

Forum: Sustainable Development Commission 2

Issue: Measures to end the epidemics of AIDS, tuberculosis, malaria and other communicable diseases

by 2030

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Introduction

Epidemics of AIDS, tuberculosis, malaria and other communicable diseases have been increasingly prevalent globally^[1]. The SDG (Sustainable Development Goal) 3.3 intends to seek out measures to end substantial epidemics by 2030^[2]. In order to take steps towards this goal, we must consider the global reach of the issue where millions of individuals remain affected by these diseases^[3]. Moreover, numerous social, environmental and economic barriers exist in the way of elimination. Solutions to tackle the issue lie in addressing these root causes and focusing on infrastructure building, eliminating transmission routes, distributing medication, educating populations and funding future research.

Definition of Key Terms

Epidemic

Refers to an outbreak of a disease characterized by its rapid spreading and the large number of individuals affected within a population or region^[4]. Epidemics differ from pandemics in terms of scale, the latter being concentrated over larger areas, spanning over continents or globally.

Communicable diseases

Any disease spreads through numerous ways such as: physical contact with infected individuals, contact with any contaminated surfaces, bites from animals carrying the illness or airborne contamination. Communicable diseases do not include non-infectious diseases such as cancer or cardiovascular conditions, occurring from genetics or poor lifestyle choices. The most prevalent communicable diseases are tuberculosis, an airborne disease affecting the lungs, malaria, a mosquito-borne illness, and AIDS, an acquired immunodeficiency syndrome contracted from the Human Immunodeficiency Virus (HIV).

Universal Health Coverage (UHC)

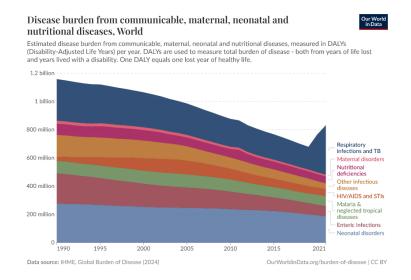
A target goal of the Sustainable Development Goals (SDGs) of 2030, where the healthcare system allows for all individuals, in any location, at any time and of any personal circumstance, to have access to a high standard of healthcare, without the hindrance of financial ability.

Transmission routes

The pathways in which an infectious disease is spread from host to host. Such is essential to consider when developing disease-oriented treatment plans and preventative strategies to fight against the diverse range of communicable diseases.

Disease burden

A quantitative measure to determine the health of a population and the comprehensive impact of diseases and injuries on a population. This can be measured through the frequency in which a condition occurs, the overall severity of diseases' impacts or the finances and resources needed to stabilize the disease within a population.



A graph estimating the global disease burden from 1990-2021 of communicable, neonatal, maternal and nutritional diseases [5]

Background Information

In order to end the long-standing global epidemics of communicable diseases such as AIDS, tuberculosis and malaria, a major point to achieve in SDG3, we need to consider the global disease burden and systemic causes hindering the elimination of these diseases.

Global burden and current progress

Focusing on the most prevalent communicable diseases in modern society, AIDS and HIV remains one of the most persistent epidemics worldwide. In 2024, a report by the World Health Organisation (WHO) counted an estimated 39 million people living with the disease, and 1.3 million new

infections surfacing despite advances in treatment^[6]. In 2024, the number of deaths from HIV/AIDS stood at 630,000 especially in LEDCs (Less Economically Developed Countries) lacking access to treatment and prevention measures. It is also particularly in sub-Saharan Africa where two thirds of cases have been recorded^[7].

Tuberculosis and malaria are also deemed persistent communicable diseases needed to be dealt with. Tuberculosis has been named the second most deadly infectious disease in the world, with an estimated 10.6 million cases and 1.3 million deaths in 2023^[8]. Drug resistant tuberculosis, amongst around 410,000 people, and global incidence declining by 1.5% every year is hindering eliminating the disease by 2030. There were roughly 263 million cases of malaria in 2023, leading to an estimated 600,000 deaths especially amongst children. ^[9]Though cases of malaria were on a declining trajectory, climate change, resistance to insecticides and insufficient healthcare have led to the reemergence of the illness. Particularly, malaria is heavily concentrated in sub-Saharan Africa with 94% of global cases and 95% of deaths recorded. Apart from these 3 prevalent examples, other communicable diseases such as the measles, viral hepatitis and endemic parasitic infections, common in low-resource regions, contribute to the global disease burden.

Barriers to the complete elimination of communicable diseases

Ending epidemics of communicable diseases is more direct than tackling other illnesses as they have clear transmission routes, standardized treatments and are shaped by social and environmental factors.

Firstly, weak healthcare systems lacking the necessary infrastructure such as clinics, trained medical staff, large-capacity hospitals and supply chains makes it difficult to prevent and treat diseases. In Nigeria, malaria remains extremely present especially among children as the country does not have sufficient testing facilities, thus treatments cannot reach every infected individual due to a lack of capacity. The WHO emphasizes that weaknesses in the areas of service delivery, information systems and access to essential medicines leave countries unable to fully curb the spread of diseases [10].

Economic, geographic and social inequities are also issues that create gaps in treatment. Focusing on sub-Saharan Africa, malaria mainly affects poorer populations in rural areas who cannot afford clinics or prevention methods. As resources are already unequally distributed depending on regions in the world, disparities within a single region further worsen the issue. Moreover, social stigma surrounding certain diseases such as HIV exist, preventing individuals from openly seeking treatment. Financial issues also arise when low-income countries depend disproportionately on donations from global funds and resources which can grow unstable and lead to periods of drought within a country without external aid.

Lastly, even when healthcare systems function adequately, environmental and biological problems are inevitable and persistent. As infections evolve, bacteria and viruses may become resistant to existing treatments in order to adapt, especially when medication is prescribed wrongly. MDR-TB, Multidrug-resistant tuberculosis, has emerged in Russia, India and the Philippines and requires additional, more costly medication for this new variant. Mosquito-borne illnesses also may require changing treatments as the insects grow resistant to insecticides. Climate change and rising temperatures also increase the number of swarms of insects or other carriers, leading to further cases.

Major Countries and Organizations Involved

United Nations

- Declaration on the Commitment on HIV/AIDS, 27 June 2001, (A/RES/S-26/2)
- An agreement at the UN General Assembly Special Session established the necessity for global collaboration on maintaining treatments, prevention methods and human rights regarding AIDS epidemics
- Resolution on Intensifying Global Malaria Response, 12 December 2019 (A/RES/74/274)

WHO (World Health Organisation)

The WHO (World Health Organization) has been a central figure in combatting communicable diseases as a major branch of the UN (United Nations). The WHO is an extremely crucial organisation handling the development of long-term global plans across countries to monitor real time statistics and control epidemics. The organisation has created initiatives such as the Global Malaria Programme and the End TB Strategy.

United States

The United States has been proven to be a strong supporter of the goal to globally eliminate HIV/AIDS, tuberculosis, malaria and other communicable diseases. The United States can be considered a major funder of numerous large scale projects such as PEPFAR (U.S President's Emergency Plan for AIDS Relief) and to the Global fund fighting major epidemics. The United States has also been a leading power in funding and following through with innovative vaccine research and distribution.

India

India has contributed to eliminating communicable diseases through significant action, as their domestic burden of such diseases has been high. India shares data and findings surrounding generic drug production and vaccine development which facilitates low income countries' access to treatment. They have launched notable programs such as the National AIDS Control Programme and the National Tuberculosis Elimination Programme

Timeline of Events

Date	Description of event
1948	Creation of the World Health Organization (WHO)
1955	Launch of the Global Malaria Eradication Programme

1974	Expanded Programme on Immunization (EPI)
1981	First official reports of AIDS
1987	First antiretroviral (ARV) HIV medicine released
1993	WHO declares tuberculosis a global emergency
2000	UN adopts the Millenium Development Goals (MDGs)
22 January 2002	Creation of the Global Fund to Fight AIDS, Tuberculosis and Malaria
2003	U.S. President's Emergency Plan for AIDS Relief (PEPFAR) is launched
September 2015	UN adopts the Sustainable Development Goals (SDGs) with target 3.3 aiming to end epidemics of communicable diseases by 2030
2021	First malaria vaccine approved by WHO
2022	WHO releases Global Health Sector Strategies (2022-2030)
2023	Rollout of new malaria vaccine begins

Previous Attempts to solve the Issue

Expanded immunization programs

Global campaigns have been launched to provide vaccines for communicable diseases such as the measles, polio and hepatitis B, coordinated by the WHO (World Health Organisation) or UNICEF (United Nations Children's Fund) and national health ministries. Vaccines are distributed to schools, hospitals or mobile clinics while health workers are sent to remote areas or regions currently facing conflict. This has been seen as highly effective with millions of children having received vaccines in remote, low-income regions such as Africa or Asia.

Mass drug administration

Numerous countries, in partnership with the WHO (World Health Organisation), have planned campaigns where there is the distribution of resources such as medication along with increased health education in schools. In Africa, the WHO (World Health Organisation) has conducted programs towards eliminating Neglected Tropical Diseases and delivered millions of doses of necessary medication. This is an effective way to ensure the treatment of diseases. However, the distribution of supplies does not directly tackle the issue of reinfection if sanitation and water infrastructure do not see significant improvement.

Water and sanitation initiatives

Led by UNICEF (United Nations Children's Fund), WHO (World Health Organisation), governments and NGOs (Non-Governmental organisations), initiatives have been taken to solve the root cause of diseases' transmission routes. Hygiene education and plans to develop more durable infrastructure in low-income countries have been put forward. Examples include UNICEF WASH programs in South Asia and Africa. This significantly tackles the reasons for the mass spreading of waterborne diseases.

Possible Solutions

To eliminate AIDS, tuberculosis, malaria, and other communicable diseases by 2030, countries have to take initiative to build stronger and more equal health systems that are able to withstand the rise of epidemics and reach every individual. One of the most effective solutions is to expand Universal Health Coverage (UHC) so people can access testing, treatment, and prevention measures without the large barrier of cost which financially impairs populations. [11] Governments can envision implementing this by increasing funding for public clinics, training more community health workers, and improving supply chains so medicines and vaccines arrive on time.

What countries can also do is consider investing in digital health systems if resources permit, such as switching to electronic medical records and apps that help patients. Moreover, technology that helps with diagnosis and tracks outbreaks can be effective in the near future.

The UN (United Nations) can focus on initiatives that reinforce healthcare systems and infrastructure in low income countries, focusing on cleanliness and the destruction of disease transmission routes in the environment. As for public oriented solutions, governments may implement widespread vaccine programs, invest in research to combat adaptive variants of diseases, run public health education in schools or workplaces by partnering with NGOs, religious groups or youth communities.

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