Forum: World Health Assembly

Issue: Ensuring the Preparedness of Global Healthcare Systems and Responses in the Face of Potential Communicable Disease Outbreaks.

Student Officer: Zahraa Aqeel Al Attiya

Position: President Chair

Introduction

Before the novel COVID-19 outbreak, the idea of an Epidemic shutting down the world was not a viable one to many. Therefore, plans in response to such aggressively communicable diseases did not consider how fast a virus could spread in an ever so connected planet. The spread of COVID-19 depended on the poor and slow response to the virus, exploiting the gaps in Global healthcare systems. These gaps include the speed in which information travels in healthcare, the costs required to control communicable diseases, the lack of resources for controlling spread of COVID to name a few. Whilst the Coronavirus is not the only communicable disease that has threatened lives, monitoring and observing it's spread could allow for future responses to be more effective and well structured

Corona Viruses are a large family of viruses, they can range from a common cold to more serious illnesses like Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). The novel Coronavirus (COVID-19) is an entirely new strain of virus that has not been found in humans up until the recent outbreak. As of December 2019 the first case of the COVID-19 was reported to the UN, they were reported as cases of pneumonia as they were not properly identified yet. It was soon identified as the COVID-19 strand, an entirely new strand that remained unknown till this outbreak. Soon after, cases of this virus began popping up all over the world, and at an exceptionally fast rate. One of the many dangers regarding this virus is the lack of cures for the virus, as there is no cure, symptoms can only be responded to and a person is largely dependent on their immune system. Thus, people who are at higher risk are more likely to be severely ill and possibly

even pass away. At its peak in China, cases would reach well into the 100,000's, whilst in nations like the United States, poor response to the virus has allowed for 5 million COVID-19 cases, and the numbers are simply increasing. In nations with a large population of older people like Italy, in which 23% of people are over the age of 65, cases skyrocketed in a short period of time and at it's peak, numbers as high as 5,000 new cases everyday, this also led to COVID-19 having a higher mortality rate with thousands dying from it everyday when it was at its peak.

COVID-19 has shown the world the gaps in governmental agencies, healthcare institutions and global systems of response, these gaps will allow for better detection and retaliation if a similar communicable disease would appear in future. By analyzing the weaknesses that have been exploited in worldwide healthcare systems, more assistance and support can be supplied to weak spots in the system, allowing it to be more effective further along the line. This valuable information can allow the monitoring of future Epidemics to be finer which can allow the prevention of Pandemics. The observation of specific patterns may also allow other overlooked flaws to be identified. Overall, whilst the world may be heavily affected by COVID-19, this will only allow for real progress in future.

Definitions of Key Terms

COVID-19

COVID-19 is a disease caused by a new strain of coronavirus. It is highly contagious and has led to global shutdown.

Epidemic

A widespread occurrence of an infectious disease in a community at a particular time.

Pandemic

A disease prevalent over a whole country or the world. So when a new virus emerges, it spreads around the world and due to many people not having immunity against it, rapidly the spread becomes uncontrollable and a pandemic becomes prevalent.

Communicable disease

An infectious disease that is contagious and that can be transmitted either directly or indirectly from one source to another.

SARS

Severe Acute Respiratory Syndrome (SARS-CoV), a variation of the Coronavirus strand.

MERS

Middle East Respiratory Syndrome (MERS-CoV), a variation of the Coronavirus strand.

Tariff

A tax or duty that must be paid on a particular class of imports or exports.

Pharmacovigilance

The practice of monitoring medical drugs after their licensing for usage, this is in order to identify and analyze any reactions that may have been unrecognized previously.

Isolation

When an ill person is kept separated from others in order to prevent infection.

Social Distancing

Creating distance from others and preventing real life interactions between people.

Quarantine

When a person who may have been exposed to a disease is kept in isolation for a period of time.

Intergenerational

Something that occurs or affects multiple generations.

NGO's (Non Governmental Organizations)

A non governmental organization is a non profit group that functions independently from government and is citizen based.

Generic Pharmaceuticals

A pharmaceutical drug that contains the same main chemical substance that would have been originally protected by a chemical patent.

Biosimilars

A biosimilar is a medical product that is manufactured after the chemical patent of the "original" medicine expires, it is often similar or the same to the medical product.

Patent

A legally binding license that is given for a set period of time, it allows for a person to stop others from synthesizing, using or selling a specific item. A chemical patent would be a patent that regards medicine or chemical products.

Key Issues:

Lack of Medical Capacity

Approximately 400 million people worldwide lack access to essential health services, this is an occurrence in both poor and rich countries. This is for a multitude of reasons, one of which is that national systems can occasionally not cover medical expenses, therefore it is expected for medical payments to come out of people's pockets, this can lead to bankruptcy or poverty. Therefore, many opt not to receive medical care at all, thus creating societies that

are far more vulnerable to potential outbreaks. Occasionally, the healthcare systems in place are unable to provide the people with proper medicine or information to deal with arising issues, with many not having the capacity to deal with a large-scale outbreak. Whatever the reason may be, the outcome is always the same, and it is that there is a lack of access to many essential health services, which could become absolutely crucial in future outbreaks. This overwhelms an already vulnerable system and can cost many lives. An example of this is in the United States, where many people that are racial or ethnic minority groups at a higher risk of getting sick, and due to their limited access to healthcare, death tolls are higher in these groups. The United States does not have a national health system, and ethnic minorities are less likely to have insurance therefore many will either not be able to access any healthcare facility and others who do will have to deal with long term debt which could harm their families.

Access to Medicine

Almost two billion people worldwide do not have access to medicine that they need. What appears to be something that many take for granted, medicines are not an option for almost one third of the global population. There are many challenges that arise with attempting to expand access to medicine around the world. In recent years, the need for medical supplies has become more urgent, however the many gaps in the agendas that tackle access to medicine allow many to exploit the system. Access to medication depends on many factors, gaps in healthcare systems as well as issues with the capacity of these systems prevent millions from receiving medical supplies they may require.

Furthermore, things like local tax and tariff policies on good quality medicine creates challenges in the access of these medicines worldwide. There are also different regulatory authorities around the world, and with medicine, it is essential that it is transported and kept safely and so a lack of pharmacovigilance can affect the access to medicine. Efforts to improve the access to medicine are also brought down by a multitude of economic issues in which up to 90% of those living in low-middle income countries will have to pay for medicine

out of pocket, and paying for these expensive medicines may be the nail in the coffin that leads to intergenerational poverty.

If there is no regulation and ready access to medicine, then societies are vulnerable to future outbreaks, furthermore, even if medicine were to be supplied for outbreaks, the lack of chains of order and regulations would mean that many could not access the medicine to begin with. Finally, if purchasing medicine leads to intergenerational poverty, then there will be no ability for those who may suffer in outbreaks of getting viable medication as the risk of passing away will be outweighed by that of severe long-term struggle in impoverished societies. If this continues, the usage of substandard or imitation medical products is bound to increase, leading not only to more fatalities, but to lack of confidence in healthcare providers and other medicine which will have dire consequences further along the line.

Medical Information

Nearly three out of every four healthcare experts perceive the access to medical information as low. A survey known as the Sandoz 12 country survey revealed that a majority of healthcare providers and members of the public would like to know more about diseases, medicines and treatments. However, the access to this information is difficult as much of the information is unreliable, and the oversupply of information makes it inaccessible. Many healthcare experts and patients have little to no access to medical information, and so they are not aware of things that may be as simple as asthma or allergies, this creates a population more open to misinformation, this misinformation could present real issues in pandemics.

When the unreliable information could lead to inappropriate responses, the lack of circulation of this information also presents a challenge as accurate data may be lost since there is no reliable way for information to move. Many turn to the internet for the data or information that they need, however there is a large risk with one not recognizing the difference between inaccurate information and realistic facts. In addition to this, patients need to know the details of their illnesses and treatment choices beforehand, something that a lack of reliability can heavily affect. A prevalent example of this occurred in the Middle East, where a lack of translated research led to things like false videos and information to be circulated on social networking like Whatsapp. This either led to increased fear and occasionally elaborate

conspiracies which meant that many people were anxious and tried to respond to COVID-19 without the assistance of professionals, some even tried to prevent COVID-19 by doing harmful things like snorting salt water to "flush out the virus".

Medical professionals deal with another challenge, and that is keeping up to date with the latest developments in medical research, therapies and treatments. With outbreaks, this is even more essential, as a 24-hour delay in something like how a disease transfers can cause many to be infected or even for healthcare providers' lives to be put at unnecessary risk. If data and accurate medical information cannot flow throughout societies, many people will have to pay the price. The ignorance that may remain in societies that suffer from these issues can lead to more devastating results in the case of communicable diseases or any new developments in medicine in general. Hence the importance of accurate and easily accessible information in societies all around the world.

Development of Vaccinations & Medications

Whilst all vaccines function in the same way, each response to an infection has to be created in its own way. Moreover, with medicine, the goal is to produce the proper response to a disease. Both of these are incredibly helpful and complex ways to overcome communicable diseases, however the development of these requires a long period of time as well as a large concentration of resources. Human vaccine development becomes exceedingly difficult with each stage presenting new challenges. One challenge that arises with outbreaks of disease is shortening the period of time in which vaccines are required to be found, the larger amount of pressure placed amongst researchers to find viable vaccines and appropriate candidates presents real challenges. Furthermore, the lack of knowledge for long term effects of the vaccines means that though they may be safe to enter the market in the short term, the long-term effects can be devastating. Alongside all of these challenges in the synthesis of vaccines (Which can also apply to the synthesis of medicines) there are challenges with production and delivery of said vaccines.

The costs of producing the vaccines can be incredibly high, and in lower-middle income nations the ability to fund these vaccines will be impossible. Furthermore, with inappropriate medical supplies, poor supply chains and lack of structure in healthcare systems, the delivery

of vaccines and medicine face new challenges. With many choosing not to take the vaccines due to the inability to afford said vaccines. This is also contributed to by the lack of information and knowledge about the efficacy of these treatments or prevention methods, meaning that many will opt not to take this option without knowing the real impact of avoiding it. All of these challenges mean that in outbreaks, developing, producing and delivering helpful resources may become near impossible as there is no effective way of doing so.

Assistance in Areas of Conflict and Crisis

The task of containing communicable disease outbreaks is already an incredibly difficult task, it becomes more challenging in nations with conflict and crises. Approximately 1000 attacks on healthcare facilities and medical workers in 11 countries occurred in 2019, leaving 193 medical staff dead. Even with stricter surveillance, many healthcare workers remain vulnerable. So, for the millions of people who are forced to flee their homes, or who live in areas where there is no direct access to healthcare then there are severe challenges in accessing healthcare during outbreaks. Whilst it is illegal to attack hospitals and other medical facilities under international humanitarian law, it does not stop medical assistance from being attacked. The attack on these facilities and people have many consequences, from damaging expensive equipment and medicine that is irreplaceable, to causing fear amongst others in the medical community and preventing them from aiding those in affected nations. If it is impossible to reach those in these areas, it is impossible to provide them with healthcare and in conflict, where people are constantly moving and under multiple risks, outbreaks can have a much larger and more negative impact.

Public Perception

In order to deliver safe and reliable healthcare to patients, it is essential that one must trust and have confidence in those delivering the healthcare. This is largely determined by the spread of misinformation on social media, movements like the anti-vaccination movement has led to less trust towards healthcare workers, in turn leading to larger death tolls from preventable diseases. If healthcare providers develop more trust from the public then when threats like potential outbreaks appear, the instructions that will be provided are more likely to be taken seriously. When people listen to their healthcare workers, the ability to transfer

information along chains of people is much simpler, meaning that more people will be informed and more people will in turn, follow through. Limiting outbreaks is far easier when people do not feel forced but choose to obligate themselves in order to keep them and others safe. This also allows healthcare to be provided in nations that may face conflict with less challenges, if there is more trust in healthcare workers simply being there to provide healthcare rather than to push an ulterior motive, then the responses will become more positive and healthcare workers may become less threatened, thus providing better assistance to those in dire need of it. An example of negative public perception is the COVID-19 protests that took place in the USA, with hundreds of people blatantly ignoring social distancing rules, not wearing masks and being exceeding violent which placed the lives of many healthcare providers on the line. This could be accredited to political motives, in which COVID-19 was not taken as seriously as it may have been by the Trump Administration which has led to people taking the opinion of a political party in place of medical experts or scientific evidence.

Timeline:

Date	Event	Outcome
1889-1890	The Russian Flu	A death toll of 1 million, it spread rapidly in comparison to the previous outbreaks and

		actually revolutionised bacteriology, much was learned about outbreaks due to this flu.
1918-1920	The Spanish Flu	A death toll of 20-50 million, a deadly Influenza outbreak infected over a third of the world's population. Unlike with most pandemics, the victims of this one are that they were mostly made up of completely healthy adults instead of children and older people.
1956 - 1958	The Asian Flu	A death toll of 2 million, lasted for two years and was a variation of the H2N2 type A Influenza Subtype, It was predominant in the United States, Hong Kong, China and Singapore.
1968	Influenza Pandemic	A death toll of 1 million, a H3N2 strain of the Influenza virus spread rapidly in the South East Asia region. Was considered to have a low mortality rate (5%) but still led to the death of almost 15% of the Hong Kong population at the time.
December 1- 27 2019	First symptoms of COVID-19 are observed. Soon after Chinese authorities were informed about a SARS-like disease in Hubei province.	Recorded in the Lancet Medical Journal, it is mentioned that it most likely started in November of that year. No response is taken by the authorities yet, cases of the virus begin to multiply.

December 30 2019	In Wuhan, the health commission notifies local hospitals regarding "pneumonia of unclear cause" . Ai Fen, a leading doctor in the Wuhan central hospital gets test results that suggest that a patient has a coronavirus and spreads an image of the result to another local doctor. Dr Li Wenliang then sends this to a local Doctor group chat, where he advises them to wear protective clothing.	Dr Li is summoned to the Public Security Bureau, he is then accused of making "false comments that have disturbed the social order in society". The Chinese social media site "Weibo" is filled with information about "a mysterious deadly pneumonia", raising public fear.
December 31 2019	27 cases of viral pneumonia are being investigated in Wuhan. 7 of whom are in critical condition. The WHO (World health organization) are alerted by the authorities.	A team of healthcare experts are dispatched to the region where the cases were found. It is concluded by authorities that there is no human to human transmission of the virus. At this time, the WHO takes no action yet.

January 1 2020	A hospital in Wuhan posts on WeChat that they are fighting a "mysterious pneumonia". Multiple people mention the virus to the public. Authorities are recognizing that the virus may be more serious than originally thought.	Dr Ai Fen is then reprimanded by a disciplinary committee, the committee claims that she is "spreading rumors". The Wuhan Public Security Bureau detains those who spread 'rumors' about the virus, this treatment is reported to the public on the Chinese news programme "Xinwen Lianbo". This is a show watched by millions. As response to the virus, the Chinese authorities shut down the Huanan Seafood Wholesale Market, as it is deemed to be the source of the virus as well as a location with a larger number of cases. The WHO places itself onto an emergency footing in order to deal with a potential outbreak.
January 3 2020	Allegations in the Chinese media begin regarding the spread of the virus, both local health authorities and local doctors post about this. Wuhan health authorities claim to be investigating the original cause of the outbreak.	Many of the posts regarding the virus are censored by the Chinese authorities. One of the statements that is concluded by the Wuhan health authorities is that there is no human to human transmission of the virus.

January 7 2020	Top leaders in China, like President Xi Jinping have a meeting, this meeting is conducted at the standing committee of the politburo.	It is indicated that there was awareness over the existence of the virus from an early date.
January 8 2020	The National Health Committee finally identified the existence of a new form of coronavirus, this virus is suspected to be the cause of the epidemic.	No conclusive outcome yet.
January 9 2020	The coronavirus genome is made public by China.	Links to MERS and SARS are made, scientists can begin developing tests for COVID-19
January 11-17 2020	The Chinese Communist Party (CCP) conducts the annual political meetings for the Hubei province.	The issue appears to be ignored, there are no reports of increases in cases during this period.
January 13-15 2020	The WHO posts on twitter that the Chinese authorities have found no	The infected person is a traveler from Wuhan, the traveller is identified by Thai officials and taken to hospital the same day. Many local hospitals suspect that the virus does spread via

	evidence that the virus spreads via human to human transmission. This comes after the first case of COVID-19 is identified outside of China, this is the first of many cases that soon begin to pop up around the world.	human to human transmission due to the large influx of patients.
January 20 2020	The first South Korean case of COVID-19 is announced, more cases pop up around the nation	A group of health experts in China's National Health Commission confirm that the Coronavirus does indeed spread via human to human transmission.
January 21 2020	The WHO sends a delegation to China in order to investigate the statements made by China's National Health Commission. Chinese media underplay the outbreak, furthermore the WHO discusses if the outbreak should be announced as an international health	Most evidence points towards human to human transmission, however more analysis is needed for a conclusive answer. The international pressure on the top political bodies leads to statements that threaten those who speak about the Coronavirus. The first mention of COVID-19 is in the state run newspaper.

	emergency. Cases in China are now at 291.	
January 23 2020	Wuhan is put under lockdown, so are nearby cities. The WHO decides **not** to declare an international health emergency.	More response is being taken to tackle the virus in China, including the construction of new hospitals. However, the Chinese Lunar year holiday commences and millions of people travel across the country.
January 30 2020	The spread of the virus only increases, with hundreds of cases in China and 82 cases outside China.	The WHO declares COVID-19 a Public Health Emergency of Global Concern.
February 11-12 2020	The WHO convened a Global Research and Innovation Forum, this was attended by more than 450 experts from 48 countries.	Many topics were covered in this forum regarding COVID-19, this included things like funding research, the virus itself and other topics.

Major Parties Involved:

World Health Organization:

The WHO is always essential when it comes to outbreaks as it is a specialized agency in the UN whose sole purpose is to provide healthcare to people around the world. It's self-proclaimed mission is "attainment by all peoples of the highest possible level of health". The WHO advocates for universal healthcare, it monitors public health, it also sets health standards and guidelines, checks on public health risks and puts together efforts to fight these risks. The WHO helps the world respond to any health threats however as it tackles so many issues around the world sometimes it has slow responses to some outbreaks or does not place a risk as high as it should be until absolutely essential to do so. The WHO is the frontline against outbreaks and so it is essential that it remains well funded, however there were reports in the past claiming it was "badly underfunded" and this may not become easier with time, especially as COVID-19 has been devastating for many world economies and agencies.

During COVID-19, the WHO has done an exceptional amount of work to combat the deadly virus. The first action taken by the WHO when the Coronavirus outbreak began was issuing a COVID-19 Strategic Preparedness and Response Plan which allowed for the spread of accurate information and also gave a guideline for nations to prepare for the outbreak. The WHO's offices also worked alongside governmental agencies to help prepare their health systems for COVID-19. The WHO also helped set up a response fund, allowed frontline workers to get access to equipment and has helped raise $800 million with donations from governments, the private sector and individuals. The WHO also took many efforts to help release and spread accurate information in many languages about the virus, they also set up a system to help give everyone access to timely and accurate information and advice. The WHO then focused on providing equipment to essential healthcare workers all around the world, shipping millions of protective care equipment and millions of diagnostic tests. The WHO also trained millions of health workers to help with the response to COVID-19, by educating frontline personnel on how to efficiently respond to the coronavirus. Finally, the WHO has been on the frontlines in trying to find the vaccine, with nations all over the world trying to find vaccines for CO ID-19 because of the WHO's efforts.

United States of America:

Roughly 15% of the WHO's budget comes from the United States of America, as of April 2020, the USA cut off their funding to the WHO, this move has been criticized as the WHO greatly depends on these funds especially during outbreaks. The way the USA has responded to the pandemic has been largely criticized as it has been deemed as inefficient. This has been supported by the increase in cases in the US, with the highest number of global infections in the world. Furthermore, the poor lockdown rules that have been protested has led to speculation about a second wave of COVID-19. The Donald Trump Administration has been largely criticised for their response to the virus, lockdown action was only taken after a large increase in cases, then during the protests of COVID-19, Mr. Trump did not call for a fast response and thus allowed cases to once again increase. The lack of trust Americans have for the public contributed to them choosing not to wear masks and therefore once again a large rise in cases was witnessed. Currently, it appears that cases will only increase with time and that with the reopening of more public places, a possible second wave is expected.

African Union:

The largest portion of WHO assistance is provided to Africa, with 635 million USD going to programs in Africa alone, in the cases of pandemics, nations in Africa are more likely to be badly affected. Many nations in Africa have large populations that live below the poverty line, and whilst the spread during COVID-19 was slower in Africa, other communicable diseases may make it far worse. It is difficult for research to be conducted in many places, it is also challenging as there are not as many well funded medical institutions and medical supplies are in high demand, meaning that without exceedingly large amounts of assistance, a communicable disease outbreak could have dire consequences to the continent. Whilst the Coronavirus itself affected Africa the least, other examples of communicable disease outbreaks that did devastate Africa include HIV and Tuberculosis, these were largely limited due to the WHO's assistance and also due to the lack of travel in most African regions, that being said a future communicable disease outbreak may be more devastating to the ever evolving continent.

China:

COVID-19 was first detected in China, it is predicted that it began in the Huanan Seafood Wholesale Market the measures and speed were not as effective as they could have been as the spread of COVID-19 worldwide was largely due to the lack of early travel bans or quarantine orders. China has heavy censorship on news, and does not provide protection to whistleblowers, at the beginning of the outbreak, China refused to acknowledge it thus presenting a challenge to the healthcare workers who were penalized for speaking up about the outbreak. Seeing as China has some of the highest case numbers it would not be surprising if a future outbreak had the same tragic result as the COVID-19 outbreak. China being densely populated could also contribute to the spread of communicable diseases and so that is another challenge that may need to be overcome in future.

India:

Much like China, India is densely populated, allowing for the faster spread of communicable diseases, and with the large influx of people entering and exiting the country everyday, it comes as no surprise that the cases have surpassed 1 million. COVID-19 was found predominantly in poorer areas, in which practices such as social distancing are near impossible to maintain in the populated areas. The hospitals in India are also unable to meet the demand for healthcare, with private and public practices alike turning away patients due to a lack of beds, medical supplies, staff and equipment. The healthcare systems appear to be buckling under pressure and it is assumed that things will only become more difficult. It has also clearly displayed the wealth gap in India and how some people's care has been prioritized over others. It is essential that assistance and proper healthcare supplies are delivered to India, and it is of dire importance that the healthcare systems are evaluated in order to meet the demands of the heavily populated nation.

Italy:

Italy appeared to have been one of the nations most affected by the coronavirus, this is due to a multitude of reasons. As with most communicable diseases, those who are older in age are more likely to catch a disease as well as die because of it, and as Italy has the second largest elder population in the world, it is expected that the nation would have had a higher fatality rate. Furthermore, much like India and China, Italy is heavily populated in some areas more than others, and due to the cultural norms of large family gatherings and physical affections, a communicable disease would be able to travel much faster. The Italian government did act swiftly once COVID-19 cases were identified, however it was not identified until much later and spread like wildfire in an increasingly short time period. The cultural norms in Italy as well as the late response could be vulnerable points that allow for escalation of future outbreaks, therefore they must be addressed. Italy was able to meet demand to some extent, however nobody was turned away from treatment.

Previous Attempts to Solve the Issue

Isolation, Quarantine and Social Distancing:

After the infamous COVID-19 outbreak, there was an emphasis on isolation, quarantine and social distancing. Many people who had the coronavirus were instructed to stay at home or be kept in isolation wards of hospitals, those who may have been exposed to the virus were told to stay in their own homes. Public places were shut down and airports closed in order to prevent people from traveling and spreading the virus amongst each other, in places that are essential (pharmacies, grocery stores etc.) there were strict rules regarding social distancing, where people would wear masks and stay at least 2 meters apart. This was enforced globally to different extents. In nations with stricter quarantine enforcements, the virus dwindled down faster.

However quarantine presented a new challenge as millions lost their job and many people struggled with staying at home such as those who are homeless, poverty stricken and unemployed were some of the people who were not able to protect themselves from the virus and in turn were more likely to get infected. They would also be unable to afford treatment in some nations. Another issue with this is that with time, people became more uncomfortable

with staying at home and thus protested to break quarantine, so many places were forced into reopening which immediately led to a rise in COVID-19 cases. Whilst quarantine is effective, it is simply not an option for many people and has led to those who can afford healthcare and to stay at home to be able to ride out the virus. Furthermore, quarantine may be effective with diseases that are airborne, but some communicable disease outbreaks may depend on not using the local water pipes for example, so it is not viable in many nations and for many disorders. In the United States, the anti quarantine protests have led to many people contracting COVID-19, businesses like 'Disney Land' have reopened and places like schools have also reopened which has caused a spike in cases especially younger people. There has also been blatant ignorance to the social distancing rules with many people refusing to do things like wearing a mask.

Approaches to Increase Medical Access:

Multiple approaches have been taken to increase access to medicine, this includes things like partnerships with NGOs, where medicine can be delivered via these organizations to people in need. These NGOs often work with the WHO and UNICEF, and whilst they can provide a good amount of assistance, they simply can only do so much as many of them are smaller and less powerful than some bigger governmental organizations. Another approach is the usage of multilevel programs, these programs can combine the access of medicine, with research and development as well as capacity building, these programs can help product drugs that already exist or work on the research and production of new drugs, since these programs are always in place they can adapt and take on newer research more easily as their sole purpose is to work on providing medicine. An example of this is when the WHO provided medical assistance and resources to Iraq, allowing for the easier detection and early control of the coronavirus which saved the lives of countless people. This was only done since the WHO had worked with the Ministry of Health in Iraq which then helped spread the assistance across the population.

Another approach is using Generic Pharmaceuticals, these are usually exponentially cheaper than brand named medical supplies, this allows for access to important medicine in budget constrained healthcare systems, since the price of the medicine is far lower, more access to the medicine is available and it is more viable for people to access said medicine. Furthermore, the usage of biosimilars can save healthcare systems billions of dollars. All of these can help in communicable disease outbreaks and have allowed for medical care to be provided to many people; however, they are not as effective as possible and other solutions or methods are welcome to be used. Not many people have used biosimilars as they are newer, and the wariness towards the usage of biosimilars is one example of an area that requires more research but that with time could prove to be an affordable long term option.

Possible Solutions

Creation of a universal healthcare coverage, allowing public healthcare to be provided to all those that may require it. This system would allow on both large and small scales for services to be provided to millions of people that may not be able to afford it otherwise. This can also include the creation of special organizations that focus on responding to outbreaks, preventing them from becoming epidemics or pandemics.These organizations would be international and would focus on gaps in healthcare that were exploited by previous outbreaks as reference. Since an international healthcare coverage system would be consistent worldwide, and there would be regular checkups , there is less room for error and a better established system when it comes to the outbreak of contagious diseases. The healthcare system would support the organization Whistleblowers, like Dr Li Wenliang, would be protected by these organizations. These organizations would focus on dealing with outbreaks first hand, by providing quick and effective responses, these would also tackle conducting firsthand research and announcing the possible outbreaks instead of leaving it to the hands of specific governing bodies.

As one large contributor to the spread of the Coronavirus is that the world is far more globalized and connected, the creation travel bans were earlier on would have made it so that the virus would have spread slower. Emphasis on the creation of specific travel bans in the event of outbreaks is essential. Furthermore, gaining public trust is essential and so nations should be creating more campaigns towards gaining public trust, whilst this may be challenging, gaining public trust is absolutely essential asit will allow the control of future outbreak to be more seamless. The lack of trust during the

COVID-19 outbreak led to a large amount of misinformation and conspiracies, thus gaining public trust is essential. This can be done on a larger scale with multiple nations collaborating or it can be done via a guideline that is agreed on and followed in a different style by each nation. Also Devoting more funding towards delivering accurate information in a timely manner as well as placing focus on the transport of medicine in areas of the world where medicine may be difficult to reach can help change perception in the public eye.

Finally, nations need to place an emphasis towards understanding the gravity of the issue and working towards eradicating future communicable disease in the most effective and rapid way possible. Additionally, nations should also invest in their own researchers if it is deemed necessary, this can be achieved by providing more funding and resources to those researching the virus.This will include researchers who already work under the WHO and WHS as well as individual experts who may be willing to work alongside the WHO and WHS.

Bibliography:

Communications, TAG. "What Do They All Mean and Why Are They so Important to Stop the Spread of COVID-19." COVID-19 Quarantine, Isolation, and Social Distancing | Medical Associates, www.mahealthcare.com/coronavirus/covid-19-quarantine-isolation-and-social-distancing.

Cuthbert, Olivia. "Coronavirus: the Student Translators Battling Middle East Misinformation." The National, The National, 29 Apr. 2020, www.thenational.ae/world/mena/coronavirus-the-student-translators-battling-middle-east-misinformation-1.1012209.

Dictionary.com, Dictionary.com, www.dictionary.com/.

Hills, Mike. "Coronavirus: Is the Pandemic Getting Worse in the US?" BBC News, BBC, 26 June 2020, www.bbc.com/news/world-us-canada-53088354.

Kaufmann, Stefan HE, et al. "Challenges and Responses in Human Vaccine Development." Current Opinion in Immunology, Elsevier Current Trends, 19 Feb. 2014,

www.sciencedirect.com/science/article/pii/S0952791514000107#:~:text=Challenges%20are%2
0faced%20at%20all,adequate%20strength%20and%20quality%20for.

Linda NordlingMar. 15, 2020, et al. "'A Ticking Time Bomb': Scientists Worry about Coronavirus Spread in Africa." Science, 16 Mar. 2020, www.sciencemag.org/news/2020/03/ticking-time-bomb-scientists-worry-about-coronavirus-spre ad-africa.

Nilanjana Javed, Digital Content Editor. "In Pictures: American's Protest COVID-19 Restrictions despite Rise in Number of Cases ." News, Gulf News, 30 June 2020, gulfnews.com/photos/news/in-pictures-americans-protest-covid-19-restrictions-despite-rise-in-n umber-of-cases-1.1593511447201.

PDF, Download. "The Benefits and Drawbacks of Biosimilars." Hematology Oncology, www.hematologyandoncology.net/archives/october-2015/the-benefits-and-drawbacks-of-biosim ilars/.

Regan, Helen. "India Records 1 Million Cases of Covid-19 ... and It's the Poorest Who Are Hardest Hit." CNN, Cable News Network, 17 July 2020, edition.cnn.com/2020/07/16/asia/india-wealth-gap-coronavirus-intl-hnk/index.html.

SANDOZ. "Three Global Health Challenges — and Strategies for Change." Sandoz Global Communications, www.sandoz.com/sites/www.sandoz.com/files/three-global-health-challenges-and-strategies-ch ange.pdf.

Sara Belligoni Ph.D. Student in Security Studies. "5 Reasons the Coronavirus Hit Italy so Hard." The Conversation, 13 Aug. 2020, theconversation.com/5-reasons-the-coronavirus-hit-italy-so-hard-134636.

World Health Organization. "Access to Medicines: Making Market Forces Serve the Poor." WHO International Publications, 2017, www.who.int/publications/10-year-review/chapter-medicines.pdf?ua=1#:~:text=The%20world% 20is%20neither.,in%20modern%20science%20and%20medicine.&text=When%20prices%20ar e%20so%20low,profits%2C%20companies%20leave%20the%20market.

Written by Johnny Wood, Writer. "These Are the 10 Biggest Global Health Threats of the Decade."
World Economic Forum,
www.weforum.org/agenda/2020/02/who-healthcare-challenges-2020s-climate-conflict-epidemic
s/

Written by Josephine Moulds, Freelance journalist. "How Is the World Health Organization Funded?"
World Economic Forum,
www.weforum.org/agenda/2020/04/who-funds-world-health-organization-un-coronavirus-pande
mic-covid-trump/.

Written by Peter Beech, World Economic Forum writer. "What Is the World Health Organization, and
What Does It Do?" World Economic Forum,
www.weforum.org/agenda/2020/04/world-health-organization-what-it-does-how-it-works/.

"5 Reasons the World Needs WHO, to Fight the COVID-19 Pandemic | | UN News." United Nations,
United Nations, news.un.org/en/story/2020/04/1061412.

"Communicable Disease Definition." National Institutes of Health, U.S. Department of Health and
Human Services,
aidsinfo.nih.gov/understanding-hiv-aids/glossary/3586/communicable-disease#:~:text=Commu
nicable%20Disease-,Communicable%20Disease,)%3A%20Contagious%20Disease%2C%20In
fectious%20Disease.

"Coronavirus Cases:" Worldometer, www.worldometers.info/coronavirus/.

"Coronavirus: What Did China Do about Early Outbreak?" BBC News, BBC, 9 June 2020,
www.bbc.com/news/world-52573137.

"Health Care in Conflict Zones - Still under Attack: IHEID." Health Care in Conflict Zones - Still under
Attack | IHEID,
graduateinstitute.ch/communications/news/health-care-conflict-zones-still-under-attack.

"Health Equity Considerations and Racial and Ethnic Minority Groups." Centers for Disease Control
and Prevention, Centers for Disease Control and Prevention,
www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html.

"How Can We Prevent a Pandemic Like COVID-19 From Happening Again?" Global Citizen, www.globalcitizen.org/en/content/how-prevent-covid-19-pandemic-happening-again/.

"Outbreak: 10 of the Worst Pandemics in History By Staff." Outbreak: 10 of the Worst Pandemics in History, www.mphonline.org/worst-pandemics-in-history/?__cf_chl_captcha_tk__=f3c621cf117907a6ef 40999cf580bb37f3e933ce-1597505295-0-AYoDPnTMBc6peC-EoQ6j7JSahMs09SR-GLSWrz8 Pf_TtK9RTmT3Rfhm1oJhfj6Uy5gibxItjWO7JBiydxdteJl1rUm_DhKXaDFA0u-lh-w609iTWXwcE 8qWCXv2OIUstuOtZeNMQH7en9cSgzspaPP3T1Cryz_GMjBfoTu-rau97hsWxlM38RWmR5Bl WdYvzp5N4emdT8hCyHA0vzgcp6vN0lzV2ZHFdr_ya9_IMNjpu1hBLxfeiajwu1TYgDoBboNsgT EWP2U6sOuC1yuBqgeLTr6shC8uVb2_vss9pMo8iSCE2Eo1diu69fYpRwuwp7fs2hOOk9ooiK2 UJmmRMbU_H2H2kqlxikahDUQmi-82orNJ4rSUGXi25LyUbogoaQpFwkica_Y8-n_JgtnHqfnzT W1jHjd-KsAesGDieJbSy-PLbmUJTakZPMuLr52uIeuaCd8hC_oS5tfoYn3elxWZ5Ze-ieJy2FHg0 Oi1e_exeYGzMh0n8kgxIa8m-qmKI11h8SDqGztsn7qvNXZrCpi7xiJLf28y9cec53DpQDttd0Obhl -OXXU-SOMcuA1PAzRaCe2l7ao2gmqw_kcU7wWM.

"The Biggest Issues Facing Healthcare Today." Managed Healthcare Executive, www.managedhealthcareexecutive.com/view/biggest-issues-facing-healthcare-today.

"Timeline of WHO's Response to COVID-19." World Health Organization, World Health Organization, www.who.int/news-room/detail/29-06-2020-covidtimeline.

"What Is a Pandemic?" World Health Organization, World Health Organization, 12 Mar. 2020, www.who.int/csr/disease/swineflu/frequently_asked_questions/pandemic/en/.

"WHO African Region Communicable Diseases Cluster Annual Report 2016." World Health Organization, World Health Organization, www.afro.who.int/publications/who-african-region-communicable-diseases-cluster-annual-repor t-2016.

"WHO in Emergencies." World Health Organization, World Health Organization, 30 July 2020, www.who.int/emergencies/en/.