

Research Report

COMMITTEE : World Health Organization

ISSUE : How to prepare for and manage future pandemics ?

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How to prepare for and manage future pandemics ?

INTRODUCTION

The current ongoing Covid-19 pandemic has highlighted two major factors: no country was sufficiently prepared for a pandemic and every country is vulnerable to such a disease.

Modern day travel allows a person, in a matter of hours, to go from one side of the planet to the other. However, that same person could also be carrying an infectious disease that will be the beginning of a pandemic. As seen with Covid-19, illnesses can spread at an exponential rate throughout the world in just a few months.

A pandemic is a health crisis, however it disrupts every aspect of a country including the economy, unemployment rates and the environment. Countries can quickly become overwhelmed if not prepared beforehand which ultimately leads to more deaths. Covid-19 has shown more than ever the devastating effects a pandemic can have and the necessity for countries to be prepared.

To minimise the damage of a pandemic, preparation and procedures are necessary during each and every phase.

KEY WORDS

Pandemic: A pandemic is a rapidly spreading infectious disease in a very large/global geographical area

Epidemic: A rapidly spreading infectious disease in a large geographical area

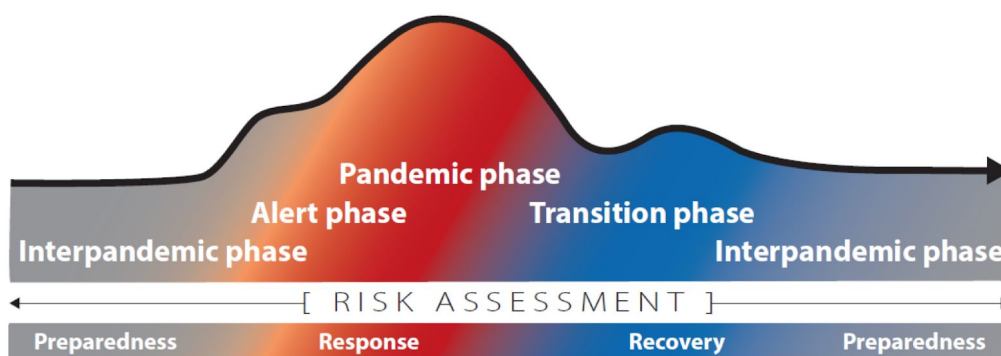
Interpandemic phase: The period between pandemics.

Alert phase: The phase where the disease has been identified

Transition phase: Phase of recovery from the crisis where governments re-enter into normal routines

Personal protective equipment (PPE): All equipment used to create a barrier between a person and an infectious disease. Some types of PPE are: gloves, masks, face shields. As PPE becomes contaminated after use most types are single use and must be properly disposed of after use.

Lockdown: A lockdown is the requirement of people to stay confined in their homes for the majority of a day and with minimal physical contact with other people. During a pandemic a total lockdown forces people to stay at home to prevent the spread of a disease, unless their leaving of home is related to a predefined reason by the government.



OVERVIEW

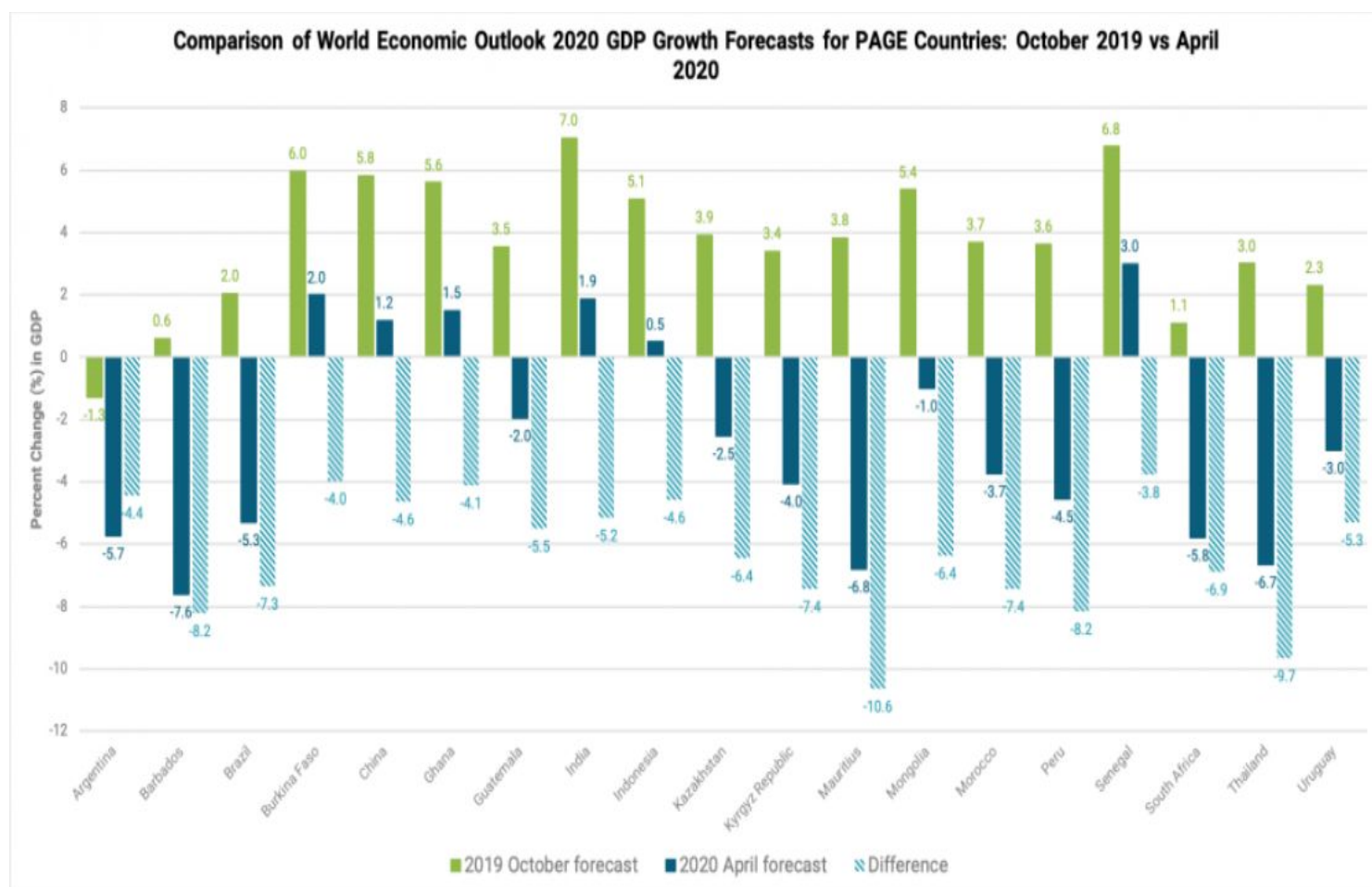
ENVIRONMENT

The environment is heavily impacted during a pandemic, whether positively due to less travelling or negatively due to the extensive use of PPE (Personal Protective Equipment). With many countries closing their borders and issuing country wide lockdowns, travel is drastically reduced, which most noticeably results in less air pollution. However, to reduce the spread of a pandemic, PPE is needed in hospitals and for the general public. Most PPE in hospitals is single use and most of it must be later burned to avoid contamination. During long pandemics this can have detrimental effects on the environment. With dedicated research and government funding reusable PPE could be made available for healthcare personnel which could theoretically solve the problem of single use PPE. During a pandemic PPE is required immediately therefore reusable PPE would need to be designed and produced during the inter-pandemic phase. Preparing for a pandemic is not only planning how to eradicate a disease but also protecting the country on all fronts. In the case of the environment, extensive preparation during the inter-pandemic phase would be very beneficial.

ECONOMY

Pandemics have many long term effects on countries, predominantly on their economies. A country's economy is greatly affected by a pandemic whether that is due to the expenses of a pandemic, unemployment, or reduced business activity. A bad economy during the time of a pandemic can have adverse effects on the country overall and its individual citizens. With many people out of work as a result of a business' inactivity during a pandemic many people can find themselves without the necessary money to finance their everyday life. During the Covid-19 pandemic many countries such as the USA, the United-Kingdom and many more provided

financial aid and suspended many payments such as rent. However all these financial aid programmes were made during a time of crisis which left many people without a source of income while the system was being put in place.



SOCIETY

A pandemic is both a healthcare and a social problem. During a pandemic stress and fear levels can be elevated which can be a major concern when governments are implementing new everyday rules such as social distancing or wearing masks. These new policies are two things that are uncommon in many countries but are vital to slowing the spread of a pandemic. Such change can be hard to introduce into society particularly during a pandemic. Lockdowns also have a negative effect as it is a major disruption in many people's lives: due to major changes in a person's routine or because of isolation. Implementing such change during a pandemic without prior notice is inefficient and in some cases ineffective. A country needs the trust and cooperation of its citizens, which relies on being well prepared for a pandemic beforehand.

GOVERNMENT

Once an infectious disease has been specified as a pandemic either by a health organisation such as the WHO or by a country's government, it has already spread at a global level and it is too late to avoid damage. To minimise the amount of victims during a pandemic, a government should

take action before it has globally spread. During the Covid-19 Pandemic many countries underestimated the severity of the virus which arguably led to unnecessary death. A country's government needs to enact various strategies based on how it is affected by such pandemic. The country where the virus originated has as a main role to contain such a virus as a means to avoid it becoming an epidemic or pandemic. Other countries have the role of stopping the virus getting into their country. During the height of a pandemic the government of a country's main priority is to minimize the amount of deaths by taking necessary measures such as sustaining the healthcare system. Most governments issued similar actions within their country such as: the closure of schools, ban on large gatherings, social distancing ,mandatory mask and lockdown during the pandemic.However many countries initiated such actions at the wrong time making them less effective. Governments in certain countries responded poorly to the outbreak and spread of the virus which caused more damage.

MAIN INTERNATIONAL ACTORS

European Union (EU)

The EU recognises the major threat that pandemics pose and respond to them by preparing in many different ways. In a report, the EU expressed major concern on the impacts that a modern day pandemic would have on the economy.

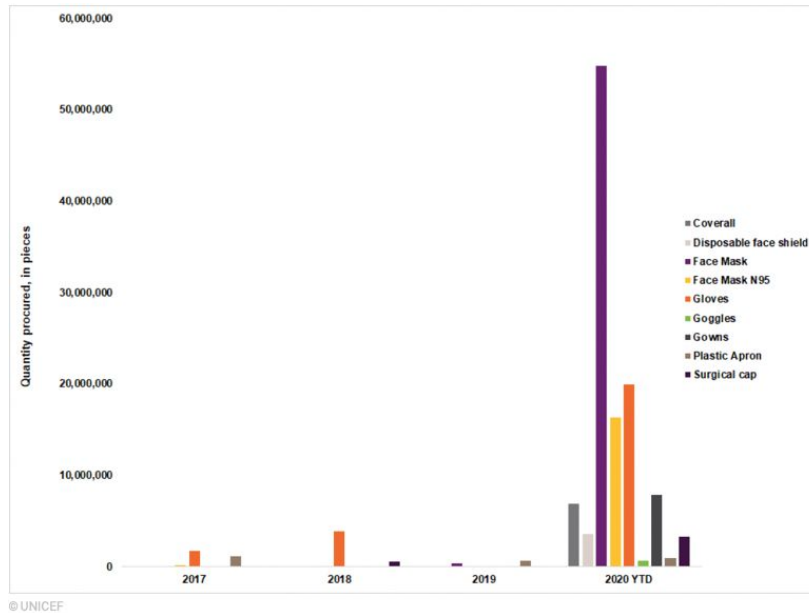
In opposition to the effects of a pandemic, the EU has created and funded different outlets such as:

- Facilities and technology to develop vaccines at fast rates
- Systems to detect new diseases that pose potential threat
- A mechanism to ensure full coordination of the European Commission services
- Aid to third world nations to prepare for pandemics, mainly in the ability to detect diseases and control initial outbreaks

The EU has also expressed their full support to organisations such as the WHO that play a major role during a pandemic. The EU aims for the highest level of preparedness to ensure full continuity of all member states after a pandemic.

United Nations International Children's Emergency Fund (UNICEF)

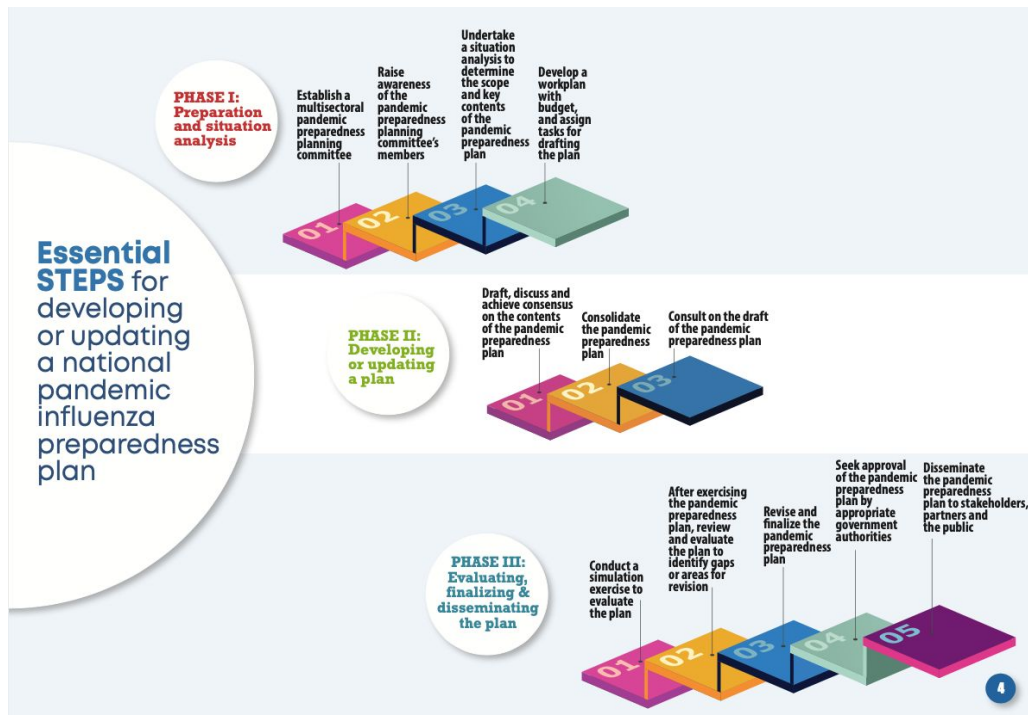
UNICEF focuses primarily on providing aid to low and middle-income countries (LICs and MICs). During the Covid-19 pandemic UNICEF helped produce and distribute PPE to many of these countries. UNICEF plays a vital role in nations that have difficulty slowing the spread of a pandemic.



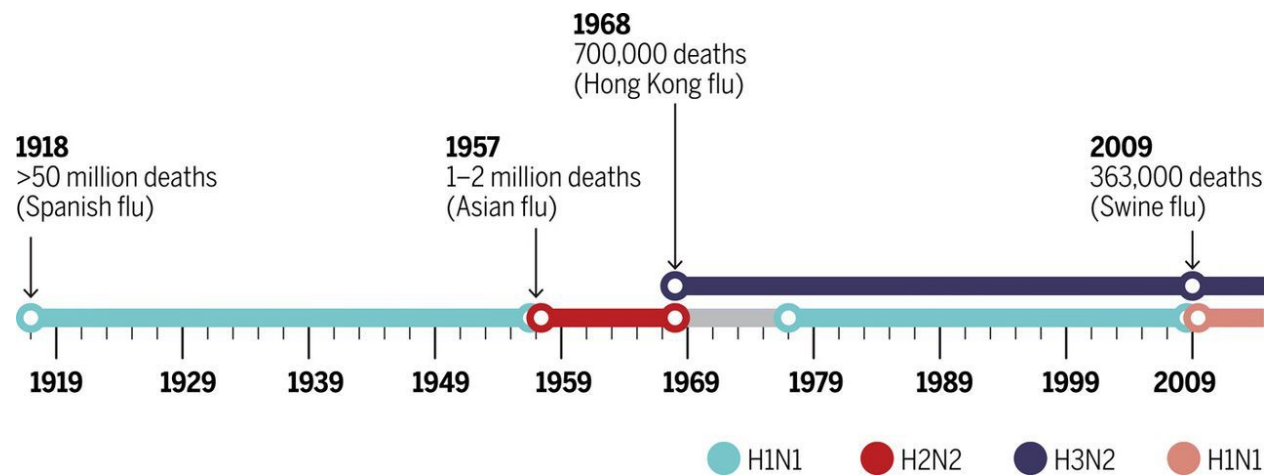
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World Health Organisation (WHO)

The WHO strongly urges each country to have their own pandemic plan and to be sufficiently prepared. The organisation also submits guidelines on how to prepare, and establishes international cooperation for times of global pandemics. The WHO mainly focuses on international cooperation for two major instances of a pandemic : identifying pandemic potential diseases to contain them whilst at low level; finding a cure or vaccine to eradicate such disease if it reaches the pandemic status.



TIMELINE OF PREVIOUS PANDEMICS



1918

The Spanish Flu (influenza A (H1N1) virus) had a devastating effect with an estimated 50 million deaths. This pandemic had such a high death toll mainly due to the lack of appropriate healthcare. World War One also played a major role in the first waves of the pandemic due to the international travel of soldiers and poor hygiene. At the time of this pandemic, there were no government procedures for pandemics and no preparation which greatly increased its severity.

1968

The Hong-Kong flu (influenza A (H3N2) virus) which lasted six months, originated in China and proceeded to spread worldwide, majorly affecting Europe and North America. In comparison with the Spanish Flu, the death toll was much lower at an estimate of 1 million. This was primarily due to the better health measures and the creation of a vaccine within 4 months after the outbreak. The lower death rate, vaccine and short lasting virus was a result of a drastically improved healthcare system and international cooperation through the WHO.

2019

The Coronavirus disease (Covid-19) that is the current ongoing pandemic has had a very high spread rate. Within just four months the virus went from an outbreak in Wuhan China to a global pandemic. Despite advanced healthcare the virus spread without difficulty because of modern day travel. Covid-19 shows how countries are not immune to pandemics despite having good healthcare systems. Current viruses now take advantage of fast national and international travel rather than the absence of sufficient technology and medicine

RELEVANT UN TREATIES AND EVENTS

International Health Regulations-2005

The International Health Regulations (IHR) is a legal framework for all member states in times of a health crisis, such as a pandemic. The IHR contains an overall guideline for preparing, during and after a health crisis and some requirements that each country must follow. The IHR

also sets the WHO as the central command point during a health crisis to ensure fluid international cooperation. The IHR prepares countries for a pandemic and aims to control a pandemic effectively and quickly.

POSSIBLE SOLUTIONS

Covid-19 has shown the effects of modern day travel on the spread of a disease. The rapid spread rate of a disease requires governments to be prepared and have potential strategies in place. During the different stages of a pandemic various procedures need to be enacted.

In the interpandemic phase the main goal of any country should be identifying any disease that has pandemic potential so it can be handled before it reaches such a stage. The interpandemic phase is also the time for innovation such as : designing reusable PPE, finding ways to accelerate the production of a vaccine and ensuring that the public is ready and informed of necessary actions to enact when a pandemic occurs.

During the response phase countries need to be coordinated on their response which can be done with the aid of various international organisations such as the WHO.

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