Forum: Special Conference on Health

Issue: Reforming global and local health systems in anticipation of future pandemics

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Introduction

The World Health Organization deemed COVID-19 a worldwide pandemic in March 2020. The COVID-19 pandemic has had varying degrees of impact on important public health services. Although COVID-19 has affected all countries, the impact has varied depending on a variety of circumstances, including the integrity and resilience of the countries' health systems. The epidemic brought attention to the need for stronger and more robust health systems and capacities, as well as improved governance. The necessity of cooperation and coordination between many nations and stakeholders has also been highlighted by the COVID-19 pandemic.

The COVID-19 pandemic has sparked a broad debate on improving worldwide and national ways to prepare for and respond to similar catastrophes in terms of preparedness, response processes, and instruments. COVID-19 has had a significant impact on public health. Global platforms and efforts should present new health priorities, strategies, and agendas. Future developments are anticipated to include increased funding for technology and research to meet the demand for new medications and vaccines, creative approaches such as remote learning and employment, increased respect and compensation for medical professionals, and normalization of the social and public health measures brought about by the COVID-19 pandemic.

The COVID-19 epidemic has caused extraordinary disruptions in worldwide health and development communities. Global attention is now mostly focused on organizations that combat infectious diseases, assist healthcare professionals, provide social services, and safeguard livelihoods. However, access, safety, supply

chain logistics, and financial stress are becoming increasingly difficult for them to manage in their line of work. The immediate effects of this global crisis are widely apparent, but it is still difficult to envision how the pandemic will affect health and development organizations, careers, and priorities in the long run.

Definition of Key Terms

Contingency Planning

A plan is made by an organization in case of an emergency, ranging from the management of human resources to external coordination.

Lockdown

A temporary condition imposed by governmental authorities (such as during the outbreak of an epidemic disease) in which most people are required to refrain from or limit activities outside the home involving public contact.

Pandemic

An epidemic of a dangerous disease spreads across a large area or region and affects many individuals simultaneously.

Epidemic

Widespread illness in one region or community.

Community spread

A contagious illness spreads throughout a community of people who have not traveled to a place where the virus begins, or who have not been in contact with anyone who has had the virus.

Herd immunity

When a contagious virus or disease becomes largely inactive, because a population of people becomes immune, usually due to a vaccine.

Containment

Containment strategies were implemented at the beginning of the outbreak. It helps officials track the spread of the virus or disease within a community and then uses isolation or quarantines to prevent infected individuals from spreading the disease to other people.

PPE

An acronym for personal protective equipment. It describes special masks, clothing, and gloves worn by care providers to shield them from contagious illnesses.

Patient zero

First person contracting a virus in a new area.

Novel strain

A new type of virus.

Background Information

In 2020, the coronavirus spread worldwide from Wuhan, killing an estimated three million individuals, with officially registered deaths numbered half of that (WHO). Over 700 million individuals have been infected during the course of the pandemic. During its initial spread, the coronavirus had a death rate of approximately 6%, prompting governments to take immediate action to prevent further spread of the virus. Most governments mandated lockdowns, forcing residents to stay inside their homes for prolonged periods. Although lockdowns differed by country, similar measures were implemented throughout the study.

The health and well-being of people worldwide are at a critical yet dangerous point. Although the COVID-19 pandemic revealed health disparities and significant flaws in preparedness, the collective inability to establish robust and responsive health systems that fulfill the needs of all should not have come as a shock. These flaws extend beyond pandemic preparedness and response, and are more broadly related to health emergency preparedness. The rapid spread of the COVID-19 pandemic has highlighted long-standing weaknesses in the global health security architecture, impeding public health agencies' ability to prevent, identify, and respond to transnational infectious disease threats. Chronic underinvestment in health systems over the years has further weakened them, including poor procedures for epidemiological surveillance and monitoring during health emergencies.

Over-reliance on global health security

The spread of the COVID-19 pandemic indicates that excessive concentration solely on responding to infectious diseases may obscure the fact that health systems around the world are persistently underfunded, fragmented, and unfair. Undoubtedly, funds for sophisticated labs and early warning systems are required, as demonstrated by programs such as the WHO hub for pandemics and epidemic intelligence. However, unless these investments are directly linked to larger programs that fortify health systems and have UHC backing, they are insufficient. For instance, during the first half of the COVID-19 pandemic, nearly 90% of nations experienced disruptions to critical health services, and many people were unable to pay for tests or visit neighboring health centers. The main causes of these disruptions are the lack of progress toward universal health coverage and inadequate assessment of primary health care's role in readiness and reaction. In one significant analysis, the reaction was hampered in many areas by persistent mistrust of healthcare providers, and less than half of the countries included the maintenance of health services in their national COVID-19 strategic plans. According to the WHO January 2020 and May 2021, up to 180,000 healthcare workers may have died from COVID-19. These deaths were frequently caused by unfavorable

working conditions, and hundreds of thousands of vaccine doses were destroyed in both high- and low-income countries owing to inadequate planning and workforce capacity. These challenges extend beyond the authority of traditional global health security and provide a cautionary tale about the dangers of ignoring primary healthcare, which is supported by pledges to UHC, in future pandemic planning and response programs.

Mitigation of socioeconomic factors

The predominance of unprepared health systems can be attributed in part to a focus on clinical care rather than supporting healthy populations and societies. As a result, numerous social, political, and environmental drivers of health, such as economic inequality, racism, gender imbalance, and climate change, are overlooked in pandemic preparedness efforts. Many factors contribute to this overlook, including patronizing patterns of operation and a power imbalance in funding initiatives between high- and low-income countries, which frequently prioritize global activities over the concerns of local populations or less-powerful states. The lack of understanding of the foundational determinants of health has been particularly evident in the absence of support for vulnerable populations, including a notable lack of domestic social and economic protection policies and international solidarity-based mechanisms to provide affordable medical supplies.

Lack of equity in engagement mechanisms

Since global responses to health emergencies are generally coordinated at the national level, the lack of participation from local communities and civil societies weakens equitable governance that considers all views. Although these challenges were well recognized prior to the pandemic, they risk being exacerbated in the aftermath of the COVID-19 epidemic, as an increased focus on improving global health security programs tends to overshadow much-needed investments in UHC. Meanwhile, global administrations pursued a specific definition of equity by concentrating only on addressing unequal access to medical countermeasures

between nations (such as vaccine equity), ignoring national differences in the provision of life-saving COVID-19 supplies, and the upkeep of standard health services.

Enhancing the representation of the entire society in health systems can help solve these issues and should be a fundamental part of any future pandemic preparedness and response plan. Optimizing the use of diversified multi-stakeholder governance is essential for improving the delivery of interventions connected to UHC. Expanding and strengthening primary healthcare to aid in health emergency preparedness and response is one way to improve delivery. Other methods include doing away with user fees in healthcare facilities, providing free medical countermeasures (such as medications and diagnostics), building a strong community health workforce, and utilizing primary care data and social insights.

Major Countries and Organizations Involved

United States

The US has made undeniably significant contributions to the global health sector via global health agencies such as Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH) by making contributions in areas of research, creation of guidelines and supply of assistance.

China

As the epicenter of the COVID-19 pandemic and a major player in international trade and travel, China's collaboration and openness are critical to the success of global health governance. In China, information exchange, epidemic response, and surveillance are vital functions of the government, especially for organizations such as the Chinese Center for Disease Control and Prevention (China CDC). China's

relations with other nations and organizations are essential for the development of international health systems.

World Health Organization (WHO)

The World Health Organization (WHO) is the premier global health body responsible for establishing standards and norms, coordinating global health responses, and offering technical support to nations. The primary goal of reform initiatives should be to improve WHO's ability to quickly identify and contain pandemics. This could entail reorganizing internal procedures, enhancing financial systems, and enhancing cooperation with external stakeholders and member nations.

European Union (EU)

The European Union (EU) is a major player in promoting global health efforts and coordinating health policies among its member nations. The European Union (EU) supports regulatory, scientific, and surveillance activities through organizations such as the European Medicines Agency (EMA) and the European Center for Disease Prevention and Control (ECDC). Enhancing readiness and response capabilities, exchanging best practices, and fostering cooperation are all part of reforming health systems in the EU.

Gavi, the Vaccine Alliance

Global immunization efforts and vaccine accessibility have been made possible in large parts by Gavi. Gavi's resources and experience are crucial, as the world struggles to produce and distribute vaccines against emerging pandemics. Ensuring fair access to vaccines, bolstering vaccine distribution networks, and assisting with R&D endeavors should be the main goals of reform initiatives.

Universal Health Coverage (UHC)

UHC plays a pivotal role in reforming global and local health systems to anticipate future pandemics by promoting equitable access to health care, strengthening health system resilience, prioritizing preventive and promotive health services, ensuring sustainable health financing and governance, and addressing health equity and social protection issues.
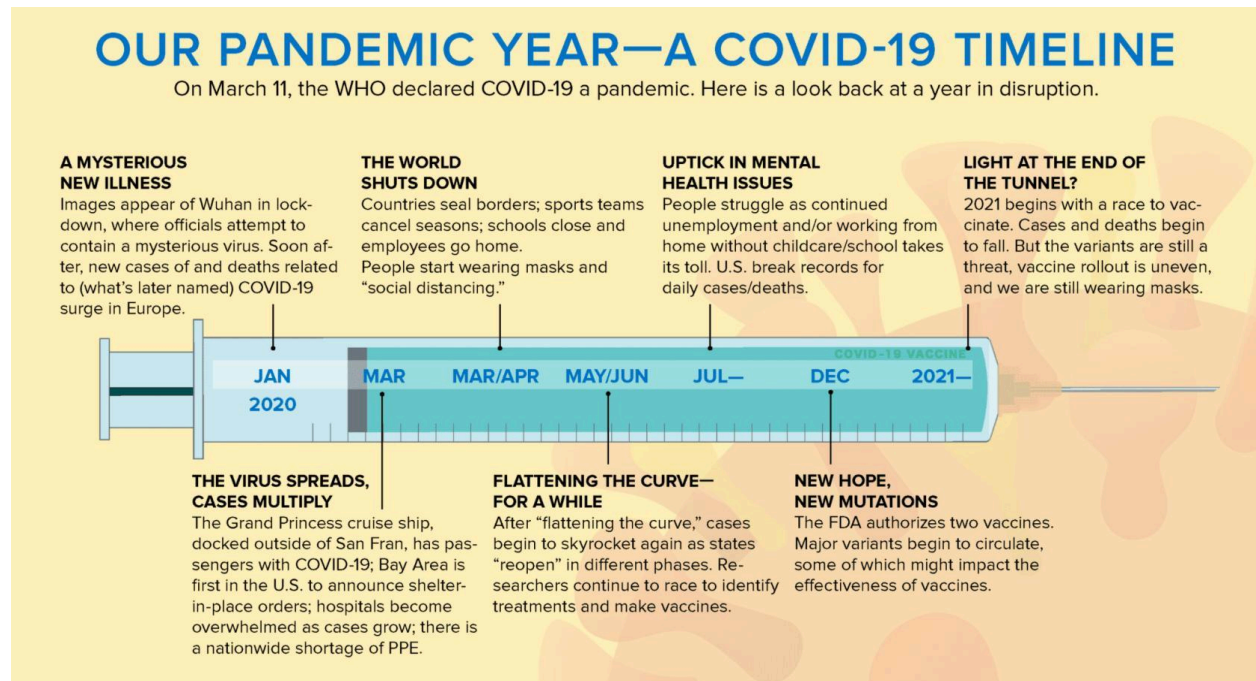
Timeline of Events

Date	Event
10 January 2020	WHO published a comprehensive package of guidance documents for countries, covering topics related to the management of an outbreak of a new disease
30 January 2020	The Director-General declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC), WHO's highest level of alarm.

12 February 2020	WHO convened a Global Research and Innovation Forum on the novel coronavirus
18 March 2020	WHO and partners launched the Solidarity trial, an international clinical trial that aims to generate robust data from around the world to find the most effective treatments for COVID-19.
30 April 2020	The Director-General convened the IHR Emergency Committee on COVID-19 for a third time, with an expanded membership to reflect the nature of the pandemic and the need to include additional areas of expertise.
11 December 2020	The Pfizer-BioNTech vaccine was invented.
1 March 2021	First COVAX COVID-19 vaccine doses administered in Africa, as the governments of Côte d'Ivoire and Ghana began COVID-19 vaccination campaigns aimed at protecting healthcare workers.

5 May 2023	WHO declares COVID-19 no longer a public health emergency of international concern

Timeline of the COVID-19 virus in the US, Yale University

Relevant UN Resolutions and Other Documents

- Resolution adopted by the General Assembly on 2 September 2022 -

76/301. High-level meeting on pandemic prevention, preparedness and response

UN, United Nations. "High-Level Meeting on Pandemic Prevention, Preparedness and Response :"*United Nations*, United Nations, 2 Sept. 2022, digitallibrary.un.org/record/3987235?ln=en&v=pdf.

- Resolution adopted by the General Assembly on 16 December 2021 -

76/175. Ensuring equitable, affordable, timely and universal access for all countries to vaccines in response to the coronavirus disease (COVID-19) pandemic

UN, United Nations. "Ensuring Equitable, Affordable, Timely and Universal Access for All Countries to Vaccines in Response to the Coronavirus Disease (Covid-19) Pandemic :" *United Nations*, United Nations, 16 Dec. 2021, digitallibrary.un.org/record/3954960?ln=en&v=pdf.

- Resolution adopted by the General Assembly on 5 November 2020 - 75/4.

Special session of the General Assembly in response to the coronavirus disease (COVID-19) pandemic

UN, United Nations. "Special Session of the General Assembly in Response to the Coronavirus Disease (Covid-19) Pandemic :" *United Nations*, United Nations, 5 Nov. 2020, digitallibrary.un.org/record/3890408?ln=en&v=pdf.

- The 74th World Health Assembly took place, under the theme of "Ending this pandemic, preventing the next: building together a healthier, safer and fairer world", with over 30 resolutions and decisions adopted from 24th of May to 31st of May 2021.

  - A74/9 Add.1 - Strengthening preparedness for health emergencies: implementation of the International Health Regulations (2005)

  WHA, World Health Assembly. "A74_9ADD1-EN.PDF - World Health Organization (WHO)." *WHO*, 5 May 2021, apps.who.int/gb/ebwha/pdf_files/WHA74/A74_9Add1-en.pdf.

- A74/10 Add.2 - Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases - Final evaluation of the global coordination mechanism on the prevention and control of noncommunicable diseases

WHA, World Health Assembly. "Political Declaration of the Third High-Level Meeting of the General Assembly on the Prevention and Control of Non-Communicable Diseases." *WHO*, 15 Apr. 2021, apps.who.int/gb/ebwha/pdf_files/WHA74/A74_10Add2-fr.pdf.

Previous Attempts to Solve the Issue

Figure 4 | A new model for integrated respiratory pathogen prevention, detection, and care. major part of this work.
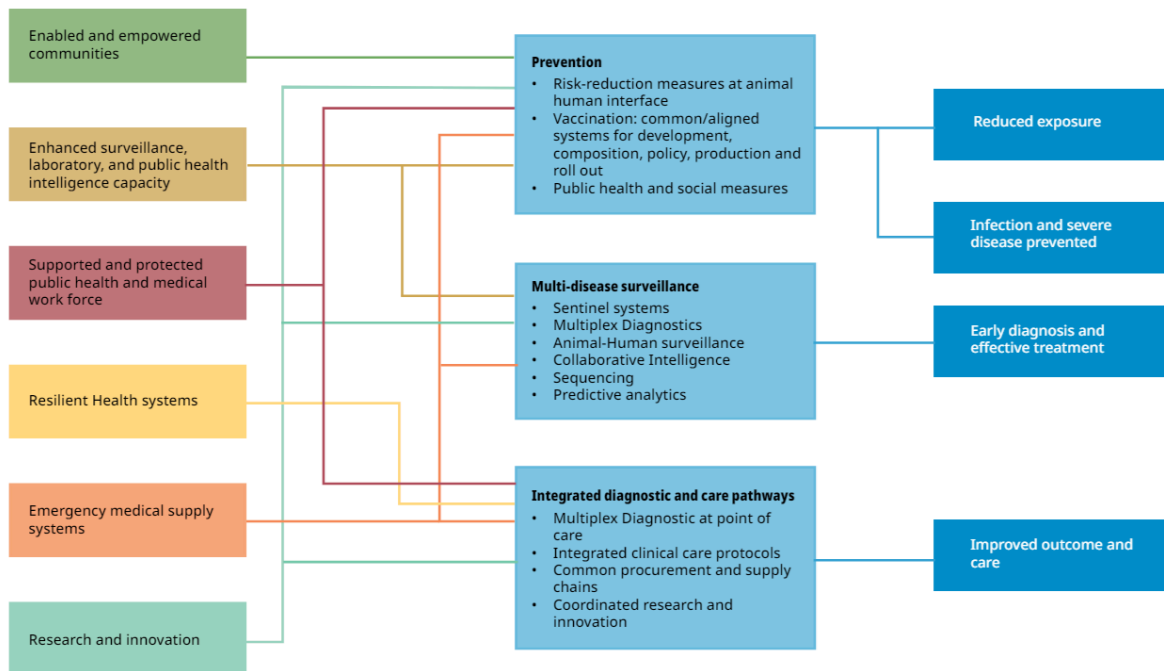
The new model for emergency response plan for future pandemic published by WHO

There have been several pandemic preparedness, readiness and response coordination plans published by WHO in the last couple of years after the COVID-19 pandemic. Since the COVID-19 pandemic, the previous plans made for anticipated future pandemics have been renewed but reforms on health care whether local or global haven't been fully functioning.

Previously published management models

- FROM EMERGENCY RESPONSE TO LONG-TERM COVID-19 DISEASE MANAGEMENT: SUSTAINING GAINS MADE DURING THE COVID-19 PANDEMIC - Strategic preparedness and response plan: April 2023–April 2025

  WHO, World Health Organization. "From Emergency Response to Long-Term Covid-19 Disease Management: Sustaining Gains Made during the COVID-19 Pandemic." *WHO*, World Health Organization, 3 May 2023, www.who.int/publications/i/item/WHO-WHE-SPP-2023.1.

- Strategic Preparedness, Readiness and Response Plan to END THE GLOBAL COVID-19 EMERGENCY IN 2022 : 1 April 2022–31 March 2023

  WHO, World Health Organization. "Strategic Preparedness, Readiness and Response Plan to End the Global COVID-19 Emergency in 2022." *WHO*, World Health Organization, 30 Mar. 2022, www.who.int/publications/i/item/WHO-WHE-SPP-2022.1.

Possible Solutions

Figure 2 | Strategic objectives to end the global COVID-19 health emergency

New strategies adopted in order to end the global health emergencies by WHO

A number of crucial changes must be made to local and global health systems in order to adequately prepare for pandemics in the future. First, in order to provide healthcare practitioners with the most up-to-date information and abilities necessary to address new health risks, it is essential that medical and health curriculum be updated and improved. In order to satisfy the demands of an expanding population and guarantee proper care during health crises, it is also necessary to increase the workforce. Building strong regulatory frameworks and efficient risk communication systems can aid in preventing the spread of false information and boosting public confidence. The introduction of telehealth services can increase access to healthcare, particularly in distant locations, while the integration of AI-based diagnostic tools can accelerate and enhance the accuracy of disease identification. For treatments and vaccines to be developed quickly, research and development must continue to accelerate at the rate seen during prior pandemics. Lastly, implementing equitable global health initiatives guarantees that all people have access to critical medical treatment, irrespective of their financial situation. Together, these actions reinforce health systems, increasing their adaptability and capacity to deal with pandemics in the future.

- Updating and enriching medical and health curricula in light of the issue
- Increasing the number of workforces
- Establishment of legal frameworks and effective risk communication mechanisms to obstruct the misinformation of the public
- Addition of AI based diagnostic systems
- Establishing telehealth services
- Sustaining the acceleration of research and development seen during previous pandemics
- Adopting equitable global health initiatives

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