



Review

Reimagining Sustainability in Global Health: A look at situation post COVID-19 and Influence of Growing Geopolitical Fragmentation

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Abstract

Coronavirus disease 2019 (COVID-19) coupled with effects of conflicts and wars has threatened sustainability in global health (GH). This paper discusses sustainability in GH based on core pillars of sustainable development – *economic, social and environmental*.

In the *economic pillar*, we note the needs for: adequate funding to World Health Organization; sustaining global resource sharing and ensuring efficiency in internal resource mobilization; addressing effects of conflicts and war; and solidarity in ensuring GH funding is maintained.

In the *social pillar*, there is a need for: having proper regulatory framework for guiding development and use of artificial intelligence tools; addressing equity issues; strengthening role of women leadership for peace and health systems; improving application of laws, regulations and policies; ensuring health education is delivered in an ethical, transparent and honest way considering use of formats and language suitable for targeted populations; and strengthening health systems to provide quality services to older population.

In the *environmental pillar*: health care workers (HCWs) need to provide counselling to clients on effects of climate change; health systems leaders, planners, and HCWs in general need to ensure healthcare services are provided in a sustainable way; and design and implementation of interventions should uphold human rights taking into account population demographics.

Keywords: Global health; Sustainability; Sustainable development; Strengthening health systems; COVID-19; Climate change; Conflicts and war; Systems thinking; Antibiotic use; Commercial and social determinants of health.

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Introduction



A common definition of global health has been an issue of debate by scholars in global health (1-4). Consensus from the “*Editorial Board Meeting of Global Health Research and Policy, convened in July 2019 in Wuhan, China,*” defined global health as a “*general guiding principle, an organizing framework for thinking and action, a new branch of sciences and specialized discipline in the large family of public health and medicine*”(4). Sewankambo, and colleagues have proposed “*redefining global health as a dignity-based practice*”(5), building on a conceptualization of dignity in health promotion by Sæteren and Nåden (6). As efforts to strengthen global health implementation continues, a movement on “*decolonizing global health*” has emerged (7-9); and its link to quality of care has been documented (10).

Efforts to strengthen global health system in a way that will contribute to sustainability in global health requires that governance function is continuously strengthened (11). Also, need for considering the governance function to suit governance for sustainable development goals (SDGs) has been noted (12). Past 12 years (in 2010), a need for strengthening country health systems as a way for making progress in global health systems was documented, pointing to the value of nurturing health system leaders with “*strategic vision, technical knowledge, political skills, and ethical orientation*” (13). Coronavirus disease of 2019 (COVID-19) which has caused “*human, economic and social crisis*” (14); has also exposed some malfunction in global health governance in which “*COVID-19 decisions underlying value, although had human right to health at the base, overlooked the concept of health as a global public good and was skewed towards market-oriented values*” (15). While the World Health Organization (WHO) on 05th May 2023 declared that the COVID-19 is no longer a global health emergency (16, 17); reflecting on its effects in global health offers some insights with regard to the way forward with sustainability in global health.

Disease outbreaks have been shown to have profound economic and social impacts which has highlighted on the need to invest in strengthening health systems in a way that will ensure sustainability of preparedness and response efforts to manage future outbreaks (18, 19). A WHO report on maternal mortality between 2000 and 2020 revealed that the gains made during the millennium development goals era (2000 – 2015) have faltered in the period of 2016-2020 (20).

The Pillars

This paper discusses the situation of sustainability in global health (in the context of post COVID-19, and raising geopolitical fragmentation and tensions including conflicts and wars) based on the core pillars of sustainable development – namely “*economic, social and environmental*” (21).

1 The Economic Pillar

The WHO has been noted to be “*uniquely placed among global health organizations to provide the overarching governance of global functions*” (22). However, as the WHO marked 75 years of



work on 07th April, 2023, still sustainability of its work has been compromised by inadequate budget (23). Consensus by countries during the 76th-World Health Assembly (76WHA) in May 2023, for a “20% increase in assessed contributions,” sheds some light on improved financing for the work of WHO (24). Low- and middle- income countries (LMICs) especially in sub-Saharan Africa and South Asia have been shown to face a number of challenges towards achievement of universal health coverage (UHC) by 2030, which require improvement in efficiency of internal resource mobilization, as well as, international cooperation and resource sharing (25). The increasing tensions between bigger economies, as well as conflicts and wars are posing threats to global financial stability (26); which ultimately will greatly affect sustainability in global health due to effects on commodity prices and supply chains for both food and health commodities. Investments in health could achieve a “*grand convergence in global health - a reduction in avertable infectious, maternal, and child deaths down to universally low levels-within a generation*” by 2035 (27). Although financing global health during the COVID-19 pandemic (2020 – 2021) showed significant improvement, there is a need for ensuring that the funding is maintained (28); given the observations that global “*multilateralism and solidarity*” showed a failure during the three-years of COVID-19 (29). Also, the economic effects of the COVID-19 pandemic and the Russia – Ukraine war on Central Banks is likely to affect sustainability of global health financing (30). Experts have proposed a need for reforming development assistance funding by ensuring that “*domestic finances are allocated ‘first,’ and aid is allocated as ‘top up’*”, (31). In this view, countries need to explore and utilize the potential corporate taxes in financing health and related sectors (32).

2 The Social Pillar

In the global digital revolution, use of digital solutions to optimize health services has been making fast progress. One of the areas (in digital revolution) being the development and use of artificial intelligence (AI). Need for a well securitized ethical framework is key to ensure sustained future use and development of various AI’s based health care tools. Exploration of patients’ perspectives by Mikkelsen and colleagues has shown that they prefer implementation of AI to be in a way that preserves the relationship between patient and general practitioner, and that it should be used as a support tool but not replacing general practitioner (33). Exploration by Kamradt and colleagues on “*physician perspectives on using real-world care data for the development of AI-based technologies in health care*” has found that “*physicians would agree to use real-world care data to support the development of AI-based solutions with a clear benefit for daily patient care*” (34). A review of patient perspectives on AI use in radiology has found that patients support use of “*combined human and AI interpretation of imaging over AI acting autonomously*” (35).

Equity gaps exist in global health, which require redressal efforts (36). Strengthening partnerships between health facilities and communities is key to ensure sustained population health (37). During the WHO pandemic treaty negotiation development process, a call for upholding promises of equity has been raised (38). Migrants face challenges to utilize health services in countries of



migration due to many system issues, hence there is a need for interventions to address various access barriers to health services by migrants (39). In sub-Saharan Africa, household autonomy of women in making decisions has been shown to be associated with their enrollment in health insurance, which indicates that efforts on socioeconomic empowerment of women can contribute to attainment of UHC (40). Role of women leadership on peacebuilding in conflict affected countries, as well as in strengthening health systems has been documented, which warrants more investments in the current era of mounting armed conflicts and wars (41).

Also, there is a need to strengthen development, implementation and monitoring of laws, regulations and policies at global, national and subnational level in the spirit of countries cooperation and collaboration for a safe and healthier world (42). The commitment of the “*Intergovernmental Negotiating Body (INB) Bureau members, in facilitating INB negotiation among the 194 countries to reach consensus on the new instrument that provides concrete, timely, and equitable means of preventing, preparing for, and responding to future pandemics*” offers hope for a bright future in global health (43). While, globally emphasis to populations of all socio-demographics on the importance of physical activities is made as an intervention to address non-communicable diseases, there is also a need to focus on ethical issues within physical activities as put forward by Esmonde (44).

Education of public on issues that are more specific to global health (for instance: “*maternal and child mortality, major infectious diseases, international organizations, inequality and equity, and the UN Development Goals*”) seem to attract less interest as compared to general issues, which points to a need for tailoring the language and formats for presentation to those that are popular (of interest) to respective community or population (45). Along the lines of ethical communication, ensuring transparency and honesty are of paramount importance (46, 47). Also, a need for more research to understand what content is appropriate for particular message has been documented (48). Healthcare services to adult population is another aspect which require at most attention for sustainability in global health. It has been estimated that “*by 2050, one in six people worldwide will be over age 65*” (49).

3 The Environmental Pillar

Climate change effects to communities from heatwaves, heavy rainfalls with floods, to wildfires have had effects on wellbeing of populations. For example, in the United States from 2011 to 2021, exposure to wildfire smoke to socially disadvantaged communities has increased (50). Environmental factors have also been shown to play a role in COVID-19 transmission (51-53). As the burden of COVID-19 increased its effects were felt by health workforce who also suffered a lot of morbidity and mortality (54,55). This indicates the need to ensure that health care workers are well protected during epidemics and pandemics so as to effectively maintain health care services delivery to populations.



With increasing disasters and weather emergencies contributed by climate change, health workers need to utilize avenues of caring for their clients to provide knowledge on how to cope with such situations. A study by Meeker and colleagues in the United States has noted that healthcare providers have not provided emergency preparedness counseling to their clients citing barriers such as lack of time and knowledge (56). Also, climate change has been shown to affect young women decision on getting pregnancy and childbearing (57). Health systems leaders, planners, and health care workers in general need to ensure that health care is delivered in sustainable way to minimize its impact on environment in a balance way (win-win) in order not to compromise health care services delivery (58). Using a “*socio-legal lens*”, Van Hout has raised an important issue based on rights to health with regard to the environment in detention spaces for immigration detainees. This is essential in ensuring that they are kept safe and healthy while other legal procedures follow appropriate steps (59). Likewise, in the efforts to address climate change, there is a need to take into account human rights and promote social justice (60, 61); and accommodate population demographics - youths, older people, and other vulnerable groups (62-65). Also, a need for “*influential global institutions*” to uphold human rights principles as their guide has been noted (66).

In addressing the growing danger of nexus between climate change, emerging infectious diseases, and food security, Trivellone and colleagues have suggested for application of “*Stockholm paradigm and the document-assess-monitor-act protocol*” which can enable protection of “*human rights, supporting food security, access to nutritious food, health interventions and environmental integrity*” (67). Moving forward past COVID-19, Özdemir has proposed use of an innovative governance framework (“*One Nature*”) for future sustainability of biodiversity and ecosystem (68).

Water, sanitation, and hygiene (WASH) interventions use by communities and populations were very essential in the fight against COVID-19 (69). Given the fact that compliance to these interventions is mainly behavioral, it is critical to ensure that strategies that facilitate availability and accessibility to WASH services and interventions are maintained since WASH interventions have also benefits to other infectious diseases (70).

Discussion

Given the rising global health challenges, actors and stakeholders at global, national and sub-national levels need to embrace the “*systems thinking approach*” to designing of solution interventions in addressing various challenges and issues. The system thinking approach can be used to address the following global health issues: commercial determinants of health (71); promoting maternal, child and adolescent nutrition (72); ending neglected tropical diseases (73);



responding to infectious diseases outbreaks (74); achieving circular economy (75); understanding ways for promoting physical activity in children and adolescents (76); improving implementation of antimicrobial stewardship in primary health care as an important strategy for addressing antimicrobial resistance (77); “*transforming and redesigning Competency-based Medical Education*” (78); implementation of interventions to achieve the “*WHO call to action to eliminate cervical cancer by the end of the century*” (79); tackling effects of COVID-19 to women and girls in LMICs in a way that will ensure their sustainable development (80); and in strengthening stewardship in the practice of veterinary medicine in order to ensure “*that every resource in livestock production, the land, livestock, and people,*” is considered (81). Also, systems thinking has been shown to be an essential tool for countries in implementation of various interventions towards attainment of the SDGs by 2030 (82). Thelen and colleagues have developed a useful framework for assisting application of system thinking in designing and implementation of health interventions (83).

As the world continue with efforts to build back better post COVID-19 as well as fighting with the effects of climate change and increased geopolitics that are likely to increase fragmentation and tensions (conflicts and wars), there is a need for reimagining sustainability in global health using “*a big-tent approach*” which will allow and encourage all global health actors to collaborate towards common goals that will ultimately be celebrated as collective achievements (84). Also, experts in behavioral medicine need to work together with experts in climate sciences in order to contribute effectively on efforts for mitigation and adaption to climate change (85). Governments need to strengthen policy interventions to address poverty as a way of enabling people to afford food, instead of relying on the expanding food banks backed by corporates (86). Also, countries need to reflect on their progress in the SDGs and strategize on improvement ways towards 2030 targets (87,88).

Along with all efforts to improve sustainability in global health, it is important to ensure that we conduct “*policy and implementation research that aims to produce generalizable evidence on what works to implement successful interventions at scale*” (89). The implementation research also needs to focus on health literacy in young generation in LMICs (90). Also, for a better future, need for studies of the past issues (“*memory studies*”) is imperative (91). In order to ensure that we have critical number of well-trained global health researchers, use of mentorship is essential (92). Role of the WHO Regional Offices in enhancing collaboration across regions and countries in a way that will help to address trans-regional problems that are not yet at a level of receiving global attention has also been emphasized (93).

Future Directions

Countries need to use the WHO guidance book on antibiotic use (*The WHO AWaRe (Access, Watch, Reserve) antibiotic book*) which aims “*to help reach the WHO target of increasing the*



*proportion of global consumption of Access antibiotics to at least 60% of total consumption”, and also contribute to achievement of UHC (94); and further strengthen capacity to implement best practices for containment of antimicrobial resistance (95). Countries and global health actors need to design appropriate interventions for addressing the HRH drainage from LMICs exacerbated by the circumstances post COVID-19 (96,97). Commercial determinants of health need to be well conceptualized and appropriate strategic interventions by governments be put in place to save the future generation (98), taking into account the “*expanded best buys for tackling noncommunicable diseases*” from the 76WHA (99). Studies targeting ways to improve and sustain physical activities in children are critical in order to provide evidence on best strategies for enhancing physical activity (100).*

Primary health care services are foundation for a strong and resilient health system. However, studies on AI-based health care technologies development and use in primary health care have been done more in high-income countries (33,34,101); therefore, there is a need for developing AI-based health care tools based on the LMICs contexts in order to ensure ethical accommodation, transparency, as well as accuracy to the AI-based tools (102,103).

Continued engagement of the global financial institutions (e.g., World Bank, International Monetary Fund) in supporting global health efforts, as well as, building capacity for LMICs to improve efficiency of internal resource mobilization and allocation (25). Also, there is an imperative need for countries to strengthen health system governance based on the five core functions of health system governance (*policy formulation and strategic plans; intelligence; regulation; collaboration and coalition; and accountability*) (104). Countries need to implement primary health care reforms and ensure further strengthening of primary health care in order to be able to care for aging population (105).

In order to tackle the effects of anti-science culture, Øvretveit has provided a useful list of methodological options that can be used in implementation research (106). Given the importance of social determinants of health (SDOH), it is essential for health facilities globally to address SDOH as part of health services delivery (107). As a way of improving monitoring of key SDGs indicators, health systems in countries in sub-Saharan Africa need to implement interventions that will improve “*data quality and monitoring through the District Health Information System 2 (DHIS2) software*” (108). Health training institutions have a role to play. Therefore, it is recommended to reimagine medical education through incorporation of what Engebretsen and colleagues have called it a “*critical medical humanities*, which can help to address the current complex challenges (109).

This paper has discussed sustainability based on the three components of sustainability (economic, social, and environmental). However, learning from the disruptions caused by COVID-19 in health



systems globally, a proposal by Blanch and Anderson for a fourth component namely “*systems sustainability*” is essential in order to ensure health care delivery sustainability (110). Therefore, it is recommended that future analyses of sustainability need to include systems sustainability.

Conclusions

This paper has provided an insight into sustainability in global health based on the three pillars of sustainable development namely economic, social, and environmental.

In the economic pillar, the paper has noted on: need for adequate funding to WHO to fulfil its roles; need for sustaining global resource sharing and ensuring efficiency in internal resource mobilization in LMICs; effects of geopolitical tensions, conflicts and war; and need for solidarity in ensuring that global health funding is maintained.

In the social pillar the following have been noted: role of digital revolution and the need for having proper regulatory framework (especially in LMICs) for guiding development and use of AI tools; addressing equity issues; role of women leadership in building peace and strengthening health systems; role of laws, regulations and policies; need for ensuring that health education to public considers use of formats and language suitable for targeted populations, and that it is delivered in an ethical, transparent and honest way; and strengthening and reforming health systems to be able to provide quality services to older adult population.

In the environmental pillar, the following three points have been highlighted: need for health care workers to provide counselling to their clients on the effects of climate change; need for health systems leaders, planners, and health care workers in general to ensure that health care services are provided in a sustainable way (a win-win way) in order to minimize its impact on environment; and the need for upholding human rights in design and implementation of interventions taking into account population demographics. Looking at the effects of wars and conflicts in global health, it is anticipated that global efforts by members states to work towards peace within and between countries by supporting the WHO-lead peace initiative through “*The Roadmap for the Global Health and Peace Initiative*”, will be able to cooperate in restoring peace globally (111); and by continuing to learn from the “*Faith for Rights*” approach (112). Also, global health strategies need to be crafted with a lens of solidarity and inclusiveness with the aim of reaching everyone regardless of geopolitical location (113).

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