



## Global Health: An Overview

Matthew N. O. Sadiku<sup>1</sup>, Uwakwe C. Chukwu<sup>2</sup>, Janet O. Sadiku<sup>3</sup>

<sup>1</sup> Department of Electrical & Computer Engineering, Prairie View A&M University, Prairie View, TX USA

<sup>2</sup> Department of Engineering Technology, South Carolina State University, Orangeburg, SC, USA

<sup>3</sup> Juliana King University, Houston, TX, USA

**Abstract:** Health is on the political and social agenda of nations and international bodies such as WHO. It is an important global economic and security issue. Global health is a discipline that places a priority on improving health and achieving equity in health for all people worldwide. It focuses on the health needs of people around the world. It has both medical and political dimensions. It plays a crucial role in both global security and the security of every nation. The paper provides an overview of the global health and its ramifications.

**Keywords:** health, healthcare, global health, global public health.

### INTRODUCTION

Good health is the basis of many important things in life, such as facilitating education, helping people to escape from poverty, and supporting long-term economic development.

Health is regarded as one of the global challenges for mankind. Healthcare is a complex system that covers processes of diagnosis, treatment, and prevention of diseases. It constitutes a fundamental pillar of the modern society. The healthcare industry is one of the largest industries in developed nations in terms of job creation, number of employees, and expenditure. A modern healthcare system typically consists of the service providers (i.e., doctors, nurses), healthcare management (i.e. administrators), information technology, the consumers (i.e., patients), the insurance companies (payers), and pharmaceutical drug provider. Such a modernized healthcare system should provide healthcare services to people at any time and from anywhere. As a service industry, healthcare organization is always challenged with efficiencies, equities, and provision of qualities in delivering services [1].

The past two decades have brought revolutionary changes in global health, driven by AIDS, new strains of influenza, and maternal mortality. Global disease threats can have an impact on American business interests at home and abroad. Migration influences many health determinants and outcomes around the world.

In May 2017, the World Health Organization (WHO) updated its facts about global health. The facts are summarized as follows [2]:

- Fact 1: Global average life expectancy increased by five years between 2000 and 2015, the fastest increase since the 1960s.

- Fact 2: Globally, healthy life expectancy (HLE) at birth in 2015 was estimated at 63.1 years.
- Fact 3: In 2015, more than 16,000 children under age five died every day.
- Fact 4: Forty-five percent of deaths among children under age five occur during the first four weeks of life.
- Fact 5: In 2015, an estimated 2.6 million babies were stillborn.
- Fact 6: 1.3 million deaths in 2015 were attributable to hepatitis.
- Fact 7: Non-communicable diseases (NCDs) caused 37 percent of deaths in low-income countries in 2015, up from 23 percent in 2000.
- Fact 8: Ischemic heart disease and stroke killed 15 million people in 2015.
- Fact 9: Diabetes is among the 10 leading causes of death and disability worldwide.
- Fact 10: Injuries claimed nearly 5 million lives in 2015.

Global health builds on national public health efforts and institutions.

### WHAT IS GLOBAL HEALTH?

Global health may be regarded as an area for study, research, and practice that places a priority on improving health and achieving health equity for all people worldwide. It involves health issues that transcend national boundaries and governments. It requires

partnership and collaboration to taking actions on the global forces that determine the health of people. It is focused on people across the whole world rather than the concerns of particular individuals or nations. It draws on a variety of disciplines such as economics, environmental science, epidemiology, sociology, international relations, etc. Ebola and COVID-19 pandemic offer excellent example of global health today.

The key components of global health includes [3]:

- *Improving Health:* Health refers not only to the absence of illness, but also a state of complete physical, mental, and social well-being. Improving health requires attention to all three of these parts, as well as equal emphasis on prevention and care.
- *Achieving Equity:* Achieving equity in health means addressing social and environmental determinants and eliminating disparities in health systems and health care access. This applies to those who are near or far.
- *Reaching Beyond Borders:* Global health deals with health issues affecting multiple nations. Health issues that transcend borders include infectious diseases, climate change, and pollution.
- *Uniting Disciplines:* Global health issues are complex and must be approached from multiple angles: cultural, economic, environmental, infrastructural, political, social, and technological.
- *Building Partnerships:* The complexity of global health requires alliances and partnerships that bring together different perspectives, organizations, and skills.

### APPLICATIONS

Global health in focuses on relationships of interdependence between the developed and the developing world on the global distribution of health and disease and their determinants. The pandemic has highlighted the interdependence of nations like never before. Here will consider applications of global health and some related issues such as governance,, law, mobile health, women's health, children's health, aging, ethics, and religion.

- *Global Health Governance:* The idea of governance refers to the totality of ways in which a society organizes and collectively manages its affairs. Global governance is different from national governance in one critical respect: there is no government at the global level. Consequently, societies face enduring challenges to agree on and enforce rules, coordinate action, achieve policy coherence, and ensure accountability. In an increasingly globalized world,

health challenges can no longer be solved by the health sector alone. Unfortunately, institutions charged with reducing inequalities in global health governance actually contribute to a sense of “global health elitism” and confusion. The rapid spread of COVID-19 highlights the lack of coordination in global health governance more than any other previous modern pandemic. There is apparently no coordination among governments to ensure vaccines will get to the places that lack this local capacity. In order to properly address the burden of global disease, we must first focus on international cooperation and influence international relations. Global health tribulations require meticulous diplomatic and political negotiation. Global and collective agendas rather than local and nationalist concerns must dominate. Collectively we should have more than enough knowledge and expertise to manage this pandemic better than we have [4]. Figure 1 depicts some scholars involved in collaborative discussion [5].

- *Global Health Law*: Given the rapid globalization that is a defining feature of today's world, the need for a robust system of global health law has never been greater. There is the need for collective action to intensify the interest in international legal solutions. The law relating to global health rests primarily within the domain of public international law. The regulations encompass a broad spectrum of health hazards of international concern [6].
- *Women Health*: It is time to end all forms of work-related discrimination by listening to women's experiences. Public health data indicate that the global burden of breast cancer in women is substantial and on the increase. Worldwide, it is estimated that more than one million women are diagnosed with breast cancer every year, and more than 410,000 will die from the disease. The infrastructure and resources for routine mammography are often unavailable in low-income nations.
- *Children Health*: Many children are at high risk of dying due to the indirect effects of the pandemic. Lockdown measures due to the COVID-19 pandemic threaten to cause dangerous drops in childhood vaccination rates for many infectious diseases. About 60 percent of unvaccinated children live in 10 countries: Angola, Brazil, Democratic Republic of Congo, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, and Vietnam [7]. Figure 2 shows an American health worker preparing to give a African boy an injection [8]
- *Mobile Health*: Mobile health (or mHealth) refers to the practice of medicine via mobile devices such as mobile phones, tablet computers, personal digital assistants (PDAs), and wearable devices. It has emerged as a subdiscipline of electronic health (or eHealth). While eHealth can be regarded as technology that supports the delivery of healthcare and provides healthcare services online, mHealth essentially provides access to healthcare mHealth is conducting health via a mobile device [9]. Developing nations are often the most equipped to benefit from mobile services. Mobile devices are used for emergency maternal care delivery in Bangladesh, Ghana, Uganda, and India.

## BENEFITS

For decades, USAID's global health programs have saved lives, protected people most vulnerable to disease, and promoted the stability of communities and nations, while advancing American security and prosperity. Connecting global and domestic health efforts can help us improve health outcomes for everyone, while also maximizing time and resources. Global health thinks about the entire human population as one global community. It incorporates the training and distribution of the health-care workforce in a manner that goes beyond the capacity-building interest of public health [10].

## CHALLENGES

Although globalization promises improved, it has also accelerated the spread of infectious diseases. Global health with issues transcend national boundaries even though the effects of the issues are experienced within nations. Since international law primarily addresses the rights and duties of countries, it cannot easily govern nonstate actors such as individuals and civil-society groups. It is difficult to harmonize governmental interests due to the disparate perspectives. Greater investment in

research and development that primarily benefits the poor is needed. Other challenges include the following:

- *Inequalities*: While access to healthcare across the globe has improved, inequalities in access to healthcare have grown. Inequalities in access to healthcare lead to worse healthcare outcomes in some groups. Millions die each year due to lack of access to healthcare. Figure 3 shows some issues leading to fragmenting and global health inequality [5].
- *Low-income Nations*: Low-income nations often have very limited health system capacity. There are also considerable disparities between poor and rich nations in health infrastructure, including hospital beds, medical personnel, nurses, physicians, and hospital beds. Although preventable disease is predominantly in low-income nations, most global health centers are located in high-income nations, which are facing with a range of pressing health issues. Figure 4 illustrates the burden of noncommunicable disease [11].
- *Hunger*: Hunger and starvation remain a global health problem. Even in wealthier nations, natural disasters can expose political and economic inequalities.
- *Global Health Ethics*: The ethical challenges students face while working abroad can run the gamut, from difficulties navigating relationships at their host institution to misunderstandings about their level of training.
- *Threats*: Key threats of strategic relevance for health are the global divides in terms of demographic development and the burden of disease, social inequity, migration of populations, migration of health professionals, the inequitable terms of trade, and the consequences of the recent global monetary crisis [12].

## HEALTH AROUND THE WORLD

- Outbreaks of infectious disease do not respect national boundaries. Halting and treating diseases at their points of origin is one of the best and most economical ways of saving lives and protecting people. Global health builds on international health interests from institutions in high-income countries. We consider how some nations handle global health.
- *United States*: The US healthcare system has been plagued by high costs for service, poor health outcomes, and access inequalities. For example, increasing cancer rates in the US have made it the number one cause of death, with no indication of slowing down. To protect the American people, the United States actively works to prevent, detect, and respond to infectious disease threats. America is safer and stronger when people can live healthy and productive lives and when nations around the world are self-reliant and resilient. The United States has long prioritized its initiatives, bilateral relationships, and voluntary contributions to WHO over increasing the organization's authority and mandated funding.
- *United Kingdom*: UK refers to global health as health issues where the determinants circumvent, undermine or are oblivious to the territorial boundaries of states, and are thus beyond the capacity of individual countries to address through domestic institutions.
- *Europe*: A task force is establishing a mechanism to coordinate European Academic Global Health initiatives through ASPER. The European Commission launched a public consultation to feed into its new EU Global Health Strategy, which worked with its members and contributed to the public consultation. The European Union is currently revising its strategy on global health. The strategy's aims are to improve health systems and prevent and respond to global health threats as well as tackle all infectious and non-communicable diseases. EU should create One Health interventions and solutions which are inclusive and supporting environments for all.

## CONCLUSION

Global health is an area for study, research, and practice that places a priority on improving health and achieving health equity for all people across the world. Science and disease have no borders. Global health is firmly centered on those with power and privilege, and focused on their generosity and saviorism. Several civil society organizations are promoting health, education, and other human

rights throughout the world. These include the People's Health Movement, ALAMES, Health Poverty Action, Medico International, Global Health Corps, Doctors for Global Health, Third World Network, and Medact.

Global health is a multi-disciplinary course with strong knowledge application-orientation. Regardless of your discipline, you can become a global health professional.

If you are seeking an advanced career that will make an impact in your community, then the field of public health could be great for you and a master's degree is recommended.

To that effect, online courses are being offered to provide students with the basic knowledge of major issues and trends of global health. The courses will analyze the impact of culture, the environment, the economy, and nutrition on global health. More information about global health can be found in the books in [13-22] and the following related journals:

Advances in Global Health

Christian Journal for Global Health

Journal of Global Health

Global Health Journal

International Health

## REFERENCES

1. M. N. O. Sadiku, R. A. K. Jaiyesimi, J. B. Idehen, and S.M. Musa, *Emerging Technologies in Healthcare*. Bloomington, IN: AuthorHouse, 2021, p. vii.
2. "Who updates state of global health facts,"  
<http://health21initiative.org/who-updates-state-of-global-health-facts/>
3. P. Koplan et al., "What Is Global Health?" 2009,  
<https://globalhealth.rutgers.edu/what-we-do/what-is-global-health/>
4. "Global health coordination necessary in a pandemic," July 2020,  
<https://policyoptions.irpp.org/magazines/july-2020/global-health-coodination-necessary-in-a-pandemic/>
5. "Global health justice and governance,"  
<https://penntoday.upenn.edu/news/global-health-justice-and-governance>
6. "Global health and the law," May 2014,  
<https://www.nejm.org/doi/full/10.1056/nejmra1314094>
7. "Global health amid a pandemic,"  
<https://datatopics.worldbank.org/sdcatlas/goal-3-good-health-and-well-being/>
8. "Global health," (National Institute of Health)  
<https://www.nih.gov/about-nih/what-we-do/nih-turning-discovery-into-health/global-health>
9. M. N. O. Sadiku, A. E. Shadare, and S.M. Musa, "Mobile health," *International Journal of Engineering Research*, vol. 6, no. 11, Oct. 2017, pp. 450-452.
10. R. Young, J. Evert, and C. Toms, (2020), "What is global health and why does it matter?" in E. Hartman (ed.). *Interdependence: Global Solidarity and Local Actions*. The Community-based Global Learning Collaborative,  
<http://globalsolidaritylocalaction.sites.haverford.edu/what-is-global-health/>
11. Z. Jakab, "Facing future challenges for global health,"

[https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/178419/RD-Pres-Facing-future-challenges-for-global-health-30-November-2012,-London,-UK-v2.pdf](https://www.euro.who.int/__data/assets/pdf_file/0003/178419/RD-Pres-Facing-future-challenges-for-global-health-30-November-2012,-London,-UK-v2.pdf)

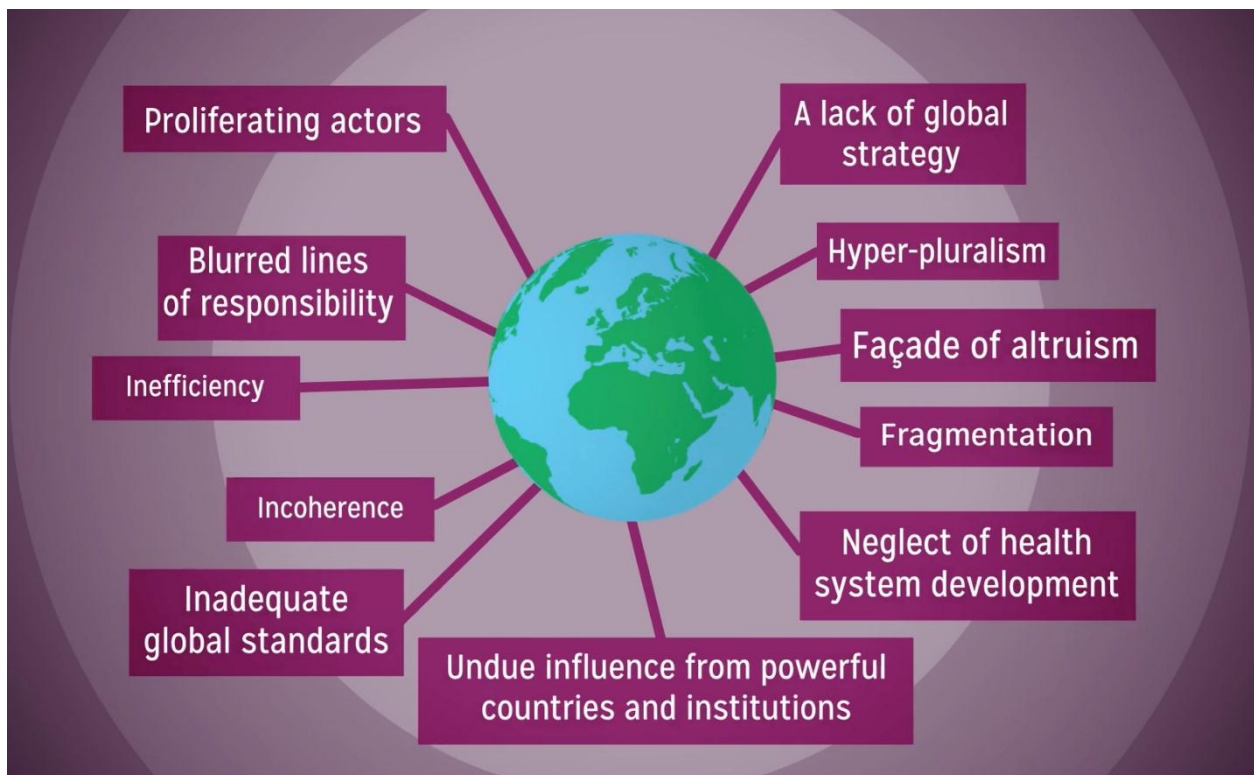
12. U. Laaser and L. Epstein, “Threats to global health and opportunities for change: A new global health,” *Public Health Reviews*, vol. 32, no 1, 2010, pp. 54-89.
13. P. Farmer et al., *Reimagining Global Health: An Introduction*. Univ of California Press, 2013.
14. J. Biehl and A. Petryna (eds.), *When People Come First: Critical Studies In Global Health*. Princeton University Press, 2013.
15. S. Elbe, *Security and Global Health*. Polity, 2010.
16. V. Adams, *Metrics: What Counts in Global Health*. Duke University Press, 2016.
17. B. Sethia and P. Kumar (eds.), *Essentials of Global Health*. Elsevier, 2018
18. S. Benatar and G. Borck, *Global Health: Ethical Challenges*. Cambridge University Press, 2nd edition, 2021.
19. L. O. Gostin, *Global Health Security: A Blueprint for the Future*. Harvard University Press, 2021.
20. C. O. Neill et al. (eds.), *Routledge Handbook of Global Health Rights*. Routledge, 2021
21. C. Clinton and D. Sridhar, *Governing Global Health: Who Runs the World and Why?* Oxford University Press, 2017.
22. P. Ruger, *Global Health Justice and Governance*. Oxford University Press, 2018.



**Figure 1. Some scholars involved in collaborative discussion [5].**



**Figure 2. An American health worker preparing to give a African boy an injection [8]**



**Figure 3. Some issues leading to fragmenting and global health inequality [5].**

# Burden of Noncommunicable Disease

Burden of disease by broad cause group and region, 2004

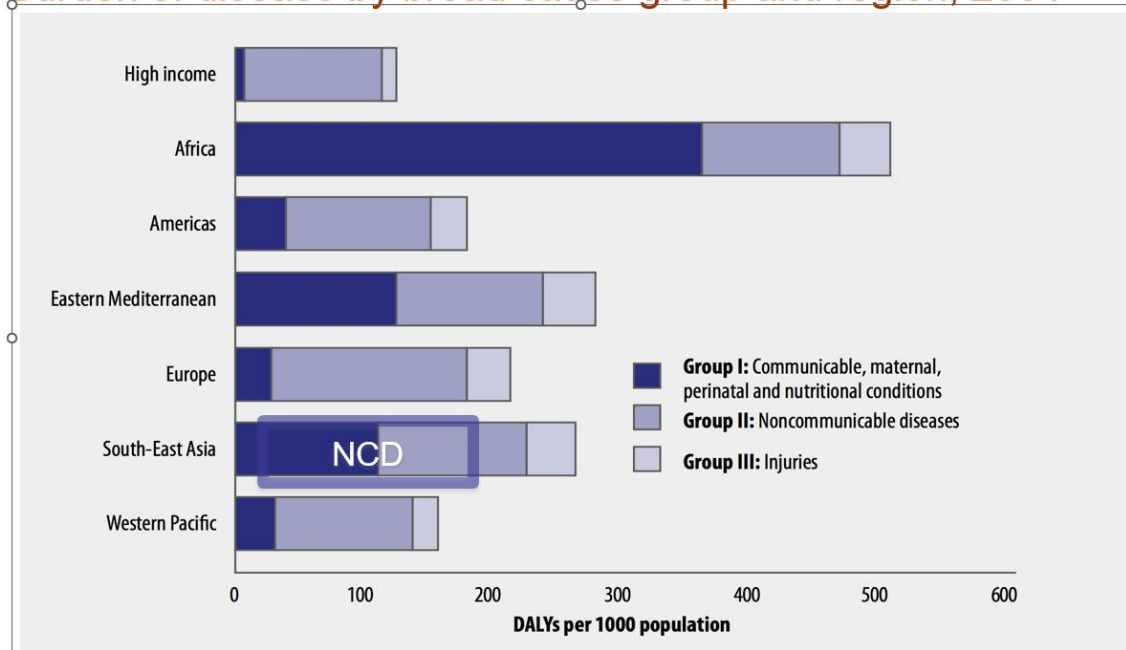


Figure 4. Burden of noncommunicable disease [12].