Forum: World Health Assembly (WHA)

Issue: Measures to Prevent Worldwide Pandemics

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Introduction

As proven in the recent COVID-19 pandemic that resulted in the loss of more than 1.8 million lives, the prevention of worldwide pandemics is a pressing issue that has been inadequately discussed in the past. In recent years, risks of pandemics have risen significantly with at least 5 new diseases emerging each year. In addition, a series of factors such as decreased biodiversity due to our encroachment on wildlife and deforestation are greatly associated with increased human risk of new infections and diseases. COVID-19 will not be the last worldwide pandemic. Without effective coordinated global plans, many more could perish in future pandemics more deadly than the Coronavirus.

The devastating outcomes of worldwide pandemics are hugely underestimated, with death tolls that exceed large scale wars. For instance, while World War 1 had roughly 20 million fatalities, the Spanish Flu pandemic slaughtered 40 million people. Since pandemics could potentially weaken countries more than wars could and without clear parties involved, virtually every country in the world has a chance of being seriously affected if proper actions were not taken in a timely manner. Countries around the world would be devastated to lose large numbers of young adults, as they are the main contributors to the economy and society. Not only would pandemics cause catastrophic effects through the health problems they create, pandemics also slow down or even halt economies given that workers could no longer work at crowded factories, thus decreasing the amount of goods being manufactured and exported to other countries.

Due to the detrimental effects pandemics have on humans and countries, preventing worldwide pandemics should be one of the World Health Assembly's (WHA) greatest concerns.

Definition of Key Terms

Pandemic

The WHO defined a pandemic as "an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people". Pandemics have

mostly been associated with bacteria and viruses, but with obesity being also classified a global pandemic by the WHO, pandemics would be defined as any major health issues prevalent to large amounts of population.

Quarantine

Quarantine is a period of isolation where an animal or person arrives from a place that is exposed to contagious diseases. Quarantines procedures were implemented to slow down or stop the spread of diseases. The time required to be quarantined is dependent on the incubation period of each disease. During this period, the subject is prohibited from leaving the compound and interacting with others to prevent the spread of the diseases.

Carrier

A carrier is a person that carries a pathogen that is capable of transmitting it to another person. A virus typically requires a carrier to spread. An animal could also be a carrier such as rats during the Bubonic plague.

Asymptomatic Carrier

Asymptomatic carriers are people that carry pathogens without symptoms. Asymptomatic carriers are a problem when trying to contain a disease as without symptoms, it would be really hard to identify the carrier and stop the disease from spreading. Many diseases have an incubation period. For example, COVID-19 has a median incubation period of 4-5 days and a maximum incubation period of up to 14 days. This is why quarantine procedures must be implemented even though the subjects might not show symptoms of diseases.

Incubation Period

The incubation period is the period between contracting the disease and the symptoms being apparent.

Contagious

Contagious means able to be spread from one person or organism to another, typically a disease. Contagious diseases can be transferred among people through several ways: through airborne droplets from the nose and throat, faecal-oral route, urine, blood and body secretions, contaminated food, or sexual contact. Contagious disease could be spread rapidly because of the regular contact between people. Contagious diseases are most easily spread in crowded or confined spaces and are responsible for the outbreaks of many pandemics.

Communicable diseases

Communicable diseases are diseases that are contagious and capable of spreading among people or animals.

Non communicable diseases (NCDs)

Non communicable diseases are diseases that cannot be transmitted from one person to another. The main types of non communicable diseases are cancer, cardiovascular diseases, diabetes, and lung diseases. NCDs are responsible for the deaths of around 30 million people each year. NCDs are generally caused by lifestyle choices and can be a major problem for countries if the lifestyle choices are significant risk factors for NCDs. In 2002, the WHO identified common behaviors such as the use of tobacco, alcohol consumption, and physical inactivity to be major risk factors of NCDs. Even though blood pressure control and smoking rates improved over the past few decades, other risk factors showed no improvement or even worsened.

Non-pharmeceutical interventions (NPIs)

Non-pharmaceutical interventions are actions a community or government need to take aside from pharmaceutical means such as vaccination and taking medications to combat a spreading disease or pandemic. Since people have little or no immunity to newly emerged diseases, NPIs are one of the best ways to prevent and contain a disease to combat the spread of diseases and infections.

Zootonic pathogens

Zoonotic pathogens are bacterial, viral, parasitic, or unconventional agents that can be spread from non-human animals to humans through direct contact or through water, food, or the environment. A zoonosis is an infectious disease when humans are infected with zoonotic pathogens.

Globalization

Globalization is the speedup of movement and exchange between humans, goods, services, cultural practices, capital, and technologies. Due to globalization, diseases can be spread much easier and faster than before as human interaction around the globe increases.

Background Information

Myths shattered by recent pandemics

Information and beliefs of pandemics constantly change as unpredictable events constantly happen. With new information and knowledge, the approaches to preventing pandemics should also be changed.

Pandemics are not problems only for the poor

At the start of the century, experts believed that pandemics that plagued third world countries in Africa and South-East Asia would not be a problem for first world countries because of their high standards of living and well developed health care systems, but recent pandemics such as the SARS in 2003 and COVID-19 spread efficiently in sophisticated hospitals. The 2009 H1N1 virus also showed the world the capability of viruses to quickly spread to every corner of the world.

Birthplaces of new diseases

The exotic jungles in Africa and dense populations in Asia living with chickens, pigs, and ducks were once considered the only birthplaces for new pathogens, but not after the Middle East Respiratory Syndrome (MERS) emerged from seemingly unproblematic camel-human interactions. MERS has shown the world that all kinds of animals, even camels, could be a place where new pathogens surface.

International Security

Another myth that has been shattered by recent pandemic outbreaks is that pandemics would not be a threat to global security. Prior to the Ebola Virus outbreak in 2014, several Ebola outbreaks have occured in central Africa at the start of the century, but most it was regarded as a geographically confined threat that only worried poor African countries. The rest of the world hardly noticed these outbreaks. But after the outbreaks in other regions of the world, the United Nations Security Council called an emergency session and adopted a resolution that affirmed the threat the Ebola outbreak would pose on international peace and security. The resolution had 134 co-sponsors, which is the most in the history of the Security Council. This was also the first time a public health issue was discussed in a Security Council's Emergency Meeting.

Vaccines vs new diseases

Vaccines help the human body combat and prevent viruses by immunization. Immunization is achieved by administering antibodies or the induction of other natural defense mechanisms. There are two types of immunization: passive and active. Even though the development of vaccines has been much faster than ever before, new diseases can still wreak havoc in societies when vaccines are not developed yet. Although many diseases can be combated through a simple vaccine, complex infections

such as malaria, tuberculosis, and HIV might require a combination of vaccines and are not affordable to everyone. Progress has also been made with therapeutic cancer vaccines. Future potential targets for the development of vaccines include diabetes, Alzhimer's disease, addiction, and hypertension.

Biological weapons

Biological weapons threaten international health in their very existence because of its capability of causing widespread and severe damages to countries and humans.

Pandemics caused by biological weapons

Biological weapons would pose a great threat to the international community if they were ever used. Biological weapons deliver viruses or bacteria to inflict disease on targeted populations to kill or incapacitate them. Some of these biological agents work through direct exposure, but those who are contagious have a potential to cause worldwide pandemics. The destructive capabilities of these weapons are unimaginable and the effects can happen so quickly countries and people could not contain the spread. Although some can be countered with drugs and vaccines, contagious biological agents with no vaccines such as glanders have the possibility of having mass effect. The WHO announced that smallpox was eradicated due to international vaccine programs, but the Soviet Union and the US has kept smallpox samples to protect themselves against biological attacks.

Past Pandemics

Throughout history, countries and civilizations have been destroyed and seriously affected by pandemic as they have the capacity of doing severe damages with little or no warning. As technology continues to advance, so does the mutation of pathogens, thus creating viruses more potent than ever.

Spanish Flu (1918)

The Spanish Flu was the most severe pandemic in recent history. There was no universal consensus on the origin of this virus and an estimate of one-third of the world's population got infected. The number of deaths was estimated to be between 30 to 50 million people worldwide. Even though pandemics often affect elderly people over 75 years old or children under 5 years old more than young adults, Spanish Flu has a unique feature of also having a high mortality rate in healthy people, killing millions of healthy 20-40 year olds. With no vaccines against influenza and no antibiotics to treat secondary infections that can be associated with the flu, nations resorted to using NPIs such as isolations, quarantines, and limiting social gatherings.

HIV (1984)

Scientists identified the human immunodeficiency virus (HIV), which is a cause of acquired immunodeficiency syndrome (AIDS), in 1984. Since 1990, the number of people living with HIV has quadrupled. Currently, more than 35 million people worldwide are living with an HIV infection, and over 25 million people have died from AIDS since the first case.

SARS (2003)

The Severe Acute Respiratory Syndrome (SARS) was a viral respiratory virus and was first reported in Asia in the start of 2003. The symptoms include shortage of breath, fever, and coughing. SARS caused the deaths of 774 people. The WHO, along with the help from the Global Outbreak Alert Response Network (GOARN), coordinated an international investigation and assisted affected countries with logistical, epidemiological, and clinical support to control the pandemic.

COVID-19

In 2019, COVID-19 emerged in Wuhan, China, and rapidly spread across the world. More than 2 million people worldwide have lost their lives to COVID-19. Fortunately, organizations such as the WHO constantly advises countries and the public on actions they should take.

Caption #1: Isolation rooms for COVID-19 patients

Major Countries and Organizations Involved

Republic of China (ROC)

After having experience from SARS that killed 37 people in ROC and many more abroad, ROC quickly responded to COVID-19 and was one of the first countries to implement lockdowns and quarantine procedures. ROC has been one of the most successful countries at combating the virus with only 7 confirmed deaths from COVID-19. One of the factors that might contribute to ROC's success was

the swift actions taken after the first cases were reported in China. The large amounts of hospital isolation rooms built during the SARS outbreak also helped contain the spread of COVID-19 whereas other countries might not be able to effectively isolate the people with symptoms of COVID-19.

China

China has been the largest supplier of medical equipment and Personal Protective Equipment (PPE) such as masks and has also effectively implemented lockdowns and quarantines after the spread of COVID-19. Even though China is the largest supplier of PPE such as masks, the quality is often criticized to be inconsistent. The dense population was a struggle for China to contain the virus. The blurred lines between nature and humans in markets containing wild animals are also common grounds for zoonotic pathogens to emerge and spread, which is the alleged case for the emergence of Coronavirus.

United States of America (USA)

Since SARS did not affect the United States of America as much as other countries, the USA did not respond to the ongoing COVID-19 as well as Southeast Asian countries did. Adding on to the refusal to act fast, widespread misinformation and lack of cooperation from the community also took a part in the futile attempts to contain the virus. The USA also turned a blind eye to the WHO's advice which includes the implementation of a track and trace system. Despite the Trump administration blaming the size of the country and large scale testings for the high figures, the death per capita is still one of the highest in the world.

New Zealand

New Zealand is successful at containing COVID-19 with only 25 confirmed deaths related to the Coronavirus. New Zealand wasted no time in responding to the new threat and the Ministry of Health set up the National Health Coordination Center (NHCC) to respond to COVID-19 on January 28, 2020. As early as February, travel restrictions to and from other countries were imposed. New Zealand adopted the elimination strategy, instead of the traditional mitigation strategy for combating influenza. The elimination strategy will result in fewer deaths and cases if started early and offers a clear path on returning to normal activities. But because of the focus on border control, it is obvious that island states could implement this method a lot easier.

Japan

Japan had a history of dealing with pandemics since the Heian Era and has been developing drugs to combat diseases and fortunately obtained reliable antiviral drugs in the year 2000. Data indicates that Japan's approach to the Coronavirus has been more effective than its western counterparts even though it received a lot of domestic dissatisfaction following the cancellation of the

2020 Tokyo Olympics. Japan allowed some degree of transmission but focused on identifying clusters of infection rather than tracking down individual cases and eliminating them. Japan's approach avoided exhausting the medical system. Even though Japan claims to have a more effective approach to prevent the current pandemic from further spreading, other countries criticize its testing system and argues that Japan does not know the extent of the spread due to its low testing rate.

United Kingdom

The UK's high death toll of 58,545 in the current pandemic is the result of a dangerously late lockdown. After 5 weeks after the first cases of COVID-19 reached the UK, Boris Johnson announced that citizens should go about their business as usual. Johnson decided to lockdown the country only after 285 people had died from COVID-19. Even though lockdowns were implemented, they were considerably lax, and travel restrictions weren't imposed until June of 2020. The slow actions and underestimation might be because the SARS and MERS did not directly link to any deaths in the UK.

World Health Organization (WHO)

The World Health Organization is a UN body that aims to improve global health. The WHO tackles all health-related problems and has created initiatives to tackle pandemics. The WHO took actions such as compiling reports on the status of current epidemics and helping countries cure, vaccinate, and treat citizens during emergency outbreaks. The WHO also advises countries on the best course of action during pandemics. Emergency response frameworks and for the international community has also been created in case of a health emergency.

Red Cross

The International Red Cross is an independent organization ensuring humanitarian protection and assisting anyone in need of medical assistance. The Red Cross incessantly provides aid and reduces the number of deaths due to diseases. By offering education, healthcare, and other resources combating diseases, the Red Cross mitigates the spread and severity of diseases and infections.

Pfizer

Pfizer is one of the largest pharmaceutical companies in the world and has a 171 year record of researching, developing, and manufacturing vaccines and medicines for patients. In around a year after the first COVID-19 case was reported in Wuhan, Pfizer's vaccine for COVID-19 was approved by the Food and Drug Association for emergency use. This was the fastest a vaccine has been approved whereas the second fastest a vaccine has been approved before took 4 years for mumps in the 1960s.

Timeline of Events

You must include short sentences to explain the timeline. Follow the format presented below:

Date	Description of event
1918	The outbreak of the Spanish Flu that killed an estimate of 40 million people
April 7th, 1948	The WHO was established.
1998	The National Childhood Injury Act is passed which protects pharmaceutical companies from claims of injury resulting from their vaccines.
2002	The SARS outbreak tore through southeast Asian countries and spread to other parts of the world
2011	The Pandemic Influenza Preparedness (PIP) Framework was created to implement a global approach to pandemic influenza response
2019	The Coronavirus outbreak started in Wuhan and rapidly spread across the globe

Relevant UN Resolutions and Treaties

- Eradication of poliomyelitis, May 27, 2006 (WHA59.1)
- Resolution 2439 - October 30, 2018
- “Strengthening and Enforcing the Convention on Biological Weapons, September 30, 2013
- Pandemic influenza preparedness: sharing of influenza viruses and access to vaccines and other benefits, May 2007, (WHA60.28)

Possible Solutions

Implementing more forceful quarantine measures with better monitoring of newly confirmed and suspected cases. Countries and states could close their borders and require people who arrived from foreign countries to be quarantined. Even though this would be effective, the question of whether this violates the people’s right to freedom of movement remains. Closing off borders would also prevent the flow of goods and resources required for a country to combat pandemics. Because of the fact that most countries are not able to produce enough medical supplies or other resources to be self-sustaining, completely closing off borders would not be a very feasible option although that might be an option for some countries that are island states. Despite the fact that monitoring the movements and whereabouts of suspected cases would be a crucial part in trying to contain a local outbreak, this might violate people’s right to privacy. Before local diseases outbreak into global pandemics and quarantine

measures did not have to be implemented, there is the issue of infected people refusing to report their symptoms and seek medical care which would delay the responses of governments and officials.

Creating a treaty where countries agree to share accurate information on the status of local or regional diseases and infections to allow other nations to take necessary preemptive measures. Considering that the information of local or regional diseases are rarely, or even falsely communicated between countries, the responses to global pandemic outbreaks would be severely delayed, claiming the lives of countless people which could easily be prevented if other countries had known about the spreading disease. A fault for this solution would be that countries wouldn't want to share such information because the country who possesses or developed effective vaccines would be a very significant power boost. There would be an extra problem in developing countries where identifying the diseases and monitoring the spread would be a challenge.

Providing aid to less economically developed countries (LEDCs) for more effective communication and the research, development, and production of vaccines, medicine, and medical equipment such as masks to prevent the spread of diseases. LEDCs are usually more affected by pandemics both in number of deaths and economically. Already lacking resources such as testing kits to accurately record increases of local diseases, LEDCs would respond to pandemics slower than MEDCs. Even if LEDCs managed to identify a rapidly spreading virus, containment and mitigation for them would also be a difficulty as effective communication between the government and the people could not be assumed. The current global pandemic has shown that LEDCs lack the resources like personal protective equipment (PPE) to shield themselves from infection. MEDCs could help provide LEDCs testing kits for wide scale testing and funding to manufacture PPE as it is vital for helping nations limit the spread of diseases. If MEDCs and NGOs regularly provide assistance to LEDCs, LEDCs would be a lot more prepared in identifying and preventing local pandemics to spread into worldwide pandemics. MEDCs would have economic incentives as worldwide pandemics such as COVID-19 have proved that preventing pandemics could be a lot cheaper than 'curing' them.

Nations could focus more on health education and combating misinformation. Governments could work with television or social media companies to help spread accurate information to the public by regularly releasing information and updates on current pandemics and what people should do to help combat the spread. The announcements could include information such as reminders for people to repeatedly wash/sanitize their hands, putting on masks, and refrain from constantly touching their face to prevent infections. Governments could also work with police forces and collaborate with their communications commission to take down false information to prevent them from interrupting or impair their efforts of fighting the pandemics. Even with widespread accurate information available, the effectiveness of health education would depend on multiple factors such as the ability for

people to obtain the necessary resources such as masks and alcohol. In LEDCs, both communication between the government and the people and gaining access to the resources would be problematic. In every nation, there will be the additional question of whether organizations and people would comply with the government's suggestions given that the government could not force them to change their behavior as requested.

For many past worldwide pandemic, lockdowns were implemented in numerous countries around the world. It is very effective as shown in the current pandemic that countries who locked down early were able to manage and prevent the spread of the virus much more effectively than countries that initially ignored the virus. It is ironic that the two countries that landed themselves among the highest death tolls, the USA and the UK, were hailed to be the most prepared for a pandemic. On the flip side, countries that have been previously ranked low on preparedness scoreboard such as Vietnam and Iceland kept their death rates low.

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