# Pandemic Ethics

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## Overview of Pandemic Ethics

While many bioethical case studies pertain to interesting special cases or morally ambiguous situations, some applications of bioethics have the ability to affect the lives of incredibly large groups of people. As depicted in many dramatic movie plots, pandemics can be devastating, and have been historically when they have occurred; thus, nations prepare extensive networks for the prevention and treatment of pandemic disease. However, there are a multitude of ethical considerations to be made when examining the preparation for and reaction against pandemics. This study will analyze the most important ethical issues associated with preparation for pandemics and prevention through vaccines data sharing, and reactionary measures such as quarantine, isolation, and emergency medical treatments. Together, these discussions provide an extensive look at the ethical considerations for pandemics and how they are treated worldwide. The focus will be to explore the ethics of how pandemics are treated around the globe and what kind of questions should be asked when dealing with the preparation and implementation of pandemic reaction plans and how pandemics can be best treated ethically. Pandemics are hard to plan for and no one is fully prepared for a pandemic outbreak, and so the ethics behind pandemics can be both ambiguous and complicated, although this study will attempt to unpack the possible issues and examine multiple perspectives.

## How Countries Prepare for Pandemics

Preparation for the eventuality of a pandemic event is a difficult thing to plan for, but it is an event that countries around the world attempt to prepare for in various ways. Take, for instance, the case study of Lassa Fever. Lassa Fever is a viral hemorrhagic disease that comes in the form of a fever. The disease appears to have originated in Nigeria in 1969 and is caused by rodents that transfer the disease to humans. The disease was first described in Nigeria but the Fever is endemic to the surrounding areas of Sierra Leone, West Africa, Guinea, and Liberia. The Fever appears seasonally by the end of the rainy season or beginning of the dry season, and it affects 300,000 to 500,000 people each year with about 5,000 deaths. So how do the people of 1 Nigeria and the surrounding areas prepare for this infectious disease every year? What is done to contain and limit the spread of this deadly fever that affects hundreds of thousands of people? The answer can be found in the ways that countries prepare for the event of an epidemic or pandemic.

Preparing for a pandemic is a lengthy and arduous task that takes a lot of work and effort to ensure that everything runs smoothly and will work correctly in the event that a pandemic actually occurs. The trouble is ensuring that a country can implement a timely and effective coordinated outbreak response. This is a difficult task to accomplish because pandemics cannot be predicted, there is no easy way to know what will occur during a pandemic or when one will pop up. These events often occur suddenly and if countries do not act quickly enough they will spread fast and get out of hand. However, there are ways of preparing for such a crisis in order to better implement plans of defense. One of the ways that pandemics can be prepared for is the use of surveillance. Constant 2 surveillance of the human and animal populations is used to keep a lookout for signs of a potential outbreak of a disease. Surveillance is useful because it helps to keep an eye out for any signs that humans or animals are experiencing odd symptoms that could lead to the spread of an infectious disease . Some people might argue that the use of surveillance is against people’s right 3 to privacy, but in the event of a pandemic it is necessary to check the safety and health of everyone within a population to keep the disease from spreading further. Surveillance is important because it can catch the signs of disease early before they get out of hand and hopefully keep them from spreading further. In the case of the Lassa Fever, it is necessary to have detailed rodent control and avoidance. Since the Lassa Fever is transferred from rodents to 4 people, it is important that Nigeria and surrounding areas have well put together rodent control and avoidance to keep rodents from spreading the disease to people. Ways to control rodent population is to have proper food storage as well as to keep the house clean. This includes

trapping and killing any rodents found in the house to prevent rodent to human transmission.
Proper disposal of the rodents is also important to keep the diseased bodies from spreading the fever through other sources as well as not using the rodents as a food source. These are some of the best ways to maintain the safety of the population and prevent it from getting the disease and spreading it through people. By stopping the disease at its source, we can ensure that fewer people will become affected by the rodents and the fever.

However, it is not always possible to keep away from rodents, even if the houses are well cleaned and food storage is well done. Rodents still find ways into houses, they continue to cause trouble. In the case that people are infected by the rodents then it is also necessary to have trained medical staff and hospital programs preparing for the event of an outbreak. Hospitals 5 around the world should have programs put in place to have people preparing for the chance of a pandemic to occur at any time. It is useful to have people on hand as well who already have 6 experience with outbreaks and are able to help limit the exposure of the disease and contain it before it gets too strong and spreads too far.
The last of the most important ways to prepare for the event of a pandemic is the use of communication among public officials as well as appropriately informing the public. 7 Communication is key in the event that a pandemic occurs because public officials will need to know what is happening in order to keep the country from chaos. Communication among public officials will make sure that preparation plans are enacted correctly so that the disease is handled correctly and hopefully contained quickly before it spreads or kills too many people. Along with this comes the obligation to inform the population of where the disease is spreading to. It is necessary to appropriately inform the populace in a way that does not produce panic but that also gives them the correct information that will help keep them safe and decrease their chances of becoming infected and spreading the sickness further. The populace should know that a disease 8 is spreading, but how much information should the population be given in the case of a pandemic? I argue that the populace should be given just enough information to understand what disease is spreading, how it is spreading, and what symptoms to look out for. If the populace is given too much information, it could lead to panic and chaos, which would only lead to more problems during the pandemic, such as disorganization and miscommunication, as well as possibly spread the disease more rapidly. The preparation for a pandemic is difficult, but there are ways in which a country can prepare and plan for a pandemic. These methods of preparation can help to slow the spread of the disease as well as to improve conditions during a pandemic.
A method of preventing pandemics altogether is through the use of vaccinations.
Vaccinations can help to stop diseases before they occur. They defend against the diseases and keep them from occurring in a population. There have been many diseases that have been eradicated by the use of vaccines. Diseases such as Polio no longer occur because enough of the population is vaccinated against the disease that it cannot spread effectively. This idea is called herd immunity, which states that if enough of the population is vaccinated, the disease cannot be spread to anyone that has been vaccinated against the disease. The population becomes resistant to the spread of the disease because enough of the population had been vaccinated. But what happens when not enough people are vaccinated to keep the disease from spreading around? This is becoming more prevalent in the past decade because of the rise of the anti-vaccination movement. More people are believing that vaccines do not help to protect from diseases and that, in fact, these vaccines are causing other diseases and problems, such as autism. This movement is causing more problems for the population, because they are beginning to spread diseases that have been gone for decades because they will not be vaccinated or have their children vaccinated against dangerous diseases. These people believe that vaccines cause other problems, even though there is no scientific backing that says that vaccines cause autism. The movement has become more popular and prevalent and is thus causing more problems for the rest of the population because they are spreading deadly diseases that could easily be contained or resisted if enough people were vaccinated.

**Influencing the Masses**

So how do we encourage people to vaccinate? Countries around the world have come up with different ways in which to encourage people to vaccinate. Some of the ideas that will help encourage the use of vaccinations is the idea of word-of-mouth through social groups and doctor recommendations. If people in social groups have someone who is vaccinating then they are more likely themselves to get vaccinated. It's the idea of peer or social pressure that will ensure

that people will vaccinate. The other idea is that if doctors recommend vaccines then people will get vaccinated. People will be more likely to believe what a medical provider advises because that is what they are meant to do, so people will vaccinate based on what a doctor recommends. But it is not always the case that a person will vaccinate based on these social or medical cues. Some countries have come up with interesting ways to get people to vaccinate. In Italy, parents are required to have their kids vaccinated. If parents do not comply then they will be fined for not vaccinating their kids. It is an incentive to vaccinate kids in order to avoid a fine in Italy. In 9 the United States, vaccines are mandated for all kids that going to schools, nurseries, etc. Kids 10 who are not vaccinated cannot be allowed into school or nurseries, this provides a reason for parents to get their kids vaccinated. In Australia the government has a different way to get people to vaccinate, using financial incentives to entice people to get vaccines.

The Australian government has enacted a new policy in which people of lower income can get additional family tax rebates by ensuring that their children are up to date with their vaccines. This gives the Australian families a good reason to keep their children up to date on vaccines as they can get money back for doing so. Finally, in Canada the government has given better access to vaccinations to the people of the country. With better access to the vaccines 12 that are needed this allows more people to go in to get their vaccines. Before it was more difficult because fewer people had access to vaccinations, so this allows more people to vaccinate within Canada. Encouraging people to get vaccinations is one way in which the the governments of the world can help ensure that pandemics do not occur as vaccines will help to stop the spread of these deadly diseases before they reach pandemic status.

Discussions about pandemic preparation are essential to the ethical considerations for pandemics, but equally important is the examination of how one reacts to a pandemic crisis. Within this section is a discussion of medical treatment during a crisis as well the ethics of quarantine and isolation, particularly on a massive scale. This last idea is difficult to research, since there are very few examples of national quarantines, and government pandemic plans are typically vague concerning the issue of quarantine; therefore, much of that discussion will be based in ethical discussion and hypothetical scenarios, but this discussion can be supported by several case studies of epidemics and pandemics which reveal practical and ethical problems. This paper argues that while many considerations, both pragmatic and ethical, must be made, it is ethical to use risky medical treatments when necessary, and quarantine and isolation, which often require certain rights violations, are ethical and necessary to preventing, containing, and stopping a pandemic.

One of the most noticeable and well-reported epidemics in recent history is the ebola epidemic. To provide a brief overview of the virus itself, ebola is an RNA virus which can cause viral hemorrhagic fever syndrome. It can be transmitted through bodily fluids such as blood, 13 feces, and vomit, and emerges with symptoms including fever, severe headache, hemorrhaging, 14 and vomiting. Though it is a rare, ebola is often deadly, making it a serious concern wherever it is able to spread quickly and where prevention and treatment are difficult. And both of these 15 requirements for concern are achieved where ebola is most common: West Africa. Hygiene and cleanliness are serious concerns in affected countries in West Africa, and even more concerning is the growing lack of trust for government organizations in the region, as well as cultural practices such as the physical cleaning of corpses that increase the chance of exposure to the disease. These practical concerns make the isolation and treatment of the virus extremely 16 difficult.

**The Ethics behind Pandemic Control**

There are numerous ethical concerns with this case study which can be applied to any other nation. One particular concern voiced about the Ebola outbreak is the use of experimental treatments. There is still no cure for Ebola, and as of 2014, only experimental treatments were available. In particular, a treatment known as “Z Mapp” was used with mixed success. Several doctors were given the treatment and survived, while some others did not. When one doctor, Sheikh Umar Khan, was infected, the team deliberated through the night and decided not to risk the treatment, and the doctor soon died. When a treatment is yet untested, its use on humans risks dangerous side effects or even death. The World Health Organization argues that unproven treatments can be provided ethically as long as there is “transparency about all aspects of care, informed consent, freedom of choice, confidentiality, respect for the person, preservation of dignity, and involvement of the community.” If these prerequisites are met, then experimental 18

treatments are absolutely ethical. If the patient is unconscious, then the situation might change. The patient cannot choose the treatment, and cannot understand the risks. In this case, I would still argue it is ethical if no other options are available, and the patient is treated with respect, and no information is withheld from them if they recover. The priority when dealing with any outbreak should be saving lives, and as many as possible, and if an experimental treatment can save lives, it should be used.

Another ethical concern is prioritization. If there are limited resources, then health care providers might be forced to choose between patients. If neither of the patients are doctors or other health care providers, then whichever patient is most likely to recover, or is the most likely to benefit from the treatment ought to be treated. If one of the patients is, however, a doctor, then other concerns develop. If the doctor dies, you lose an essential resource, and so prioritizing the other patient might lead to a decrease in professionals available to save lives in the future. It also acts as a deterrent for incoming volunteers. If volunteers know that if they are infected, they are put at the back of a long line, then it is less likely that they will enlist to help. On the other hand, the doctor is not worth any more as a human being than the African patient. To choose one patient over another requires a sufficient reason to consider one life more valuable than another, or to consider it more likely a certain individual will survive.

While Ebola is difficult to transmit, as it is not airborne, and so the dangers of its arrival into the U.S. was perhaps exaggerated; however, it serves as a stepping stone into the next ethical issue. Were Ebola more contagious but just as deadly, its transmission into the U.S. could be devastating, particularly if the government failed to contain the virus. Therefore, in order to have a proper system in place to prevent catastrophe, there must be a discussion of quarantine.

Quarantine is often confused with isolation, which means the containment of infected individuals, and the prevention of their interaction with healthy individuals. Quarantine is the separation of exposed individuals from those who have not been exposed. Isolation might be 19 considered common sense, as most would likely agree that it is unethical to knowingly expose healthy individuals to an infected person unnecessarily. Quarantine, on the other hand, is more controversial.

Individuals who are not necessarily infected are contained and their movement and rights are restricted in the interest of protecting others who have not been exposed; and so quarantine is a topic ripe for ethical discussion. In particular, this paper is concerned with large scale pandemics, which reveal the problems of large-scale quarantine, such as the quarantine of an entire U.S. state or nation.

One of the most recent examples of an actual pandemic was the H1N1 outbreak with confirmed infections in 74 countries. The approximate death count was 16,000, though this number likely underestimates the total number of deaths from the virus. Influenza is a perfect example for a discussion of pandemic risk, because influenza already kills thousands every year from seasonal mutations of the virus. Many are made immune through vaccinations, but the speed of mutation makes permanent immunity nearly if not absolutely impossible. H1N1 was a new strain with no popular immunity amongst the global population. Thus, it was able to 20 devastate. Even so, a new strain of influenza could develop which would be even more deadly, and methods of containment would be necessary. Before examining the World Health Organization's influenza preparation plan, and the problems contained within, it is necessary to examine the fundamental ethical questions associated with quarantine.

**Compromising Rights for Safety**

The first concern is the violation of individual rights. Quarantine restricts an individual or group's ability to move about freely, and eliminates physical interaction with any non-quarantined individuals. If someone does not show any symptoms, and their infection is unconfirmed, their containment might be called unnecessary and unethical, if it is agreed that violating one's individual rights without good reason is unethical. It is for this reason that Ross Upshur in an article in the AMA Journal of Ethics recommends voluntary quarantine first before making it compulsory. This allows individuals to choose to give up their right to move about 21 freely rather than having it forcibly taken away, particularly if it is later discovered that they were never infected.

I argue that this argument is unconvincing, since it is only an effort to stave off compulsory quarantine. If the intention would be to quarantine a group if they refuse to volunteer, then the quarantine is entirely compulsory. Asking for volunteers before forcing them

all to do something does not make it any less mandatory. That argument uses a technicality to justify the action in question. It should be argued, rather, that compulsory quarantine is itself justified assuming that it is necessary to stopping the spread of a serious infection. Here, Upshur's article mentions an important detail: quarantine is not justifiable if the infection cannot be spread from person to person. An example is anthrax. It can infect someone, but one person 22 cannot spread it to others, so quarantine is entirely unnecessary and therefore unjustifiable. Quarantine must be necessary to be justifiable. Quarantining risks containing healthy individuals with unhealthy ones, and violating the rights of people thought to be exposed, but were not in fact at risk of infection until the quarantine. But it is the need to protect the greater human population that makes these risks palatable, and obeying certain ethical guidelines can make quarantine ethical, such as transparency, ensuring that the public is aware of the reasons for the quarantine, and what Upshur labels reciprocity. When a person is forced to be quarantined by the state, they should be repaid for their sacrifice, and they should not be allowed to suffer penalty for their obligation to the state.

With these considerations in mind, it is possible to examine the question of mass scale quarantine. The CDC's influenza pandemic plan discusses very little of quarantine or even isolation. The plan includes working with the WHO and other nations, if necessary, to implement a means of containing the infection and preventing further "person-to-person transmission." In 23 a developing nation, this is nearly impossible, as shown through the Ebola case study in West Africa. Even in a developed nation like the United States, implementing a massive quarantine on several U.S. states would be extremely difficult. However, I argue that there should be a strict plan for the quarantining of entire states, enforced by the federal government, if a dangerous and possibly deadly virus were to break out and risk a pandemic. If a virus is present and well-spread within a nation, it is also necessary to shut down all connected borders until the infection is contained or eliminated. The goal in a pandemic is to save as many people as possible while containing the infection as effectively as possible, and shutting down borders is one of the best ways of stopping a virus' spread throughout the world. It is not a perfect system, as it is possible to cross the borders illegally, and it is also possible that the quarantine could be implemented too late to stop the spread. But assuming that the previous ethical criteria are met, such as transparency, reciprocity, and only doing what is absolutely necessary to stopping the spread of the infection, it is necessary to do all that is possible to bring about an effective quarantine. In fact, there is an additional method of quarantine that makes it possibly more effective and more ethical: stratified quarantine.

**Proposed Systems**

In this system, there would be multiple quarantines within a single region. For example, if City X within Florida has confirmed cases of a deadly strand of influenza which has already killed thousands of people elsewhere in the world, then it might be necessary to close all airports in Florida and shut down the borders. But to prevent people from City X from infecting all other quarantined people in Florida, City X would be quarantined as well. This system would not work if the entire United States was quarantined and every city needed its own quarantine, as the manpower required would be far too great. It is possible, however, to create such a system of stratified quarantine if one can catch the infection early and implement the plan as quickly as possible. This makes quarantine more effective by creating multiple lines of defense, and it makes it more ethically justifiable, as the borders will be closed to prevent the infection of other states, but the confirmed infected regions of that state would be isolated from the unconfirmed regions. That way, there is a lesser chance of healthy people becoming infected and dying specifically because the quarantine prevents their escape.

Pandemics are complicated dilemmas, as there is much to consider with preparation, prevention, and reaction. The variability of pandemics make such planning extremely difficult, and there is no chance of anticipating all possibilities and effectively counteracting them. However, it is an ethical necessity that nations and governments prepare for pandemics and work to prevent them for the sake of human life everywhere. The risks of catastrophe make a lack of preparedness dangerous and deeply unethical, considering the sheer damage that a single pandemic can create. It is also necessary to consider certain ethical guidelines when acting to contain a pandemic-level crisis, which can both work to create an effective method of saving lives and containing the infection through maintaining the people's trust and cooperation, as well as avoiding ethical violations that are both wrong in themselves and less likely to be effective if

people fail to obey the necessary restrictions and laws. All of the given considerations only work at the tip of the iceberg that is pandemic ethics, but they provide a survey of some of the most important ethical concerns relating to the preparation for, prevention of, and reaction against deadly and dangerous pandemics.

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