

# World Health Organization

## Preventing Future Pandemics



<b>Forum:</b>	World Health Organisation(WHO)
<b>Issue:</b>	Preventing Future Pandemics
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## Introduction

A significant and long-lasting impact of periodic outbreaks of infectious diseases has been felt throughout history. These have often lasted for centuries, and have had an extensive impact on the economic, political and social aspects of human civilisation. Epidemic outbreaks have compelled the scientific community to establish concepts of epidemiology, prevention, immunisation, and antibiotic therapies which have helped define some of the fundamental foundations of modern medicine. It is crucial to comprehend the scope of the social, medical, and psychological effects on civilisation that some pandemics have had on humanity, such as the Black Death, the Spanish Flu of 1918, and the more recent outbreaks in the twenty-first century, such as SARS, HIV/AIDS, Ebola, and Zika, as well as the SARS-CoV-2 (Covid-19) pandemic.

These illnesses have become some of the most well-known ones to appear in recent years. Even though they began in various locations around the world, they all share a similar trait. These infections, which scientists refer to as "zoonotic illnesses," spread from animals to humans and can result in illness and even death. To be effective, solutions should be coordinated for the wellbeing of people, animals, and ecosystems in the long run, through the 'One Step' approach.

The influence of vaccines on infectious diseases is essential because they play a crucial part in preventing hospitalisations, fatalities, and disease-related deaths that are brought on by infectious diseases. Vaccines also help to stop the transmission of diseases. They are the principal line of defence against the threat of many infectious illnesses in modern civilization. They are a crucial component of any subsequent response in the short run.



## Definition of Key Terms

### Zoonotic Diseases

A zoonosis is a contagious illness that can spread from one species of animal to another, including from humans (or from humans to animals).

### One Health

An approach for creating and implementing laws, rules, regulations, and research in which different sectors cooperate and share knowledge to improve public health outcomes is known as "One Health."

### ICMRA

The International Coalition of Medicines Regulatory Authorities offers a world-wide infrastructure to promote improved communication, information sharing, crisis management, and regulatory science challenges.

### SARS-CoV2

A virus, fully defined as "severe acute respiratory syndrome coronavirus 2" causes the disease COVID-19.

### Remdesivir

An experimental injectable antiviral medication that prevents virus reproduction. It was first created to treat Ebola and is a promising medication for the management of COVID-19 disease.

### Screening

Before conducting a virus test, the procedure of verifying symptoms and potential exposure.

### Epidemiology

A subspecialty of medicine that focuses on illness incidence, distribution, analysis, and control in the context of public health.

### Epidemic curve

A graph or chart that displays the progression of an outbreak in a particular community.



## General Overview

An unprecedented amount of public interest in vaccines has arisen as a result of the COVID-19 epidemic's global effects. This calls for an emphasis on vaccine development as well as regulatory assessment and safety oversight. Mass media and social media have had a significant impact on this coverage. Some people have questioned vaccination, delayed immunisation, or are vehemently opposed to vaccination in response to reports of negative instances (side effects). Individuals have different perspectives on national safety monitoring systems. The fact that many children and young people have reduced clinical impact from COVID-19 is another obstacle for promoting the relevance of the virus.

Collaborative efforts between the World Health Organisation (WHO) and International Coalition of Medicines Regulatory Authorities (ICMRA)\* released a statement to assist medical practitioners in responding to inquiries about the role of regulators in the supervision of COVID-19 vaccines. These described the rigorous scientific testing that is done on vaccinations to determine their safety, efficacy, quality, as well as how safety is thoroughly and continuously checked following approval.

It has been demonstrated that vaccination helps to lower COVID-19-related fatalities, serious illnesses, and transmission. The protection provided by vaccination of a sizable segment of the population also extends to individuals who are at risk for infection after vaccination, such as those who cannot obtain vaccines or those who make up a small percentage of the population. The virus can spread and develop mutations, some of which may be more harmful, when there is a lack of universal vaccination. Because of extensive vaccination, there have been fewer infections and hospitalisations, which has lessened the impact of COVID-19 on healthcare systems. Additionally, it has enabled communities to get back to business as usual and for economies to restart.

Curfews and restrictions on large-scale mobility were put into place after the initial steps, which included shutting down borders and halting international flights. Sanitary goods, medical supplies, and equipment were in limited supply, and the healthcare systems of the nations that were most badly affected by the virus were heavily strained. Governments moved quickly to halt such negative impacts despite the fact that the procedures intended to restrict the virus' spread practically entirely interrupted social and economic life. Nations worked to help individuals shoulder the financial and social burdens of the epidemic by offering direct aid and taking action to support workers and businesses.



The international community restricted foreign flights and sealed its borders as a first step before imposing internal travel restrictions. In Turkey, international flights had been halted, border crossings had been shut down, and in-country travel was only permitted with approval from the offices of the provincial governors. Travel to or from 31 countries was no longer possible. China, Iran, Italy, Spain, France, Belgium, and Portugal all enacted border closures and domestic restrictions. Many countries, including the United States, Canada, Brazil, Russia, the Netherlands, Austria, Switzerland, and Israel, shut their borders to foreign travel but did not initially place strict restrictions on domestic travel.

As a result of the virus's spread, curfews had been applied in various ways. While the United Kingdom, Ireland, and China opted for less stringent controls, curfews were announced in Italy, Spain, Russia, France, the Netherlands, and India. The United States, Canada, Iran, Germany, Belgium, Switzerland, Portugal, Brazil, Austria, and Israel did not enforce a curfew, instead urged people to remain indoors. Turkey had imposed limitations and prohibited anyone over the age of 65 and under the age of 20 from leaving their homes.

To protect employees, Turkey has made it illegal for corporations to cancel employment or service contracts for three months. Companies who were forced to close because of the outbreak were compensated with a "short work allowance". Spain, Italy, France, Germany, and Brazil have also implemented anti-unemployment legislation. The US, UK, China, Iran, Belgium, Russia, Canada, the Netherlands, Switzerland, Austria, Portugal, India, Ireland, and Israel pursued a different path. Aside from Turkey and France, no other country offered extra payments to seniors, however India donated to pension funds to help the poor. Pensions were given to the homes of the elderly in Turkey, the United Kingdom, and Russia, who are more susceptible to having the coronavirus.

The spread of the virus imposed a burden on healthcare systems in the most affected countries, and supplies of medical equipment and medication began to run low. They had trouble supplying basic protective equipment such as masks and gloves, as well as testing kits and treatment services. With the exception of Brazil and the Netherlands, the nations with the most confirmed instances offer free COVID-19 tests. The United States funded a portion of the treatment charges, but Iran charged them 10% of the total cost. Aside from Turkey, Spain, and Italy, no other countries give free medical mask distribution. Although Turkey, Germany, China, Brazil, Switzerland, Portugal, and Israel had no trouble distributing medical masks, other countries, mainly the United States, have reported the most cases and deaths as a result of the virus. Turkey, Germany, China, Russia, Canada,



the Netherlands, Switzerland, and Portugal ranked higher on the list in terms of medical equipment requirements. Diagnostic kits were easily accessible in Turkey, the United States, Germany, China, Russia, Brazil, Switzerland, and Austria, but not in the others. At times, in the United States, Spain, the United Kingdom, China, Belgium, the Netherlands, and India, hospital bed capacity did not meet needs.

## Major Parties Involved

### Major Pharmaceutical Companies

They hold a monopoly over the industry and have complete control over distribution and price of many pharmaceuticals. They hold these rights due to patents and if these were waived, production could exponentially increase, and price could decrease.

### CEPI

CEPI has also received assistance from the corporate sector as well as public contributions through the UN Foundation COVID-19 Solidarity Response Fund. CEPI has been instrumental in the worldwide response to COVID-19, generating the world's largest portfolio of COVID-19 vaccines and assisting in the equitable distribution of 2 billion doses to 190 participating economies via COVAX in 2021.

### World Bank

The World Bank Group has spent over \$157 billion to address the pandemic's health, economic, and social ramifications since the beginning of the pandemic, making it the World Bank Group's fastest and largest crisis response in history. Over 100 countries benefit from the investment by strengthening pandemic preparedness, protecting the poor and jobs, and kick-starting a climate-friendly recovery. The Bank is also assisting over 60 low- and middle-income countries, more than half of which are in Africa, with the acquisition and deployment of COVID-19 vaccinations with a \$20 billion loan available through the end of 2022.

### World Organisation for Animal Health(WOAH)

Promoting multi-sectoral responses public health threats at the human-animal-ecosystem interface and provide guidance on how to reduce these risks.



## Food and Agriculture Organization of the United Nations (FAO)

Aiding in the One Health, to prevent and mitigate health concerns at the Animal-Human-Plant-Environment interfaces in order to improve public health, food and nutrition security, sustainable ecosystems, and fair trade facilitation.

### Timeline of Key Events

Date	Description of Event
10-12 Jan 2020	WHO released a comprehensive set of guideline materials for nations on themes relating to the management of a new disease outbreak.
30 Jan 2020	The Director-General declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC), WHO's highest level of alarm.
18 Mar 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.
7 Aug 2020	WHO published updated guidance on public health surveillance for COVID-19, which includes revised suspected and probable case definitions that integrate new knowledge about the clinical spectrum of COVID-19 and its transmission.
28 Sep 2020	WHO joined with partners to make 120 million affordable, quality COVID-19 rapid tests available for low- and middle-income countries.
15 Oct 2020	WHO announced conclusive evidence on the effectiveness of repurposed drugs for COVID-19. Interim results from the Solidarity Trial indicated that remdesivir, hydroxychloroquine, lopinavir/ritonavir
30 Apr 2020	WHO listed the Moderna COVID-19 vaccine (mRNA 1273) for emergency use, leading countries to expedite their own regulatory approvals and enabling the vaccine to be rolled out through COVAX.



- 26 Nov 2021** WHO designated the variant B.1.1.529 a variant of concern, named Omicron, on the advice of WHO's Technical Advisory Group on Virus Evolution (TAG-VE).
- 17 Dec 2020** WHO issued its ninth emergency use listing for a COVID-19 vaccine, for Covovax™, produced by the Serum Institute of India under licence from Novavax. Part of the COVAX facility portfolio, the vaccine gave a much-needed boost

## Previous Attempts to Resolve the Issue

WHO, the United Nations Foundation, and partners have created the first-of-its-kind COVID-19 Solidarity Response Fund to raise cash for emergency health needs. The Fund, which has raised more than \$150 million to date as part of WHO's total of \$800 million, supports WHO and partners' efforts to assist nations in responding to the COVID-19 pandemic.

Humanitarian Appeal: To address the impact of COVID in some of the world's most vulnerable countries, the United Nations created a \$2 billion coordinated global Humanitarian Response Plan. It wishes to protect millions of people and prevent the virus from recirculating the world. It draws together and identifies new needs from WHO, WFP, UNICEF, UNHCR, IOM, UNDP, UNFPA, UN-Habitat, and non-governmental organizations (NGOs). UNOCHA coordinates it, and it enhances the plans of the International Red Cross and Red Crescent Movement.

Response and Recovery Trust Fund: The UN Secretary-General established the COVID-19 Response and Recovery Trust Fund to assist low and middle-income countries in recovering expeditiously. It will enable the UN to respond to national and local actions addressing the socioeconomic impact of the COVID-19 crisis and enabling rapid recovery in a multi-agency, multi-sectoral manner.

The Secretary-General has also produced a study on the socioeconomic consequences of COVID-19. This report is a call to action for the immediate health response required to curb the virus's spread and end the pandemic, with a focus on people who are already at risk, including women, youth, low-wage workers, small and medium-sized businesses, the informal sector, and vulnerable groups.





Increased international aid for countries with limited means to fund their own stimulus programs is proposed in the report. It also proposes debt relief for countries that are at risk of or are already in debt distress, notably LDCs, as well as the mobilisation of concessional financing from multilateral development banks and private lenders. In addition, the Secretary-General has developed a Global Humanitarian Response Plan for Covid-19, as well as a series of reports on the pandemic's impact on topics ranging from education to elderly people, disability, and migration.

## Possible Solutions

The Coalition for Epidemic Preparedness Innovations (CEPI) wants the world to be prepared to respond to the next "Disease X" with a new vaccine in under 100 days. That's a little more than three months to eliminate the threat posed by a pathogen that could start a pandemic. Delivering a vaccine in 100 days would provide the world a fighting chance to put an end to the existential threat posed by a future pandemic virus, especially when combined with better surveillance that provides early identification and warning, as well as with quick and effective deployment of non-pharmaceutical therapies. However, that would be a large investment to speed the development of our defences against emerging dangers, even if such expenditures may not be profitable. COVID-19 is estimated to cost the world \$28 trillion over a five-year period by the end of 2025. However, the human cost will never be measured, but the ramifications will certainly reverberate for years. Producing a vaccine library could include creating up to 100 prototype vaccines to ensure existence of a knowledge bank that would aid member nations in covering virtually any hazard. It may also be entirely feasible if governments and industry work together. CEPI, for its part, has a \$3.5 billion pandemic-fighting plan that will commence and coordinate this action over the next five years. This is in comparison to the trillions of dollars lost as a result of COVID-19.

There is a need for an international treaty on the prevention of pandemics and a convention, pact, or other international instrument that is legally binding under international law. A World Health Organization (WHO) agreement on pandemic prevention, preparedness, and response would enable governments all over the world to improve national, regional, and global capacity and resilience in the face of future pandemics. The instrument would define the objectives and fundamental principles for mobilising the necessary societal activity to combat pandemics. A global pandemic treaty, pact, or other international instrument would encourage and emphasise: A stronger international health



framework, with the WHO serving as the coordinating authority on global health issues; and the "One Health" concept, which connects the health of humans, animals, and our planet.

**The Instrument would also do the following:**

1. Ensuring greater, sustained, and long-term political engagement at the international level of state or government leaders.
2. Define different processes and obligations of stakeholders.
3. Long-term public and private-sector support at all levels.
4. promotes the incorporation of health issues into all relevant policy areas.

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## Appendices

### Appendix I

Official WHO website: <http://www.who.int/>

### Appendix II

Official CDC website: <http://www.cdc.gov/>

