are pursued proactively and systematically, based on commitment and trust (1).

NEW PUBLIC HEALTH

The application of the biological, social and behavioural sciences to the study of health phenomena in human populations. It encompasses two main objects of analysis: (1) the epidemiological study of health conditions of populations, and (2) the study of the organized social response to those conditions, in particular, the way in which that response is structured through the health care system.

The New Public Health entails systematic efforts to identify health needs and to organize comprehensive services with a well-defined population base. It thus includes the processes

of gathering the information required to characterize the conditions of the population and mobilizing the resources necessary to respond to such conditions. In this regard, the essence of public health is the health of public. Therefore, it includes the organization of personnel and facilities for providing all the health services required for health promotion, social and vocational rehabilitation (2),

Distinction between the „old“ and „new“ public health may not be necessary in the future as the mainstream concept of public health developments and expands (1)

PUBLIC HEALTH

Public health is a social and political concept aimed at the improving health, prolonging life and improving the *quality of life* among whole populations through *health promotion*, *disease prevention* and other forms of health intervention. A distinction has been made in the *health promotion* literature between *public health* and a new public health for the purposes of emphasizing significantly different approaches to the description and analysis of the *determinants of health*, and the methods of solving public health problems. This **new public health** is distinguished by its basis in a comprehensive understanding of the ways in which *lifestyles* and *living conditions* determine health status, and recognition of the need to mobilize resources and make sound investments in policies, programmes and services which create, maintain and protect health by supporting healthy *lifestyles* and creating *supportive environments for health*. Such a distinction between the “old” and the “new” may not be necessary in the future as the mainstream concept of public health develops and expands (1).

PRIMARY HEALTH CARE

Essential health care made accessible at a cost the country and community can afford, with methods that are practical, scientifically sound and socially acceptable (25).

Primary Health Care is the central function and main focus of a country’s health system, the principal vehicle for the delivery of health care, the most peripheral level in a health system stretching from the periphery to the centre, and an integral part of the social and economic development country (6).

PRIMARY PREVENTION

Aims to prevent health problems, diseases and actions before they occur.

QUALITY OF LIFE

Quality of life is defined as individual’s perceptions of their position in life in the context of the culture and value system where they live, and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept, incorporating in a complex way a person’s physical health, psychological state, level of independence, social relationships, personal beliefs and relationship to salient features of the environment (26).

The term “Quality of Life” (QoL) has been used inconsistently in health services research literature. Some authors define QoL as being typically limited to psychosocial and social attributes. Other definitions of health-related QoL focus on the qualitative dimension of a person’s functioning in terms of mortality, symptoms, and prognosis..

Health is today considered a broad-based concept, “a multi-dimensional adaptable vehicle”. In contrast to health, the foundation of QoL are positive value. Because of this, QoL is

largely based on subjective elements. There are different opinions whether QoL be based on subjective perceptions only or on a combination of both subjective and objective conditions. The starting point of the QoL concept is multidisciplinary expressing positive value based on perceived or objectively evaluated wellbeing close to the contemporary health concept.

RE-ORIENTING HEALTH SERVICES

Health services re-orientation is characterized by a more explicit concern for the achievement of population health outcomes in the ways in which the health system is organized and funded. This must lead to a change of attitude and organization of health services, which focuses on the needs of the individual as a whole person, balanced against the needs of population groups (1,14)

RAPID APPRAISAL (RAP)

RAP is a method of gathering information about a set of problems in a short period and without a large expenditure of professional time and finance. RAP is the beginning of the process for collecting information to make a plan of action. RAP is not a method for extensive data. RAP tells what the problems are, not how many people are affected by the problems (2).

RISK BEHAVIOUR

Specific forms of behaviour which are proven to be associated with increased susceptibility to a specific disease or ill-health (1).

Risk behaviours are usually defined as “risky” on the basis of epidemiological or other social data. Changes in risk behaviour are major goals of disease prevention, and traditionally health education has been used to achieve these goals. Within the broader framework of health promotion, risk behaviour may be seen as a response, or mechanism for coping with adverse living conditions. Strategies to respond to this include the development of life skills, and creation of more supportive environments for health (1).

SELF-EFFICACY

Perceived self-efficacy refers to beliefs that individuals hold about their capability to carry out action in a way that will influence the events that affect their lives (5). Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. This is demonstrated in how much effort people will expend and how long they will persist in the face of obstacles and aversive experiences.

SELF HELP

In the context of health promotion, actions taken by lay persons (i.e. non health professionals) to mobilize the necessary resources to promote, maintain or restore the health of individuals or communities (1)

Although self help is usually understood to mean action taken by individuals or communities who will directly benefit those taking the action, it may also encompass mutual aid between individuals and groups. Self help may also include self care – such as self medication and first aid in the normal social context of people’s everyday lives.

SELF-HELP GROUP

Voluntary, small group structures for mutual aid towards a common goal. The initiators and members of such groups perceive that their needs are not or cannot be met by existing health and social services and seek to establish a mechanism for meeting their needs. All the health activities carried out by individuals for themselves and their families, including the maintenance of health, prevention of disease, self-diagnosis and self-treatment (2).

SETTINGS FOR HEALTH

The place or social context in which people engage in daily activities in which environmental, organizational and personal factors interact to affect health and wellbeing (1).

SOCIAL CAPITAL

Social capital represents the degree of social cohesion which exists in communities. It refers to the processes between people which establish networks, norms, and social trust, and facilitate co-ordination and co-operation for mutual benefit (1).

Social capital is created from the myriad of everyday interactions between people, and is embodied in such structures as civic and religious groups, family membership, informal community networks, and in norms of voluntarism, altruism and trust. The stronger these networks and bonds, the more likely it is that members of a community will co-operate for mutual benefit. In this way social capital creates health, and may enhance the benefits of investments for health.

SOCIAL MARKETING

Social marketing is the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence the behaviour of target audiences in order to improve the welfare of individuals and society (5).

Social marketing strategies are concerned firstly with the needs, references and social and economic circumstances of the target market. This information is used to ensure the most attractive benefits of a product, service or idea are offered and to address any barriers to the acceptance of that offering. Communicating with target market members about the relative advantages of what is offered is one element of social marketing, but also important are addressing issues of price, access, environmental support and the marketing of competing products. Effective social marketing, therefore, may include efforts to address the economic and regulatory environment. Success of a social marketing strategy is determined by its contribution to the well-being of the target market or society as a whole (5).

SOCIAL NETWORK(S)

Social relations and links between individuals which may provide access to or mobilization of social support for health (1).

SOCIAL SUPPORT

Social support are the assistance available to individuals and groups from within communities which can provide a buffer against adverse life events and living conditions, and can provide a positive resource for enhancing the quality of life (1).

Social support may include emotional support, information sharing and the provision of material resources and services. Social support is now widely recognized as an important determinant of health, and an essential element of social capital...

STAKEHOLDERS

People and organizations that have an interest or share in an issue. It includes both those who have an influence and those who are affected (3).

STRATEGY FOR HEALTH

Broad lines of action to be taken to achieve the goal and objectives, incorporating the identification of suitable points for intervention, the ways of ensuring the involvement of other sectors, the range of political, social, economic, managerial and technical factors as well as constraints and ways of dealing with them (2).

SUSTAINABLE HEALTH PROMOTION ACTIONS

Sustainable health promotion actions are those that can maintain their benefits for communities and populations beyond their initial stage of implementation. Sustainable actions can continue to be delivered within the limits of finances, expertise, infrastructure, natural resources and participation by stakeholders (5).

WELL-BEING

A subjective assessment of health which is less concerned with biological function than with feeling such as self-esteem and a sense of belonging through social integration.

In health promotion the use of this term might focus more on social integration and social support, or even a broader sense of social coherence for belonging, as the central meaning (1).

WELLNESS

An emerging concept of health primarily concerned with the Quality of Life, emphasizing the experiential as well as behavioural dimensions of human existence (1).

Programmes concerned with promoting wellness would recognize the multidimensional, holistic nature of health, focusing on lifestyles rather than risk behaviours and risk factors. Wellness programmes tend to rely heavily on educational strategies but would also include the full range of health promotion strategies to provide environmental and economic support for lifestyles conducive to wellness (1).

Wellness is the optimal state of health of individuals and groups. There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfillment of one's role expectations in the family, community, place of worship, workplace and other settings (5).

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A 1.1 TERMINOLOGY: INDIVIDUAL AND GROUP EXERCISE

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Some terms are used in everyday practice and even in printed documents in very different ways and sometimes in controversial meanings so that misunderstandings and dissimilar interpretations are possible.

The field of health promotion has a distinctly uncoordinated terminology. The reason for this is that terms are taken over from different other scientific fields or are created according to historical needs and circumstances in different countries. A local jargon is frequently used.

Educational objectives

- To understand different terms in the field of public health, particularly health promotion;
- To analyze their meanings in meaningful messages;
- To analyze their origin and destiny;
- To stimulate translation from English to tongue language.

Tasks

1. Mark the terms you do not understand, find their definition;
2. Mark the terms which you feel ambiguous and discuss them with your colleagues and teachers;
3. Mark the terms you fully understand and encounter often;
4. Mark the terms you find a responding word in your mother tongue.

Recommendation for teacher

Select different terms from Health Promotion Glossary (proposal: 20 terms, 5 for each small group). Recommended time: 60 minutes.

Points for consideration

Understanding of terms will not come from learning by heart their definitions, but from analysis of their meanings in meaningful messages, and understanding of their origin and destiny. Like other words, scientific and technical terms are living and changing in spite of strict definitions.

It is helpful to find a responding word in your mother tongue, but do not be disappointed if that would be hard or impossible.

A 2 ABOUT EDITORS



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