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Could the Global Health Secuirty Agenda Actually Protect Americans From Emerging Diseases?

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Could the Global Health Security Agenda Actually Protect Americans From Emerging Diseases?

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"There are no dangerous thoughts; thinking itself is dangerous."
Hannah Arendt

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Abstract

This senior project aims to challenge the traditional thinking of public health. My inspiration from this topic simply comes from my interest in bettering global health for all people. With an ever shifting political and social environment, this paper strives to seek the most successful strategies in combating infectious diseases. By using three prominent and global infectious diseases, Ebola, Zika and Influenza, this paper analyzes the failures and successes of international support and response teams. This paper also uses the Global Health Security Agenda (GHSA) as a foundation to analyze and support the claim that successful global health interventions are not successful by framing diseases as if they are security threats.

Building from existing literature, this paper strives to answer the question, *"Could the Global Health Security Agenda Protect Americans from Emerging Diseases?"* The relationship between health and security is an ever complex and complicated topic, which involves all sectors of American policy. In order to further support this topic, and strive to seek better solutions for effective infectious disease response, there are key recommendations for the future of public health.

In all cases, it was found that the Global Health Security Agenda (GHSA) and securitizing the complicated issues of public health are expected to not be successful looking towards the future of public health. In order to fully support and positively affect the future of public health, governments should promote strong domestic health care systems, anti-corrupt administrations, women's empowerment and literacy, local health initiatives and treat every disease intervention uniquely. International health workers and governments should also be aware and carefully face the obstacles of cultural differences, widespread fear, and the historical, political environments.

By the end of this project, I hope the reader finds a strong and convincing argument explaining why the Global Health Security Agenda will not protect Americans, or help combat global emerging infectious diseases. While this project only skims the top of the debate of intertwining of health and security, it does provide a basic understanding for those looking to understand the complicated questions and answers of global health.

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Acronyms and Abbreviations

GHSA: Global Health Security Agenda

WHO: World Health Organization

STD: Sexually Transmitted Diseases

H7N9: A bird flu strain of the species Influenza virus A (avian influenza virus/ bird flu)

SARS: Severe Acute Respiratory Syndrome

CDC: Center for Disease Control

PEPFAR: President's Emergency Plan for AIDS Relief

JEE: Joint External Evaluation

BMGF: Bill and Melinda Gates Foundation

EOC: Emergency Operations Center

HIV: Human Immunodeficiency Virus

NIC: National Intelligence Council

PAHO: Pan American Health Organization

H1N1: Hemagglutinin Type 1 and Neuraminidase Type 1 (influenza strain; aka swine flu)

IHR: International Health Regulations

Introduction

Since 2014, an initiative named the Global Health Security Agenda (GHSA) has targeted infectious disease prevention through a series of capacity building projects. So far, around the world, people are still affected by communicable diseases, and those who suffer the most are often women, children, and impoverished communities. Three infectious diseases, Ebola, Zika and Influenza, have received ample attention and have affected large amounts of people in the last ten years. It is because of this, and a shift in American security theory, that the United States treats health conflicts as a security threat. This is extremely problematic. This paper provides a historical timeline about health and security, and also gives the reader insight on the future of infectious diseases. One by one, each chapter will go through the history of how these diseases are prevented and treated, using the Global Health Security Agenda as a foundation, and then it will conclude with a summary of findings and analyzes. This research paper will use the three infectious diseases, Ebola, Zika, and Influenza as supporting evidence to claim why the Global Health Security Agenda will not protect Americans from communicable diseases, or prevent future epidemics in developing nations. But first, analyzing the past fifty or so years is necessary to understand the current health environment.

To understand the future of public health prevention, it is extremely necessary to comprehend the past failures and successes of how Americans handled health. For more than thirty years, from the mid 1940s onwards, medical science was extremely successful. Together doctors, scientists and health workers, in combination with clinical science, drug discovery, and technology inventions, conquered diseases both infectious and noncommunicable. But as time

went on, with any golden age, America realized that eventually the world would again be disease ridden.

The practice of modern medicine began long before the 1800s, however in the 1830s, the use of modern medicine was documented when a group of physicians came to realize that their techniques, like leaching and bleeding, to slow, treat and cure diseases were actually not very effective for individual or communal health (Le Fanu, 1999, p. 4). From then on, doctors focused on *diagnosing* specific illnesses, so that they could recommend and prescribe the correct, individual treatments. Using blood and urine samples, along with the rise of individualized diagnoses, doctors grew to be extremely talented at categorizing each illness. Overtime the progression of disease changed very little. Infectious diseases, normally affected the young, and the old suffered from chronic diseases which were not yet discovered how to cure. But besides a few ailing conditions, America's overall health seemed to be improving annually. Infant mortality decreased, lifespan increased and infectious diseases were not necessarily their major cause for concern (Le Fanu, 1999, p. 4)

Humanity’s use of science has proved itself over and over to be a source of limitless mobilization and a fundamental aspect of economic prosperity. The age of optimism, which gave name to a long span of medical advancements, began around the time of the Manhattan Project, and in the years following, Watson would discover the structure of DNA, uncovering the mystery of genetics and Yuri Gagarin’s successful orbit around the moon would launch the Space Race (Le Fanu, 1999, p.189). One after another, these historical scientific events continued for the next few decades, paving the path for more successful medical advancements.

The discoveries of medicines like penicillin and cortisone, technologies like the pump, and treatments like open heart surgery were forged by the necessities of war time. After the rediscovery of penicillin in 1941 by Howard Florey, allied soldiers as early as D-Day in 1944 were treated with the medicine, presumably influencing the outcome of the war. (Nurse Groups, 2005) Other scientists like Phillip Hench's, who discovered that bullets could be removed from a soldier, without killing the patient, encouraged other surgeons to perform difficult operations (Nurse Groups, 2005). Therapeutic discoveries changed the daily practice of modern medicine, but more importantly it was supposed to rid the world of diseases. Although these treatments were life changing for a lot of the world, they would eventually contributed to the ignorance for how important it is to promote a robust public health system, rather than just concentrating on specific disease target interventions or relying on pills and technology inventions. It is virtually impossible for an entire scale of diseases to be silenced through one invention.

Around the time penicillin was discovered, America thought they beat the fight against diseases. Penicillin, which was thought to be the most important medical discovery, curing not only infections like pneumonia, but also chronic diseases like arthritis. The use of penicillin allowed doctors to shift their attention to chronic illness, and away from infectious diseases. America was so confident in the future of infectious diseases, that government officials, scientists and doctors publicly promised that, "[i]t [was] time to close the books on infectious diseases, declare the war against pestilence won, and shift national resources to such chronic problems such as cancer and heart disease," (Specter, 2014). Steering away from infectious diseases, defunding projects, and increasing individualized diagnoses made health workers and systems turn away from promoting basic healthcare. With the idea that antibiotics and medicine

could cure infections with a pill, attention completely shifted, and America almost totally forgot about the importance of health for each individual. Although noncommunicable diseases should still be considered a global issue, the attention lost on infections created a snowball effect in the decline of modern public health systems. The age of optimism tricked scientists, doctors, and governments in believing that all diseases could be cured by only pills, vaccines, and disease specific interventions. The world would eventually come to realize that a robust public health system, trust between the people and government, gender equality, basic sanitation, and education are just some of the basics that prove to protect nations against disease.

But, after the discovery of antibiotics and war medicines in the 1940s, nearly all doctors, scientists and federal health workers believed that curative medicines would erase the need of prevention. In the 1950s and 60s, the international community was extremely confident in its ability to suppress any emerging diseases and curative medicines were so successful during this period, that clinicians "…shrugged off bacterial diseases… such as Staphylococcus and tuberculosis… and had.. deftly moved [these diseases] from the 'extremely dangerous' column to that of 'easily managed minor infections.' Even the world's leading institutions, like the World Health Organization, (WHO), were so confident in organochlorines, chemicals that killed mosquitos, that it even declared malaria a minor global health issue" (Garrett, 1994, p. 31).

It took years and an enormous amount of money for the health community to realize that these advancements would not work as long term solutions. Scientists started to realize that drugs like penicillin and technological advances, would not be able to rid the world of killer diseases, and that people would again die of curable diseases. But as will be explained, believing that the solution is only in medicines and scientific advancements is problematic. The transition

from America's age of optimism to the introduction of emerging diseases created a vast global fear of diseases, which still remains today.

Although the age of optimism contributed to many successful post war treatments, it really wasn't treating the diseases that contributed to the highest mortalities. And this is still true today. A lot of the high profile diseases are often not the most deadly, but rather more people die of preventable diseases in developing nations.

During the age of optimism, the amount of newly developed drugs was running about seventy new discoveries a year, until about 1971, when it began to decrease (Le Fanu, 1999, p. 246). During the beginning, health workers and doctors believed that these inventions, like penicillin and vaccines, would be the long term solution to eradicate disease from both rich and poor countries. But soon, they would run into more obstacles. These realizations were important for scientists to understand what contributed to the end of the age of optimism.

This entire era reveals how important it is to create a holistic, and stable public health system. Not long after the end of the age of optimism, the pharmaceutical companies that were hailed as heroes began to run into trouble. The thalidomide incident, which stunted the pharmaceutical companies progress towards mass production appeared after pregnant women, who took sleeping medications, gave birth to children without limbs (Fintel, Samaras, & Carias, 2009). This story was a symbol of how the pharmaceutical's massive production of drugs, was not regulated as well as it should have been, and thus was not a long term solution for disease prevention and treatment. In the years following, drugs would have to be tested on animals for toxicity, but not only would this process become longer, but also more expensive. This means that doctors wouldn't be able to rely on invented pills, or vaccines to eradicate diseases as

quickly as they hoped. Eventually, pharmaceutical companies grew tired of the failures to find cures for diseases like cancer, so they had to turn to lifestyle disease medications in hopes to make more money. A lot of pharmaceutical companies blamed strict regulations and the low investments of research and drug innovation on the little amount of new discoveries.

Throughout the 1980s, medical technologies were important for diagnosing patients. While numbers of diagnosing technologies were used in the daily life of a doctor, it seemed like the traditional practices of medicine had declined. The increase of technologies had similar consequences that the mass drug production had. With all of these new technologies, doctors in all different fields believed that there was a technical answer to every disease, and their daily practices relied heavily on drugs and inventions. Which in turn, completely shifted their attention towards more prevailing diseases.

The short lived age of optimism symbolized a point in scientific history where faults can be learned from. It is not to say that there were not any more innovations made after the 1970s. Minimal invasive surgeries would be improved, and well as improvements for breast and colon cancer survival rates (Le Fanu, 1999, p.266). But without improved medical practices, and support for basic health systems, along with the political and social obstacles that stand in the way, there would be more diseases to come. As time progressed, so did diseases, and suddenly America fell susceptible to diseases that penicillin was supposed to cure, like sexually transmitted diseases (STDs).

Thanks to the invention of antibiotics treatments for venereal diseases, it seemed like there were zero emerging infections that could scare America. Before the availability of antibiotics, over 13,000 Americans died annually of syphilis, but immediately after, there were

less than 6,000 deaths each year (Garrett, 1994, p. 264). Most Americans and Westerners were healthy. Non communicable diseases, car accidents, suicides and old age accounted for almost 100% of all deaths (Garrett, 1994, p. 264). It seemed like the right decision to decrease budgets and education in sexually transmitted diseases prevention, since medications took care of treatment, even without doctor's help. America had its back towards an issue that was approaching quickly. One by one, other STDs, like genital warts, herpes, pelvic inflammatory diseases and chlamydia alarmed health officials of the dangers of STDs, specifically in developing nations. Even with the discovery of therapeutic medicines, America would fall susceptible to these diseases.

During the same time, when infectious diseases were again emerging in the United States, they were also rising at a concerning rate in the developing world, specifically Africa. Recently plagued with colonialism, slavery, and war, African countries were now corrupt, in debt, suffering with some of the worst infectious diseases, and yet spending money on domestic military operations and warfare. For example, the war between Tanzania and Uganda in 1978, lasting only a short five month, managed to ruin both of the economies and catalyze a complete shutdown of health infrastructures, and habit some of the worst vector borne illnesses (Garrett, 1994, p.210). With booming populations and high debt accumulation, the government's looked for ways to incorporate their economies in the global market. Countries with natural resource abundance sold to the West. While there was foreign aid to attempt to build African economies, it had no effect on the health of the countries. Disease prevention might as well have been the last priority in countries recently emerging from colonialism.

Large projects to build up the economy, and to protect the governments seemed like the best idea to attempt at engaging in the global market. But, these large scale projects that built dams, airports and container shipping ports had nothing to do with improving health of individuals (Garrett, 1994, p. 199). In the 60s and 70s, along with infrastructure and military projects, governments were focused towards the production of agriculture for exportation, hence most of the money was not towards healthcare (Garrett, 1994, p. 200). Most foreign attention was focused on food production and availability, especially as countries fell to famine. With the idea that modernization was the key to all Africa's issues, post WWII actors worked to "[pave] towards free market capitalist industrialism… to raise the standards of life and health of a nation's people"(Garrett, 1994, p. 200). Thus, most of investments in Africa were devoted to mining, manufacturing and petroleum. But this would further work to undermine the importance of a strong public health system, especially from a nation coming out of political instability.

Along with the downward spiral of developing nations and the increase of infectious diseases, several historians and intellectuals had dove into the question of rising infectious diseases. They soon began to realize that eliminating disease was also political and social, and does not *just* come from developing new medicines. But even that realization didn't seem to stick for America.

To make matters worse, the first bioterrorism event occurred in America in 1981. In the small town of Dalles, a religious cult called the Rajneeshees poisoned with salmonella, and although it wasn't deadly, it still reminded how vulnerable America is to both natural and unnatural diseases (Miller, 2001, p. 19). Overall, over a thousand people had reported symptoms, and 751 people were confirmed to have salmonella (Miller, 2001, p. 19). The cult's medical

officer, Ma Anand Puja, also nicknamed Nurse Mengele, used salmonella strains, obtained from the germ bank, to incapacitate voters in the county. Officials later found out that Puja not only tempered with salmonella, but she repeatedly tried to culture the AIDS virus to use as her next weapon (Miller, 2001, p. 19).

Long before the salmonella incident, America and the Soviet Union were already experts at transforming germs into weapons. Even before modern warfare, warriors used to infect their arrowheads with manure and dead corpses, throw dead bodies over city walls, and give blankets infected with smallpox to native Americans (Miller, 2001, p.45)

At this time, America not only had to worry about natural diseases, but unnatural diseases that could potentially harm America. The Soviet Union and America had long standing battle to see who could develop biological warfare better and faster than the other. But it wasn't just the Soviets that America worried about. Other nations had jumped on the bandwagon and started producing biological weapons. In order to be extremely prepared, America tested experiments on proxy cities to determine how to spread anthrax through Soviet cities. By this, America developed weapons that could induce encephalitis, yellow fever, and over fifty other viruses (Miller, 2001, p. 46).

The concern of bioterror threats mostly came from a heightened fear and precaution, "[i]n the early to mid 1990s,... following the break-up of the Soviet Union when political and economic instability in the region, accompanied by growing lawlessness and the rise of organized criminal groups, raised fears that materials were being sold to terrorist organizations and 'rogue states' such as Iraq, Iran, Libya, Syria, Cuba, and North Korea" (Mcinnes & Kelly, 2012). Before the Rajaneesh incident, there really hadn't been any large scale modern germ

warfare against America. But domestically, the United States had a lot more to worry about then the possibility of a germs.

Back home, the age of optimism was over, and infectious diseases were proving more resistant than originally was thought. The diseases they thought could be cured were becoming antibiotic resistant, and now America worried about a potential bioterrorism attack. But, instead of educating and incentivizing doctors and scientists to work on infectious diseases prevention, " … the Epidemic Intelligence Service, … trained thousands of diseases detectives, [while] the [other] billions of federal dollars were being spent on biology tended to go into research aimed at cancer and the illness of old age, such as heart disease" (Alcabes, 2009, p. 90).

The American government concentrated on immunizing the nation as permanent protection for international disease threats. President Bush also announced they would be immunizing everyone for smallpox, even though the last outbreak was in 1949 (Alcabes, 2009, p. 119). From that, George Bush adopted the BioSHield Project, "which was responsible for the smallpox vaccination, but also allocated 10 billion dollars to bioterrorism prevention and biosecurity during the early 2000s" (Alcabes, 2009, p.184). Preparing for a bioterror attack came from agents of fear. Some argue that it is essentially worthless and too expensive to prepare for events that might not even happen, saying that, "there's nothing to be gained by trying to prepare for the unlikely and unforeseeable" (Alcabes, 2009, p.186). During the time, the government was emerging from the war on terrorism, so covering all their grounds and preparing for something that might happen was better than not preparing at all. The problem was that there were plenty of already emerged diseases that needed to be treated, domestically and internationally, but were not being addressed.

Media played a significant part of this issue. Since the war on terror was so politicized and widely known, part of stopping diseases came from trying to control public fear. But it becomes difficult asking health officials to predict what next disease will plague America. And in the off case that a bioterror weapon was used on a large scale in the United States, those health officials would be blamed if nothing was done to be prepared. Part of their job is to, …"lessen anxiety. But [they] will not have done anything to make us safer" (Alcabes, 2009, p. 187). But you can't blame them… how is it possible to fix a problem even before it occurs? But then again, in a society plagued by fear, nobody could tell a health official it was useless to not prepare for a biological war.

The bioterror era contributed to a society concentrated on specific cause and effect correlations, and "almost always we presume that a epidemic resulted because of the mismanagement of small risks" (Alcabes, 2009, p. 220). And while Bioterrorism was sucking up all the funds for health promotion, real epidemics, like MRSA, did not carry enough popularity to receive ample attention or money (Alcabes, 2009, p.226).

The twenty first century proved to be very hard to elevate and mobilize global public health. The wealth gap increased enormously, making it even more difficult for developing nations and impoverished Americans to have access to affordable medication and treatment. Amartya Sen, an economist and public health expert showed the correlation between, "the wealth of nations, and the degree of fairness with which that wealth was distributed within nations determined country's infant mortality rates"(Garrett, 2000, p. 548). But it wasn't even just in developing nations where infectious and noncommunicable diseases soared. At the same time, the private sector of pharmaceutical companies saw no incentive or profit in producing drugs for

diseases which largely affected the poor. Just like pharmaceutical companies, governments found health systems of lesser importance in a world of competitive economic prosperity. But, with the twenty first century challenges, public health had to be a national priority because it was hanging on by a string.

Public health is not a one way street. It requires an ample amount of collaboration, assistance and trust between nations, governments, health workers and citizens. People rely on the government to protect them against epidemics, pandemics or even just small outbreaks. And in return, the citizens are supposed to trust the guidelines of the public health governance. But, with all of these necessary pieces to the puzzle, public health in the twenty first century was losing the battle.

Slowing over time, health became an individual responsibility. Even with the amazing discoveries of technology and antibiotics, "we're still just as vulnerable to pathogens as we were decades ago" (Garrett, 2000, p. 573). Because health governments are not concentrating on creating strong and supportive health systems, preventable diseases are killing people everywhere. Even in America, there rate of maternal mortality is extremely high. The history of political corruption, accountability and war has affected the unspoken "bond" between the government and its citizens a great deal. When one party has broken the contract, the entire system can fail.

The future of public health is extremely dependent on a responsible and transparent healthcare system. While the last century has made significant progress to improve global health, these advances are constantly being tested by war, political corruption, and government. The conversation not only relies on how the global health system can progress, but also issues like

extreme poverty, political corruption, race issues, could progress. The point is that global health is not caused by one single factor. It is not just because of globalization, migration or poverty. Thus collaboration between governments, citizens, and health organizations need to work together and create a health system that is for every individual.

In the twenty first century, many governments have separated themselves from the health systems. Public health, "...will either rise or fall, ...with the ultimate course of globalization. If the passage of time finds ever widening wealth gaps, disappearing middle classes, international financial lawlessness, and still rising individualism, the essential elements of public health will be imperiled… perhaps all over the world"(Garrett, 2000, p. 582). Theses issues will eventually have to be brought up in order to fully see a disease free world. But what is being done today, to prevent any emerging diseases?

Introduction Part Two: Global Health Security Agenda

Infectious diseases can have the ability to spread very quickly. Since the 1970s, "over forty new infectious diseases were discovered" including Ebola, SARS, Middle Eastern Respiratory Syndrome, H7N9, and so many more (Baylor College of Medicine, 2018). Thousands of people around the world are affected, permanently impacted, or killed by infectious diseases every year, and countries without the ability to stop the next epidemic are a huge threat to the rest of the world. Increased travel, trade, globalization, etc, give infectious diseases the ability use humans, and animals, as vectors, spreading faster than they ever before. Most of the world is still extremely unprepared for another pandemic to explode. So, with this in mind, the Global Health Security Agenda (GHSA) was born.

Since February 2014, when the Center for Disease Control (CDC) commenced the Global Health Security Agenda (GHSA) to prevent, protect and respond to global, infectious health threats, over thirty countries, international and non-governmental partners have signed the agenda in hopes to respond and promote biosecurity as a main strategy to stop the spread of infectious diseases. Ultimately, and with success, the GHSA should provide every country with the capacity to, ”[p]revent and reduce the likelihood of outbreaks – natural, accidental, or intentional; [d]etect threats early to save lives; [and] [r]espond rapidly and effectively using multi-sectoral, international coordination and communication" (CDC, 2016). Attempting to address international health vulnerabilities, the Global Health Security Agenda follows in the footsteps of some of the largest governmental health programs, such as the President’s

Emergency Plan for AIDS Relief (PEPFAR) in 2003 and the President's Malaria Initiative in 2005, which were both initiated as governmental programs to address epidemics and allocate over eight billion dollars (Gostin & Phelan, 2014). However, only the Global Health Security Agenda, is not concentrated on one specific disease, but instead securing America from the threat of other countries unprepared health systems.

The launch of the GHSA took place under the Obama administration just before some of the first media covered cases of Ebola in West Africa (Schrinning, 2017). Since then, the United States has aided $1 billion to seventeen high risk countries in order to build the capacity of each nation so they are able to respond to their own emerging diseases without the threat of them coming into America (Schrinning, 2017). This past year, in 2017, Rex Tillerson has supported the GHSA, announcing that he plans to extend the program into 2024 (Schrinning, 2017). He said, "it [GHSA] is one of the most useful frameworks for halting the spread of infectious diseases. He [announced] $1 billion in investments to strengthen global health security in at-risk countries…" (Schrinning, 2017).

The premise of this effort is to evaluate, then fill, any gaps in domestic public health systems. After their evaluation, the GHSA steering group allocates a grade depending on how well their system could handle an emergency disease outbreak, and then works to address the areas where epidemics could spread. While this project is designed to address any sort of problem areas in health systems, it also allows the United States to evaluate which nations are the biggest threat to global health.

The logistical way GHSA works is broken up into two phases. Phase I is designed to *find* gaps and weaknesses in countries public health capabilities, by completing a self assessment test,

where the country rates its own program based on how confident and secure they feel to respond to health threats. This assessment is called the Joint External Evaluation (JEE), which is used by all countries involved with GHSA (Global Health Security Agenda, 2018). After recognizing the gaps and taking the JEE test, the country moves on to Phase II. This part is designed to *physically* address and fix the gaps which the respective countries have found. This is different depending on the country, and could include providing necessary equipment, training health workers, rebuilding an entire new set of public health programs, or creating a surveillance team, which are used to detect any newly emerging diseases (Global Health Security Agenda, 2018). Overall, both phase I and II are designed to address specific goals for each nation in hopes to combat health threats, and mitigate the threat of infectious diseases for Americans.

The initiative is governed by the Steering Group, which includes, Canada, Chile, Finland, India, Indonesia, Italy, Kenya, the Kingdom of Saudi Arabia, the Republic of Korea, and the United States (Global Health Security Agenda, 2018). These countries are responsible for donating money and providing insight into investing in developing new technology, transporting necessary medical supplies for infectious disease response, rebuilding health systems in West Africa, studying antimicrobial resistance, and combatting bioterrorism threats (Global Health Security Agenda, 2018). The United States is the largest donor, amounting to donating over one billion dollars to seventeen “at-risk” nations (Schrinning, 2017). Most of these nations are located in Sub-Saharan Africa, however this is designed to be a global project, and not just focused on African nations. While each leader in the Steering Group is given a specific duty, there is a lot of collaboration. Korea has pledged to contribute $100M to 13 countries over the next 5 years, and Canada has donated $20M in 2016 to assist 15 nations (Schrinning, 2017).

Other countries, like Spain and Italy are working to train “at risk” nations by strengthening South East Asian labs and training workers. The World Bank has approved $110 million to the Regional Surveillance Enhancement Project to strengthen African health surveillance. Finland, Germany, Saudi Arabia and the Bill and Melinda Gates Foundation (BMGF) have pledged to support the Joint External Evaluation (Global Health Security Agenda, 2018.). The GHSA's collaboration is enormous, and although it was started and led as an American project, it is expanding each year.

Since the initiative started, there has been a lot of capacity building progress made in African countries. For example, in Uganda, “[t]he DoD and CDC has created a secure lab for dangerous pathogens ... including providing a secure perimeter fence, guard station, x-ray, and metal detector, and facility lighting; secure window and doors; surveillance cameras; and extensive biosafety and biosecurity training, including training on dual-use research of concern” (Global Health Security Agenda, 2018. P, 11). Other countries such as, the Democratic Republic of Congo have made significant progress since an, “unprecedented yellow fever outbreak in DR Congo in 2016 (with 17 deaths as of September 18), the United States provided surge support to help plan and conduct large-scale vaccination campaigns and to complete laboratory testing….In total, more than 9 million at- risk persons were vaccinated” (Global Health Security Agenda, 2018, p, 12). The GHSA has provided capacity building projects to places, such as, “Uganda [which] now has a secure lab for studying dangerous germs. Tanzania has a digital communications network so people can phone in information on potential outbreaks from remote locations. Liberia has more than 115 frontline disease detectives trained by the CDC. Cameroon shortened its response time to recent outbreaks of cholera and bird flu from 8

weeks to just 24 hours. The DRC controlled an outbreak of yellow fever and built an emergency operations center (EOC)—a kind of war room for responding to outbreaks" (Yong, 2018). The capacity building projects are growing, and it seems like America's strategy to create health security involves many of the countries that would normally give rise to some of the worst infectious diseases in the world.

Since the beginning, the Global Health Security Agenda has received strong bipartisan support. Former president Barack Obama supported the project immensely, and since then it still has received large governmental support. Even though it was originally a five year project project, the White House Senior Director of Health Security, Tim Ziemer, hopes to extend GHSA's project to 2025. Many people attribute the GHSA's work to the financial support of Western nations. This large of a project requires enormous amounts of money, and "[t]he $1 billion pot" that the United States allocated between the CDC "runs out in 2019" (Yong, 2018) Without financial support, the international nations that rely on the GHSA for public health program support and progress will no longer have any access to funding for capacity building projects. Ed Yong, a science journalist says that, "[t]ime and again, diseases flare up, governments throw money at the problem, the crisis recedes, and funding dries up. It happened after anthrax attacks in 2001 alerted people to the risk of bioterrorism. It happened in 2003, after sars showed people how quickly a new disease could spread around the globe. The world is caught in a cycle of panic and neglect" (Yong, 2018). One of the many issues of treating health as a security threat is that it relies on financial and bipartisan support. Western governments get to decide where and when health support should be given, but without the money, hospitals can't be built, and bio surveillance will not increase.

The Global Health Security Agenda's three pronged approach is aimed to prevent, detect and respond. In order to *prevent* unintentional or intentional epidemics, the project aims to govern food safety, stop emerging drug resistant microbes and zoonotic diseases, promote biosafety and biosecurity systems, and create mass immunization programs (CDC, 2017). The GHSA *detects* by strengthening real time biosurveillance, increasing sample sharing, developing and strengthening laboratory systems, and deploying a successful biosurveillance team (CDC, 2017). And lastly, the GHSA works to *respond* to infectious diseases by developing emergency operation centers and improving access to medical supplies during an epidemic (CDC, 2017). While preventing, detecting, and responding to infectious diseases is important, the shift to global health securitization is extremely problematic, and daunting. *So, is the Global Health Security Agenda really the best program for combating infectious diseases? Does treating health as a security threat work? Would building hospitals, creating mass vaccination programs, increasing surveillance, and increasing sample sharing be successful at stopping the next epidemic? And, are infectious diseases really the biggest burden on global health?*

This answer is complicated, but in a short sense, every question answers no. Approaching gaps in public health systems is important, but the Global Health Security Agenda will not likely see the success it is hoping to bring. The project's goal of securing Americans from diseases by focusing on building hospitals, creating new technology, and sending "SWAT" teams to watch over villages most at risk is not what countries need in order to combat infectious diseases. Addressing gaps in public health systems is necessary to a certain extent, but the amount at which the Global Health Security Agenda does is unnecessary and unproductive. Responding to infectious diseases is sometimes more social and political than it is scientific, and with a focus on

security, the GHSA fails to recognize the actual obstacles that allow infectious diseases to spread. Further along, this paper will aim to use three cases of infectious diseases, Ebola, Zika and Influenza, to prove that the Global Health Security Agenda efforts will not aim to secure America from all the looming infectious diseases in developing nations. But if the Global Health Security Agenda won't protect Americans against health threats, then why is the program so concentrated on global health securitization?

Historically, this project seems very flawed. The GHSA's huge effort to eliminate the threat of bioterrorism and health threats is dramatic. Although SARS, Ebola, HIV and other diseases should start an urgent conversation to decide what measures are necessary to take in order to eradicate disease, designing a project to secure Western nations from the developing world's infectious diseases undermines the importance of treating disease prevention and eradication as a humanitarian cause.

Since the end of the Cold War and the falling of civil conflicts since 1989, many global leaders have been in favor of expanding foreign policy and development into a security agenda, and further triggered a shift in security theory (Grooves, 2007). But, securitization, which is ultimately the process of government's transforming their state affairs into matters of security, is largely debated about, since most of the security matters receive ample amount of attention and funding, even if there is no proof that they are a major threat. Key triggers like cyberwar, terrorism, bio threats, "widening gaps in wealth distribution, … a decline in traditional or conventional warfare; and a rise in threats to states posed by asymmetric, terrorist, and ethnically or religiously rationalized violence...has come against a backdrop of radically shifting transnational threats to states, rich and poor alike" (Garrett, 2015). As a result, governments and

key policy leaders are attempting to think of security as much more than just the military's emergency defense for state protection, in hopes to be prepared for the next global threat. This means that today, the American military and government is involved in just about everything, including the responsibility for global health.

Rich, Western nations, policy makers and the American government all worry about the threats infectious diseases pose. Economically, socially and politically, diseases are a burden. They threaten the stability of countries, weaken economies, military/government forces, and harm social structures. In a post 9/11 world, securitization has become very common among foreign aid and development. Newly emerging diseases like SARS, MERS, re-emerging diseases like Ebola and Dengue, increased population and mobility, environmental change, bioterrorism and terrorist organizations have all contributed to the rise of health security (Mcinnes & Kelly, 2012, p.131). Infectious diseases like SARS and Ebola, the HIV/AIDS pandemic in Sub Saharan Africa and the use of pathogens by terrorist organizations all impact the flow of international relations and have the potential to harm the economic and political stability of nations. Because of this, and the growing interconnectedness, one nation's problem soon become every nation's problem. This means, without a secure global health program, the entire world could be affected for a pandemic. For governments around the world, security and the military is an extremely important, and complex, matter which is treated as a top priority. As America has faced unfamiliar threats like cyberspace, viruses, and terrorism, the government has increasingly viewed each new security threat through the lens of war. And as this happens, the military is asked to take on tasks outside of the traditional protocols of military personnel, some of which they are not trained to perform. Military personnel are not typically trained to handle pandemics,

and by using the military for this job, it undermines the ability for the progression of health professional's work. Because of this higher budgets are needed to fill the tasks of the military, which in turn, cuts developmental work that could be successful at promoting health programs. Framing everything as a security threat, including infectious diseases, poses severe problems for the progress of social and political structures, and will only create more programs like the Global Health Security Agenda, which fail to recognize the actual problems which give rise to emerging epidemics. *So what's the problem with treating infectious diseases as a security threat?*

The history between security and health has traditionally been linked to armed conflict and the protection of soldiers during war time (Mcinnes & Kelly, 2012 p. 130). During wars and exploration, diseases like cholera, measles, and smallpox were considered a great threat to win war or explore unknown worlds, and was designed to secure both soldiers and explorers from contracting exotic diseases, which harm the progression of governmental progress. But while it killed soldiers in battle, it was also considered a security threat back home by impeding on economic and social progress. Still today, there is concern for soldier's health, but it has transformed into treating every infectious diseases as a security threat for Americans. This lens is focused largely on protecting domestic borders, stopping bioterrorism, dodging mass casualties, and desperately avoiding any economic disasters as a result of disease.

Health securitization is not necessarily a new concept, but it is now discussed more seriously and actively, while also expanding in both the academic and policy field. Starting in January 2000, the UN Security Council discussed HIV/AIDS as a security threat (Mcinnes & Kelly, 2012, p. 131). The following year the September 11th attack and the deliberate spread of anthrax took place, elevating the conversation of health towards security. With the many

international security conflicts, the American government began to frame every health obstacle into America's new war. This also makes it more and more difficult for the American government to understand what should and shouldn't be considered the job of the military, in order to further protect American prosperity against international threats.

The debate on global health security has been pulled in different directions since the start. Governments treat health as a security issue in order to protect their domestic affairs, in hopes to also protect their their citizens by maintaining a stable economy and political environment. While this is important during wartime, in a health perspective this become an enormous issue. Infectious diseases like HIV, Ebola, Zika, etc. are not security matters. They are humanitarian matters. While governments treat health as a security issue, they begin to forget the determinants of health, and the importance of a strong, and stable healthcare system. Organizations like the United Nations Development Program argue that health should be treated as an individual right and "...should be based not on states but on people; not just on the economic well-being but on health, education and basic freedoms; and that security was more than the protection of national boundaries" (Mcinnes & Kelly, 2012, p.130). The philosophy that health should be viewed as humanitarian cause, rather than national security is important. By securitizing health, governments around the world do not have to promote basic human rights to clean water, food and access to healthcare for all. Security doesn't provide adequate and basic public health programs for individuals, but instead attempts to protect those who already have these luxuries from those who are at most risk.

Still today politicians believe that infectious diseases are a threat to American security. The U.S. National Intelligence Council (NIC) predicted that,"AIDS and malaria alone will

reduce gross domestic product (GDP) in several sub-Saharan African countries by 20 per- cent or more by 2010, and at the micro-level, would have such a devastating impact on villages and families that HIV will strain the ability of the extended family system to cope and will contribute to higher levels of dissatisfaction, crime, and political volatility" (Garrett, 2015). For one, Sub Saharan African countries have been dealing with corruption, crime and political instability for much of their existence, so the NIC claiming their GDP will drop because of HIV is not exactly an American threat. Yes, infectious diseases can harm the economic potential for African nations. But instead of policy leaders claiming infectious diseases cause poverty, etc, the real truth is that poverty, political corruption, lack of education, gender inequality, *causes* infectious diseases.

So why does it matter if health is viewed as a security issue? Because, health is a humanitarian cause. The Global Health Security Agenda (GHSA) relies on sending military personnel to build ebola wards and track the next possible emerging pandemic threat. But, this is not the military's job. As America shifted out of post Cold war, and 9/11 times, it became harder and harder to tell what is and isn't the enemy, which involved the military in non war duty jobs. Developmental and humanitarian workers criticize military personnel, saying that, "you people, you just have no idea what you're *doing!*... You've got these kids, these thirty year old captains who spent their lives learning how to drive tanks and shoot people and they think they know how to end poverty in Afghanistan in six months. They don't understand that there are people who actually know something about this, and its not them- they act on whatever idea happens to pop into their head" (Brooks, 2016, p.95). Health securitization undermines effective solutions for targeting health. To truly protect America from emerging diseases, there should be effects to

support strong health care systems, oppose corrupted leaders, end poverty, train health care workers, and support women's empowerment.

A program like the Global Health Security Agenda may be effective in building large, high tech hospitals and laboratories, but it's perspective on health as a security threat will deter the government to treat these issues as humanitarian even if there is no evidence that diseases like, HIV/AIDS poses a real threat to national and international security (Grooves, 2007).While the securitization of disease attracts large amounts of funding, human rights workers fear there will be an increase of the politicizing of aid, and further harm and stigmatization to those affected by disease (Grooves, 2007). Linking health and security together comes from a long line of international threats and conflicts within the American government, however, the best thing that can be done for both international health and American protection is to eliminate the military from such health positions. The GHSA is effective in the sense that it attract attention towards the alarming rate of health inequality and the increase in emerging diseases, but many people fear that with such a program, the conflicts from diseases like Ebola, Zika and Influenza will only increase.

Literature Review

Most of my sources for this research paper come from books, news articles and scientific papers. One of the most important things I found was that the sources were written as recent as possible. Because global health conversations and policies are constantly changing, it was crucial for me to find recent research, proof and diseases to backup my argument.

My sources varied in opinions. Mostly all the news articles I read advocated towards a more holistic and humanitarian outlook on responding to infectious diseases. However, some of the books and older scientific research I found argued for a more security perspective on infectious diseases interventions. While I don't agree with this argument, I think it is important to read about both opinions. This made it more complicated to form an argument, however it also made me reflect more about the topic and eventually come up with an even stronger argument.

While all of my sources were important in understanding the problems surrounding infectious diseases, my life experiences also helped me come up with a concerte argument. Traveling and speaking to my friends from all over the world helped me to think of health as more of a humanitarian issue. Living in the United States, it is easy to forget about how not everything should be dealt with through the military. And I hope this paper can allow someone to think the same thing.

Overall, my articles and sources were extremely crucial for me to understand the theme. Most of the written work I used advocates for the same thing I do, which I used to create a more specific argument. I used the Global Health Security Agenda to further claim my argument.

Chapter Two

The first known Ebola virus outbreak occurred in 1976 in Yambuku, Democratic Republic of Congo, then named Zaire. It affected over 318 people, and killed 88% of those who were infected (CDC, 2017). The last known case was in 2017, also in Democratic Republic of Congo, in a village named Bas Uélé, but only this time it affected 8 people, and killed 4, 50% of those affected (CDC, 2017). On paper, this looks like a promising improvement in emergency disease response. But the truth is there were many failures that resulted in numerous, preventable deaths. By examining the 2014 Ebola outbreaks in Africa, it becomes obvious that global health responders are not responding adequately.

In 2014, the Ebola virus was at its peak. It traveled across borders to nine different countries, including some outbreaks in the United States and several European countries, affected 28,616, killed 11,310 people, slowed economic progress in countries recovering from wars, ignited worldwide fear, and cost billions of dollars in short-term, and late disease control interventions (BBC, 2016.). But what went wrong? Why couldn't the international health community stop this deadly virus from spreading in the 21st century? There is not just one answer to this question. A conglomerate of problems including political corruption, slow responses, inadequate resources, fear, denial from patients, distraction from other international conflicts, and a failure of global health responsibility have all been blamed as the reasons for this horrible outbreak. But, in order to fix the issues, which ignite epidemics, and ensure that the next outbreak is stopped, it is essential to look at failures in the 2014 Ebola outbreaks response in Guinea and Liberia.

Guinea suffered from one of the worst Ebola outbreaks. By March 2014, the virus had already circulated for three months without any international response present, and during that time, it traveled to Sierra Leone and Liberia. When Ebola emerged in Guinea, the country already had a very poor health care system, with, “the government spen[ding] a mere $9 per capita on health, with fewer than three health workers for every 20,000 people” (Erondu, 2017). But Guinea was still making considerable progress considering their circumstances. Before the Ebola outbreaks, Guinea’s under 5 mortality was steadily decreasing, as was maternal mortality, and even though they still have some of the highest rates of child and maternal mortality, it was promising to see a decrease ("Health Systems," 2014). While, these improvements were occurring because of the rise in disease specific interventions, and not long term responses, it still filled the international community with hope for Guinea. At the time, vaccine preventable diseases were on a decline due to mass immunizations, and specific child and maternal survival interventions, like food security and breast milk for children to battle malnourishment were successful in short term response. However, these short term interventions, like mass vaccination programs, and pills, can not deal with unexpected crisis and long term conflicts that come from wars, political instability, corruption, that allow Ebola to spread.

Despite their progress, Guinea needed to rely on international health actors, like the World Health Organization (WHO), to facilitate an effective Ebola response. Countries like America recognized it was also important for them to respond to this “threat,” in order to mitigate the risk of Ebola spreading throughout the western world. However, these international actors, and America, proved to be inadequate and in many ways were responsible for the continuous spreading of Ebola. Once the United States got involved in the Ebola interventions,

which was slow, it at first, looked like they would be able to stop Ebola. But while it looks good on paper, the reality was it was only because American health responders arrived so late to Guinea that the virus was already beginning to decline before they got there (Editorial Board, 2015). Overall, there was an extreme lack of communication and coordination from the minute organizations like the World Health Organization arrived, and it lasted for the duration of the outbreak. When these organizations were first notified Ebola was circulating through West Africa, international health organizations like the WHO were already In Guinea. However, because the outbreak was considered, “small”, their expert health teams trained for emergency response were pulled out prematurely, leaving a country with its own weak health system, to fend for itself (Editorial Board, 2015). Margaret Chan, then the director of the WHO, did not even declare the Ebola outbreak as an international health concern (this is defined as a event that is declared a risk to other states, however; still does not require international response) until five months after Guinea, as well as Sierra Leone notified them of cases of Ebola (World Health Organization, 2018). By the time this outbreak was considered a global emergency in August 2014, the response teams arrived too late and were inadequately trained to deal with the cultural conditions in Western Africa, which proved to be an enormous obstacle for controlling the virus.

In the Guinean Ebola outbreak, there was not only a lack of communication, late response, and inadequate health workers, but because of this, there was a total breakdown of a holistic approach. The Guinean government did not give citizens a warning, so when American health workers and the American military arrived, so did national fear. Guinea lacks a robust health care system, so when health workers arrived in remote areas, the locals were not used to foreign health workers and did not recognize this strange new disease. The local health workers,

who were working there before the disease arrived, should have warned the people and villages about Ebola. This would have helped spread public education of the disease and lead to a positive behavior towards Ebola. For example, some local populations believe that the day you die is the most important day of your life, thus, washing and dressing the body is essential for burial, which clearly does help with Ebola containment, since the virus is spread through contact. But, while the virus can be extremely dangerous, it is not nearly as contagious as people think it is. Ebola is transmitted through *direct* contact with "bodily fluids, blood, feces, vomit, semen, breast milk and urine—as well as the sweat of people who are very sick with Ebola and corpses; thus, Ebola, without direct contact, is a fairly self limiting disease" (World Health Organization, 2018). This means that the real issues were in the lack of public education of Ebola and panicked communities. Because of this, many people fled, and the ones who stayed to respond to the crisis, did so out of fear, which is detrimental for Ebola containment.

The Ebola outbreak in Guinea was hardly a surprise. But it’s important to understand that infectious diseases like Ebola ravage through countries like Guinea that have poor health systems due to chronic poverty, civil war, political corruption, and a lack of skilled health workers and doctors. When Ebola broke out in Guinea, the local doctors were not prepared to respond alone, not because they didn't have enormous laboratories to test for Ebola, but because their was simply not a strong health care system that could also work with local health clinics to mitigate fear. Even with a high tech laboratory, Ebola wouldn't have been stopped in the very beginning. In the first few months, Ebola spread without health organizations even knowing, and as the international community has learned, the first few months are extremely critical in controlling the virus. Even though the Guinean outbreak was relatively short, but extremely fatal;

because of the weak response in Guinea, Ebola was able to spread to Liberia, as well as Sierra Leone. Effective outbreak response does not *just* come from the health systems. It also relies on the people to communicate with health workers, and to trust their recommendations to stop it from spreading.

One village in Guinea, showed how important it is for government health workers to rebuild community trust. Instead of setting up health centers in the capital, the health responders pitched tents and community clinics that served to facilitate responses and build trust with the locals. They also trained local responders, staffed local villages with health trained workers, and engaged, supported and informed local people about Ebola (Erondu, 2017). The results were better than expected, "[there was] exceptional community collaboration. Many of those who had been in contact with the girl [who was infected with Ebola] voluntarily quarantined themselves, received vaccinations, and let us monitor their health for the duration of the flare-up" (Erondu, 2017). This example emphasizes the importance of binding trust and communication between responders and victims, and how community support can be more effective than many other tactics. The outbreaks in Guinea should have served as an important lesson for disease outbreak, but it only got worse in Liberia.

The Ebola outbreak in Liberia couldn't have gone any worse. By the end, thousands of people would die, the country would again be set back from economic progress, the distrust between the people and government would get worse, and a country suffering from a long brutal history would remain broken. Politics, distrust and panic all fueled the Liberian-Ebola outbreaks. Looking back at the country's history, it becomes obvious that the Ebola outbreaks would have occurred. Liberia, a country founded by freed American and Caribbean slaves, has only recently

come out of several brutal civil wars. In 2006, only three years after the end of Liberia's fourteen year war, Ellen Johnson Sirleaf, a US-educated Liberian, was elected as the president, and remained in power until 2017. During her term, the Ebola outbreak substantially impeded Liberia's rapidly growing economic rate. But while she was popular in the West, she was accused of political corruption back home in Liberia, where eventually she lost all trust from her people. In the everyday life of a Liberian, there was still mass unemployment, extreme poverty, corruption in everyday life, and struggling agriculture and health systems (BBC, 2016). Between widespread political distrust, and an emerging virus, this was a recipe for disaster.

When Ebola spread from Guinea to Liberia the first outbreak didn't last very long, and health officials wondered if the virus had managed to stop itself. But a few months later, it spread to Monrovia, the capital, and this time it was spread all over different parts of the city. With help from the CDC and Doctors Without Borders (MSF), the Liberian government,

> "... warned the public through radio announcements, posters, and billboards, and sent health workers to villages throughout the country to tell people to be on the lookout for the disease. They set up a hotline so people could report cases and trained teams of investigators to visit each caller and make a tentative diagnosis based on symptoms. They also equipped a lab to do blood tests locally and built Ebola treatment centers—tent camps where patients could be isolated and receive basic care. They hired over two thousand contact tracers to identify and isolate everyone—such as close relatives of victims and health workers—who might have been exposed to the virus" (Epstein, 2014).

Previously, this system worked to control more than a handful of Ebola outbreaks in Sub-Saharan Africa, but this time around it didn't seem to stop the outbreaks in Monrovia. Liberians were simply not responding as the CDC, MSF and the Liberian government hoped they would.

Even though the hotline was ringing constantly notifying the government of new cases, it would be impossible to contain with each infected person having over thirty contacts (Epstein, 2014). Across the border, Ebola was still killing Guineans and Krio (peoples from Sierra Leone), but it wasn't spreading this rapidly in their capitals. It took four months, thousands of lives taken, and an Ebola outbreak twice the size of the Guinea outbreak, for it to subside in Liberia (Epstein, 2014).

The outbreak in Liberia was clearly very different from that in Guinea. While there was also a weak health care system, the problem lay partly in political instability. When a country like Liberia, with a Nobel peace prize winning, Harvard and World Bank trained president, has an Ebola outbreak, it can look surprising. But the truth is that it was fairly predictable. When Ebola hit Liberia, there was little trust between the people and the government. Sirleaf had been accused of corruption, so when Ebola rampaged villages with already minimal healthcare systems, Liberians believed she'd either made it up to raise money from the UN, or even created it to kill them, and that nurses were poisoning people so that the UN would send money (Parshley, 2016). Even when health workers came to care for the sick, most of the time they were shouted at, abused or even killed, preventing them from doing any work (Parshley, 2016). For the most part, Liberians can't be blamed for thinking this either. But, when political corruption emerges during an epidemic, responding to a virus like Ebola, becomes even more difficult.

One hypothesis for the horrific and large outbreaks is that the Liberian government and the health systems was that Liberia was too ill equipped, meaning they didn't have enough labs, hospitals etc, to contain the outbreak domestically. While it is true that both Guinea and Liberia

have weak health systems, this can't be the only reason. So why was it that in places like Sudan and Congo, with similarly poor health systems, had been able to rapidly contained viruses, but Liberia was having an enormous outbreak? If the outbreak was not political or social then the international health workers should have been able to contain the outbreak. These are people whom have experience and success in containing previous outbreaks all over Sub Saharan Africa. But, there was something different about Liberia. While in most African countries there is distrust in government, Liberia's was more prominent. Liberia was supposed to be emerging out of a long, bloody history by regaining trust and building their economy. The last thing Liberia needed was Ebola.

There is a reason why Ebola rampages in only certain countries. The virus started in Democratic Republic of Congo, and the most recent case was still there. If it was really as contagious as everyone says, then more than just three African countries would have been severely affected. Clearly, viruses jump from border to border, but it only stays in the weakest places. Countries that have weak healthcare systems, distrust in their government, extreme poverty, corrupted leaders and economic decline are often the most likely places where emerging infectious disease spread. The problem isn't that the WHO, or governments don't know *how* to respond, but that viruses spreading are linked with larger governance issues, which are not amenable to a quick fix, but rather involve behavior and political change. In Guinea's case, the WHO failed. One of its most important jobs is to provide early warnings. Even when WHO officials were notified, their response was slow and indecisive, which delayed a concerted, forceful response. Ebola circulated for three months in Guinea without one person to notify health officials; so when the Guinean government was notified, they tried to play down the

seriousness in hopes to avoid widespread panic and fear (Editorial Board, 2015). Liberia's outbreak was even worse. This time it wasn't necessarily a slow response and inadequate communication that led Liberia to chaos, but instead their current political environment. The Liberian government and the international health response teams together failed to respond to the cultural obstacles. Apparently nobody realized how important it would be to build trust with Liberians, which would diminish fear, increase communication, and ultimately stop the virus by itself.

Even though Ebola is the same in every country it affects, establishing the same response in every environment is not very effective. While most of these countries have poor health care systems; building laboratories, giving them high tech resources and having scary men in white suits and black boots carrying guns around to "detect" future viruses, won't be the solution. Sure, having more educated doctors and better equipped hospitals are important to build capacity, what's the point of having all of that if the people believe the government is trying to kill them? Nobody would voluntarily go to the hospital with rumors like those. The solution is often further back, and less scientific than one would think. Establishing trust in governments, creating community clinics, educating the public and having a transparent health system proves to be successful in containing epidemics like Ebola. Even though building huge hospitals and involving the military seems like the most logical and easiest thing to do, it couldn't be farther from what's best for global health.

Looking back on the international response of Ebola, it becomes quite obvious that a program like the Global Health Security Agenda, whose goal is to protect Americans from emerging infectious disease threat, wouldn't be successful. While Ebola is a virus, health

organizations and ministries often forget that people, their responses, and trust in their government to solve these conflicts, along with a strong and transparent health care system, are what's most important. Obstacles, such as governmental structures, lack of trained doctors and poor health care systems also proved to fuel the epidemic. As shown in this chapter, the most effective mechanism for stopping Ebola would be to have community mobilization, communication and a local, trusted health system already there, that locals would listen to. The GHSA is a program that undermines the importance of local, strong health care systems and widens a further gap between government and health organizations. Ebola for many reasons is not a security threat to America. For one, Ebola is not that easily transmitted and the rate of the virus wiping out America, and western cities, is extremely unlikely. America has a basic health care system, which most people rely on for anything from a cold to serious infectious disease issues. Those patients typically trust their health support, and will listen to them if they're quarantined or asked to limit direct contact with others. While laboratories and hospitals are important, in an African country, an infectious disease could spread for weeks before the health ministry would know about, or even diagnose. While America's Global Health Security Agenda is good at bringing attention and financial resources to infectious diseases, it removes Ebola as a humanitarian conflict, and replaces it in the category of security threat.

Chapter Three:

Zika, like Ebola, was discovered long before the most recent, and media covered, outbreaks. Zika, an arthropod-borne virus was first recognized in 1947, in Uganda. While during that time, the virus was isolated in rhesus monkeys and the *Aedes africanus* mosquito, seven years later scientists discovered the first *human* zika virus, in Nigeria (Musso, 2015). It wouldn't be until 2007 for the first large outbreak of Zika to occur, and thus begin to spread across the world.

Currently scientists believe that this single strand RNA virus has two lineages: African and Asian (Musso, 2015). The Asian lineage was linked to some of the first outbreaks, which then gave rise to the virus in the Pacific and South American region. Zika virus is originally transmitted by the bite of an infected female mosquito, however it has adapted to use humans as reservoirs and urban mosquitoes as vectors (Musso, 2015). This means Zika is transmitted as a zoonotic disease, from animal to human, as well as from human to human. Some common forms of transmission are, being bitten by an infected mosquito, sexual intercourse, blood transfusions and mother to child.

The first large, globally known, outbreak was on the island, Yap in the Federated States of Micronesia. In 2007, Zika infected forty-nine confirmed humans on the small island, however scientists estimate that it actually infected over 73% of the population, over 7,500 people, because of close contact (Musso, 2015). During this outbreak, records were not kept or organized, so hospitalizations, deaths and birth defects are still uncertain. The second outbreak occurred in French Polynesia in 2013. During that time there were 28,000 consultations for Zika fever, affecting 11% of the population, and thus spread to New Caledonia, Cook Islands, Eastern

Island, Vanuatu, Solomon and Fiji (Musso, 2015). Like the first outbreak on Yap, due to the insufficient record keeping, there is still a lot unknown about the cases in the Pacific region. While Zika affected entire islands during the first few outbreaks, it wasn't until the 2015 Brazilian and American outbreaks, that there was worldwide attention and major concern. The same strain affecting Brazil was found in the Pacific outbreaks, suggesting that the Brazilian-Zika outbreaks were from the Pacific. Other, smaller outbreaks occurred around the Americas, and Europe from travelers returning from infected areas.

While Zika can severely affect a person's health, causing Guillain-Barré Syndrome, microcephaly, and severe neurological damage, most people have milder experiences. Zika for the most part is a self-limiting disease, and because some symptoms are so mild, people often aren't even aware they're infected. Some symptoms include, "mild fever, fatigue, cutaneous rash,... and conjunctivitis. Other reported symptoms are headache, malaise, dizziness, oedema of the extremities, retro orbital pain, anorexia, photophobia, gastrointestinal disorders, sore throat, cough, aphthous ulcers, back pain, sweating and lymphadenopathies" (Musso, 2015). However none of these symptoms are specific just to Zika, so they are often misdiagnosed as a viral or bacterial infection. Currently there are a few vaccines under trial to prevent future outbreaks. It is important to point out that because of misdiagnoses, improper record keeping and impoverished areas having minimal access to care, the Zika occurrences are probably more common than they are reported (Musso, 2015).

Since 2015, the Pan American Health Organization (PAHO) reported that over thirty-five countries in the Americas have reported that Zika was present from mosquitos (Phelan, 2016). Places like Puerto Rico and Rio De Janeiro, Brazil had large amounts of Zika infected mosquitos,

and with the olympics in 2016, the American government was worried about it spreading to "Florida and the Gulf Coast states... with the potential to affect up to 30 states, as far north as Washington, DC, Philadelphia, and New York City. Pregnant women, particularly those in lower socioeconomic status groups in the southern US, are at heightened risk" (Phelan, 2016). This is true even outside of the United States. The majority of people that had serious effects of Zika were in Central and South America being black, young, poor mothers, who would eventually give birth to children with microcephaly or other birth defects. There were many missed opportunities for stopping Zika, and a disproportionate number of young mothers and their children will have lifelong health issues and enormous medical bills because of inadequate support and interventions provided to these women. In many ways, like Ebola, the Zika preparedness and response interventions failed.

On the outside, the response to Zika was much different from Ebola primarily because of how differently the two viruses spread. However, the interventions, lack of preparedness, and failed ability to recognize the larger socio-economic issue makes it seem like Ebola and Zika were handled similarly. While, Ebola can spread from direct human contact, Zika cannot, unless through mother-to-child transmission or sexual intercourse. On one hand, this makes the virus's ability to spread, slower, but on the other hand, it becomes a lot harder to stop since the source of the virus is in mosquitos, which are able to multiply quickly and fly long distances. This sort of intervention heavily relies on local governments and the support of citizens, to stop the virus, the mosquitoes breeding grounds, but most of all support lower socio-economic classes which were disproportionately affected.

Again, the main actors involved in preparing and responding to this epidemic, did not make the right choices. The American government stalled passing a Zika-funding bill in Congress for over seven months, to help fight the spreading of the diseases, knowing well that the slow response would have consequences that could affect large numbers of children with birth defects (Kodjak, 2016). At that point, Kodjak wrote that, "more than 23,000 in the mainland US and Puerto Rico have contracted the Zika virus… that includes more than 2,000 pregnant women" (Kodjak, 2016). While the WHO declared Zika as an emergency early on, they also prematurely ended their interventions. But really the worst was that most governments and international organizations failed to support the millions of women, especially those who were pregnant, in slums that were the most at-risk. Many governments never even warned mothers to postpone their pregnancies, which Amir Attaran, a professor of law and medicine at the University of Ottawa, calls, “[a] hideously racist hypocrisy....“[f]emale American tourists were given the best and safest public health advice, while brown Puerto Rican inhabitants were told something else entirely” (McNEIL, 2016). While Zika affected millions of women, the most neglected were poor mothers in the Caribbean and Central and South America.

In many ways, the response to Malaria was handled similarly. Just like Zika, early on, governments introduced the use of chemicals to attempt to kill mosquitos. However, even before the Zika outbreaks, the introduction of DDT, a mosquito-killing chemical, was successful in terms of destroying domestic Malaria, even though it did have harmful side effects on the health of the environment and humans. But it took years until America realized that using DDT was more harmful than beneficial, and that the mosquitos will return, this time with pesticide resistance. In the end, these issues were so widespread- that the international community

practically abandoned the malaria campaign. Halfway through, the global malaria cases increased by two folds, and countries such as China saw one million cases, and India 6 million malaria cases (Garrett, 1994, p. 52). Just like Malaria, Zika proved to be extremely hard to control with only chemicals.

When Zika arrived in the Caribbean and the Americas, local governments as well as international health organizations gave horrible advice and offered minimal support to people most affected by Zika. Truck sprayed chemicals, attempting to kill mosquitos, which didn't even offer research for long term success. Most health offices never offered abortions as a serious option for pregnant women infected with Zika. But, it wasn't only local health authorities that deterred women from abortions, but also the WHO and CDC, saying that, "... to do so would interfere with women's reproductive rights or prevent older women from conceiving in time to have children… [and that it is] not a government doctor's job to tell women what to do with their bodies" (McNEIL, 2016). While it is not a government's job to advise women on what to do with their bodies, it is their job to provide support and realistic options for women suffering from disease and hardship. Most health officials were fearful of offending religious conservatives, and thus were not able to pubic display abortion, contraceptives, and delaying pregnancies as a realistic option for women at most risk. Director of Minnesota's Center for Infectious Disease Research and Policy, says, "the CDC always gets in trouble with Congress when it talks about contraceptives or bullets… By the latter, he meant that it was hard for the officials to point out that gunshots are a major cause of American deaths for fear of offending the gun lobby" (McNEIL, 2016). Although guns have nothing to do with Zika, the two issues can be looked at in the same perspective. Just like guns, contraceptives and abortion are difficult for

congress to discuss for fear of cut funding. This was especially true for the Zika response, since the virus was affecting places like Brazil, which happens to have the largest number of Catholics in the world.

While places like Brazil and Puerto Rico did not have their priorities set straight in order to stop the virus, neither did the American government and European countries. Most public awareness was focused on mosquito prevention, even though "not one of the nearly 1,000 cases diagnosed there by year's end was transmitted by a local mosquito" (McNEIL, 2016). For Europe and America, this made no sense, since there were not large numbers of infected mosquitoes present. Health departments should have been focused Zika transmitted from sexual transmission or travel. The only place that responded adequately was Miami. The health departments sprayed insecticide and larvacide, and went from house to house looking for mosquito breeding sites (McNEIL, 2016). Even though this worked for Miami, it doesn't mean this would work for every place infected with Zika. In places like Brazil, doctors acted quickly when Zika hit but were "often thwarted by the country's political and economic chaos"(McNEIL, 2016). Because of Brazil's political instability, after their former president Dilma Rousseff was impeached, following a corruption scandal, the country's economy was in chaos. Again, this has proved to create obstacles for healthcare progress. Like Liberia, Brazil had many other political factors that were unaccounted for in trying to eliminate Zika. Even though Former president Rousseff warned Brazil of Zika, her popularity was low, it wasn't taken with severity or urgency.

The Zika outbreaks highlight the difficulties of low socio-economic women in Latin America. Margaret Chan, the director of the WHO revealed that, "Zika revealed fault lines in the world's collective preparedness. Poor access to family planning services was one. The

dismantling of national programmes for mosquito control was another" (Stone, 2017). Women have restricted access to reproductive and sexual rights, and have a lack of education about contraceptives, unwanted pregnancies and women's health. Even though Brazil claims to have a right to healthcare, many poor women are unable to access prenatal care, testing, and abortions, which are highly illegal. In Brazil alone, "[c]landestine abortions remain too necessary, resulting in needless deaths—the fourth leading cause of maternal death, per HRW. Tragically, since 2005, about 17% of these abortion-related deaths were in young girls and women only 10-19 years old" (Stone, 2017). The unequal social environment of Brazil proved to be an extremely big obstacle in responding to the Zika outbreaks. Because of their strict laws on reproduction in Brazil, those who were affected most by Zika, such as young, poor, pregnant women, were not able to get the proper care or options that were provided to white Americans and Europeans.

While women suffered the most, it was even worse for women in poor slums. Because mosquitos breed in sitting water, and slums often have inadequate access to clean water and sanitation, these were perfect breeding grounds for Zika. While projects to spray pesticides provide a short term relief, they aren't a long term solution, since some mosquitos are becoming resistant. Judy Stone, an infectious disease specialist and author, says that,

> "[m]ore than one-third of Brazil's population lacks access to a continuous water supply. So women store water in containers that might become breeding grounds for the mosquitoes. Poor sanitation leaves standing water and sewage, which again serve as breeding grounds for the [mosquitos]. Both of these problems disproportionately affect poor communities…and women again bear most of the responsibility to try to implement burdensome attempts to eliminate standing water, which will likely be futile" (Stone, 2017).

The Brazilian government and international health organization lack in addressing the underlying issues, allowed Zika to spread.

Proper education for both women, as well as men, on the transmission of Zika could have helped slow the Zika outbreaks. Legal abortion access would not only progress towards equality between men and women, but also give women the choice to control her future. One of the biggest issues in the Zika virus response was that there was a huge emphasis on killing mosquitoes and their breeding grounds, rather than education and support on reproduction and risk of transmission. Instead of concentrating so strongly on the transmission of Zika by mosquitoes, "more emphasis needs to be placed on fixing structural problems. Further, funds for education and health were frozen. As appears universally true, poor, disadvantaged women are disproportionately affected" (Stone, 2017). Another solution could be a vaccine, which would provide poor women with protection from such viruses. But while this is true, it doesn't solve the actual issues which fuel diseases like Zika, such as gender inequality, lack of women's education on reproduction, contaminated water, and political instability.

Handing money to Brazil to provide insecticides and find mosquitoes breeding grounds will only keep the virus away for so long. By the government supporting, educating and giving access to proper health, specifically for women, there will be improvements not only in health but also the social environment. While organizations like the CDC and WHO were present and attempting to provide care for those affected and at most risk, the real solution would have been to support and provide education for men and women on sexual transmission, women's reproductive rights, access to safe abortions, and care for affected mother's and their babies. So

no matter how much funding goes to surveillance, the real solution won't be solved unless political, social, and economic progress is made within the countries affected.

The Zika response was imperfect in many ways. But the most important lesson to come out of it was how it highlights the difficulties of women, especially non-white women in poverty. Because Zika is transmitted differently than a virus, like Ebola, which is transmitted through direct contact, the solution to stopping Zika was put into a different perspective. Health organizations needed a short term solution, before the virus spread even further, which meant most of their attention was towards killing mosquitos. Without a vaccine, men and women in favelas, Brazilian slums, and women without the basic care and education are sitting ducks waiting to contract Zika. Looking forward, a program like the Global Health Security Agenda would fail to response to the actual issues, like poverty, gender discrimination and lack of a basic health care system. While the GHSA could provide funding to spray communities in attempt to kill the mosquito grounds, it would fail to support the thousands of men, women and children who live without a robust, local health care system. Providing laboratories, sending teams of military personnel and building hospitals wouldn't be the solution. This zoonotic borne disease breeds in standing waters and unsanitary conditions, which is mostly found in tropic slums. The long term solution for Zika is addressing the social and political obstacles that stand in the way of creating a solid and transparent health care system. While the Global Health Security Agenda strives to protect Americans from infectious diseases like Zika, there really is no evidence that supports the claim that Zika could do economic harm to the United States. Compared to the Caribbean, the few cases that did hit America were mainly in Miami, and they were addressed quickly and managed to control the outbreak. American, pregnant, soon-to-be, mothers who were

infected were supported and given the option to terminate the pregnancy. The GHSA's tactic to treat Zika as a security threat will not help to slow future outbreaks. The solution to infectious diseases like this, are unique and different in every country, or community, it hits. The best answer is not treating Zika like it is a economic, political and social threat to the United States, but support women in impoverished communities, provide them strong, local health and reproductive clinics and safely combat the breeding grounds for mosquitos.

Chapter Four:

While most people probably think catching the flu is just a week of a dealing with a runny nose and a fever, Influenza is actually much more complicated and has managed to kill large amounts of people since the early 20th century. There are currently three different types of influenza, A, B, and C, and many subtypes like H1N1 and Avian Flu. One of the deadliest flu pandemics occurred in 1918, infected 500 million people, killed 20 to 50 million people worldwide, and infected 675,000 Americans (Fineberg, 2014). Between then and now, there are often flu outbreaks that are small compared to the Spanish flu of 1918, but in 2009 there was a rather large outbreak of H1N1, commonly referred to the 2009 flu pandemic.

The first laboratory tested case of H1N1 occurred in Mexico, in 2009, and two months later, there were several confirmed cases of the the strain H1N1, spreading into California (Finberg, 2014). The virus spread extremely fast, and "[b]y the end of April, cases had been reported in a number of U.S. states and in countries on various continents, including Canada, Spain, the United Kingdom, New Zealand, Israel, and Germany. On April 25, invoking its authority under the 2005 IHR, the WHO declared a public health emergency of international concern and convened the emergency committee called for in the regulations" (Fineberg, 2014). Since H1N1 is spread through the air, meaning it can spread by sneezing, coughing, touching, or just being in close proximity to an infected person, the flu traveled way too fast for health officials, not giving them much time for the international community to respond before it was a global pandemic. By June 9th, 2009, the WHO declared this outbreak to be a pandemic, which infected 73 countries and had reported more than 26,000 individual cases. (World Health Organization, 2018,)

When H1N1 was first discovered in Mexico, it seemed a lot smaller than it actually was at the time, and not many people were aware of the scale they were going to deal with. One study showed that over 899 hospitalized patients, 58 people (6.5%) became critically ill, and of those, 41% died (Fineberg, 2014). Over the years, there were some countries that were affected enormously, and a lot more than other countries, which made it extremely confusing how to display a global, public message about the virus. America was hit much harder than Europe, and places like Argentina had very severe cases while, right next door Chile had only a small amount of cases. This confused governments and health organizations whether or not to display public information and risk. There is still so much uncertainty around why some countries were hit harder than others in the H1N1 outbreaks, but regardless the WHO and IHR had to implement several provisions to dodge another pandemic as large as the 1918 flu. While this 2009 flu pandemic did not kill nearly as many people, it still was a concern for global health.

While the IHR and WHO thought they would be successful at stopping the 2009 flu pandemic, by implementing tons of surveillance and records, they were realistically limited to respond to such a global and dispersed pandemic. Following the SARS outbreaks in Asia, the IHR "established systematic approaches to surveillance, early-warning systems, and response in member states and promoted technical cooperation and sharing of logistic support" which facilitated in the 2009 outbreaks (Finberg, 2014) . Other successes occurred from the IHR building communication among nations by implementing "national offices that would be responsible for rapid collection and dissemination of emerging data and guidance" (Fineberg, 2014). But in the long run, these interventions really didn't work for the 2009 flu epidemic. Because the flu was dispersed in random states, the WHO and IHR thought that they would

implement strategies for countries to build capacity, within their own state. These interventions were headed by National Focal Points, national offices that were used to encourage and be in charge of facilitating coordination, information sharing and joint planning at national level by recording progress (Finberg, 2014). This program was a lot like a smaller version of the Global Health Security Agenda, which also aims to build national capacity, coordination and domestic intervention. But despite the IHR's hope, it really didn't work the way they thought. All the member nations who took worked below the National Focal Point did not have the capacities to respond alone, and didn't show any progress that they were building their capacity. After the H1N1 pandemic, a study showed that, "Of the 194 eligible states, 128 (66%) responded to a WHO questionnaire on their state of progress in 2011. Only 58% of the responding member states reported having developed national plans to meet their core capacity requirements, and only 10% claimed to have fully established the capacities called for in the IHR" (Fineberg, 2014). This means that simply stated, nothing was really getting done. Nations and states did not end up responding to the degree that they were supposed to, even after building capacity. Other obstacles also prevented the National Focal Points from working. Even though the program attempted to provide capacity, the IHR also failed to address the issues of medical, healthcare accessibility, and"...encourag[ed] vaccine manufacturers to set aside a fraction of their pandemic-vaccine production for donation and for discounted pricing in developing countries"(Fineberg, 2014). Capacity building programs are not exactly helpful if medical care is not financially available to impoverished people. This was especially true for the 2009 flu pandemic. Since the flu is airborne, the only thing that protects people in the short run is a vaccine, and without developing nations and impoverished communities having access to that, it was basically useless.

The WHO also responded with many systematic faults. "The WHO is much better at responding to short-term outbreak emergencies, such as investigating an outbreak of hemorrhagic fever in sub-Saharan Africa, or to manage a multiyear, steady-state disease-control program" rather than globally dispersed pandemics. (Fineberg, 2014). Because each WHO offices are autonomous, with member states of the region responsible for the election of the regional director, budget, and program, this limits the ability of the WHO to direct a globally unified response during a global health emergency, especially as dispersed as this one was (Finberg, 2014).

Previous to the 2009 H1N1 pandemic, the WHO predicted that a influenza outbreak would occur and thus was prepared to respond to one. They focused specifically on, " the threat of avian H5N1 influenza, and a signal feature among recognized cases of H5N1 influenza in humans was mortality exceeding 50%" (Fineberg, 2014). But because the severity of influenza depends on so many factors, like the susceptibility of the population, age and previous exposure to influenza viruses, it was almost impossible for the WHO to know where, how bad the flu was, and which strain would hit. The WHO also lacked "a consistent, measurable, and understandable depiction of the severity of a pandemic. This situation was problematic because, regardless of the definition of a pandemic, the decisions about response logically depend on both spread and severity"(Fineberg, 2014). To say simply, it is impossible for the WHO to respond to an entire global pandemic alone, and since the flu severity depends on so many factors, it's impossible to know who, where and what it will affect most.

Once again, the WHO failed to adequately respond to a pandemic, in a timely manner. They focused on building up capacity in nations, rather than adequately notifying the globe about

transmission and the severity of the virus. The most at risk were young child, pregnant women and those already ill, and there was little, if any, support for those who were most at risk, to make sure they had sufficient access to health centers.

At first, it also seemed like the WHO was trying to keep the pandemic quiet. They spoke to only a small amount of emergency committee actors, and focused with different technical units, which failed to create a overarching plan (Fineberg, 2014). They severely failed in public involvement, and denied several conferences on the progress of H1N1. The WHO also failed to facilitate the distribution of a vaccine in time for the peak of the H1N1 pandemic, and when they did eventually distribute vaccines to seventy-seven countries, it took them way too long to make a coherent decision. This also falls on the responsibility of pharmaceutical companies to develop a vaccine, "manufacturers in their willingness to donate vaccine, concerns about liability, complex negotiations over legal agreements with both manufacturers and recipient countries, a lack of procedures to bypass national regulatory requirements for imported vaccine, and limited national and local capacities to transport, store, and administer vaccines" were huge obstacles in creating a coherent decision (Fineberg, 2014). It is basically up to pharmaceutical companies to decide when and if they want to produce a vaccine. This is a huge problem when a pandemic hits out of nowhere.

The response to H1N1 was extremely incoherent and confusing. Both the IHR and WHO's response has brought to light many issues within the global health emergency. Because of the many factors involved in how severe influenza can be, it is impossible to guess where and how bad the next outbreak could be. While, there has been a lot of progress made compared to the 1918 Spanish flu, there is still much to learn from the failures within the global emergency

response committee. There are still many obstacles on influenza preparedness because of a lack of scientific understanding, and because the outbreaks are dispersed, it's difficult for one organization to take on the responsibility for an entire globe. There was no government responsibility in providing the public with trust, support and awareness. While the WHO and IHR, and the Global Health Security Agenda, are trying to build capacity, surveillance and laboratory improvements, these really won't necessarily help. As stated before, it's very difficult, if even possible, to detect the next outbreak of influenza. Because influenza spreads so easily and quickly, along with government and local health support, there really needs to be better scientific research and development in order to keep up with the pace of the virus, since, "the annual capacity of influenza-vaccine production covers less than one third of the global population"(Fineberg, 2014).

Other issues that lied within the correct and successful response to H1N1 lied in the lack of transparency and conflict of interests. Many organizations including the WHO downplayed the seriousness of the pandemic, and thus responded with confusion and lazily. There is also too much power from private stakeholders, like pharmaceutical companies, to decide if it is worth making a vaccine. " [The] WHO state[d] that worldwide more than 213 countries and overseas territories or communities...reported laboratory confirmed cases of pandemic influenza H1N1 2009, including at least 16, 455 deaths"; so why did it take so long form them to create a vaccine (Flynn, 2010, p. 12)? Clearly not everyone who catches the flu dies, so since there are certain high-risk groups, like babies, pregnant women and previously ill persons, pharmaceutical companies may be skeptical to make a vaccine since it is not extremely profitable. But the opposite effect can also happen during flu pandemics. In the 2009 outbreaks, there were several

conflicts of interest. Once pharmaceutical companies started to make a vaccine, members of the WHO hyped up the importance of the vaccine in order to increase the sales and profits for pharmaceutical companies. It also become extremely risky once pharmaceutical companies contain this much power , to "directly influence public decisions taken with regard to the H1N1 influenza, and the question of whether some of their statements had been adopted as public health recommendations without being based on sufficient scientific evidence" (Flynn, 2010). The handful of advisory members within the WHO that had professional ties to pharmaceutical groups, were given out large research grants to these members, which largely comprised the transparency of the WHO. To date, the WHO has yet to provide reasonable proof suggesting that this did not influence their decision to quickly call the H1N1 a level 6 pandemic. There is also evidence that suggests the WHO had reason to declare an influenza pandemic because of recent contractual agreements with pharmaceutical companies (Flynn, 2010). Studies suggest that "...the sales of H1N1 vaccines in 2009 were expected to result in overall profits of between 7 and 10 billion dollars to pharmaceutical laboratories producing vaccines. According to figures presented by Sanofi-Aventis at the beginning of 2010, the group registered net profits of 7.8 billion Euros (+11%) due to a "record year" of anti-flu vaccines sales" (Flynn, 2010). This largely comprises and undermines the trust in organizations like WHO, which as stated before proves to be an enormous obstacle in stopping newly emerging viruses.

All of these conflicts create much confusion and undermine the trust that the globe holds within international health organizations. These interventions were handled with secrecy, lies, and so much confusion, that it's impossible to even come up with a liable alternative for dealing with the next influenza outbreak. Although it didn't seem like a big deal that the WHO did this,

“[t]his decline in confidence could be risky in the future. When the next pandemic arises many persons may not give full credibility to recommendations put forward by WHO and other bodies. They may refuse to be vaccinated and may put their own health and lives at risk” (Flynn, 2010). Next time, rather than putting all responsibility, and trust, on the WHO, there should be an equal inclusion of government, non-governmental and individual dialogue, both internationally and domestically.

The 2009 Flu pandemic was handled in a similar systematic manner as the Global Health Security Agenda. While the flu responses didn't specifically treat the pandemic like a security issue, the interventions were based on building capacity. However, it is important to realize that this doesn't work to stop a flu pandemics. The flu is airborne, and even if the best public health system is aware of the cases, large amounts of people could contract it before a successful intervention. The slow response to develop a vaccine, and the conflicts of interest ultimately failed the transparency and responsibility of health organizations. Another important point is that even with capacity building projects, member nations were not successful at stopping the flu within their state. Pharmaceutical companies also have too much power in deciding whether or not to make medicine. Along with many other infectious diseases, these interventions forget about the importance of affordable and accessible health care for impoverished people. The Global Health Security treats infectious diseases in a similar manner. These interventions did not rely on building strong health systems and developing safe, affordable medications for developing nations. Also, without collaboration form governmental structures, it is hard for the WHO to reply to a pandemic across the globe by itself. This narrative is very similar to the Ebola and Zika stories.

Conclusion Part I:

Examining the domestic and international responses to Ebola, Zika and Influenza makes it obvious that there is not one magic solution for dealing with emerging and reemerging infectious diseases. Government's, health ministries and non profit international health workers often forget that each infectious diseases need to be examined individually, and involve the already existing local health workers. This paper is meant to prove that interventions, like the ones used in Ebola, Zika and Influenza responses often do not work in providing long term protection against infectious diseases. Also, specifically that the Global Health Security Agenda likely not provide the outcome that the American government hopes for. Emerging infectious diseases are caused and fueled by political strain, poverty, gender inequality, lack of communication and trust, and corruption, which can not be stopped by using the American military, and high tech laboratories. While the American government believes that the best way to protect its country is to address gaps in health systems, this will not solve the long standing issue of what triggers diseases. The best thing America could do, to protect its own nation, would be to build strong health care systems globally, and support countries with social and political equality. The next few paragraphs will examine why the GHSA will not be successful and how they could help countries that are prone to emerging diseases, while also protecting America.

There are many problems with the Global Health Security Agenda. One obvious point is that the GHSA is attempting to protect Americans, at the expense of developing nations. Their perspective on this entire program is rather controversial and demeaning. Although it might not seem like it, the whole point of this program is to block infectious diseases coming from

developing nations to enter the United States, without having to directly and continuously help them. It's hard to believe that America thinks the Global Health Security Agenda will work, since there is so much evidence that proves it will just be repeating the same, previous mistakes. While the Global Health Security Agenda could work for small, short term interventions it will certainly not stop re-emerging and huge, global epidemics. As discussed previously, there are still so many political and social obstacles that the GHSA does not take into account. For example, if distrust between governments and its citizens gives rise to infectious diseases, and women are still unable to receive proper reproductive care and health education because of repressive governments and inequality, how will putting in high tech laboratories and having SWAT like teams surveilling local towns help? If anything, that would just increase fear and uncertainty between the organizations and the citizens. There is zero trust built between the GHSA and the people it is trying to help. The people who are most at risk barely trust their own government, so why do we expect them to trust another government? The GHSA also attempts to address the situation with one magic solution. An entire array of infectious diseases, such as Ebola, Zika and Influenza, can not be stopped from entering into the United States by just one organization addressing the entire spectrum of diseases. And this was shown in the first chapter, when massive projects like vaccinations and penicillin were used to eradicate multiple diseases. Each country and each infectious disease should be treated differently and should regard cultural differences, past historical changes (political and social) within the country and local communities in order to fully and properly address the disease. The GHSA also fails to involve local governments, which has previously proved to be extremely important in stopping infectious diseases. The big issue is that there is not one solution to stopping diseases, and it is more

difficult than just building huge hospitals and laboratories. It takes governments, local and national health systems, and the people to all collaborate and trust each other. It is disappointing to see so much money go into a project that will likely not work long term or provide the care and support that the most at risk need. The solution is not as surprising as one would think, and with a little time and realism, infectious disease could be stopped.

Another issue with the Global Health Security Agenda is that it only concentrates on emergency, infectious diseases that have the potential to infect large masses of people. While this seems important, which it is to certain point, this program fails to address the preventable diseases that kill more people per year, and disproportionately affect impoverished communities. Diseases like, "diarrheal diseases are among the top 10 leading causes of infectious disease deaths worldwide, accounting for 1.5 million deaths annually. Children under age 5 account for more than half of those deaths. Diarrheal disease is the second-leading cause of death in that age group"(Roussel, 2018). In developing nations all over the world, enormous amounts of mothers and their children die from preventable diseases. Malaria, birth and prenatal complications, pneumonia, malnutrition, and tuberculosis are leading causes of death. In a time where medicines and healthcare are available, programs like the Global Health Security Agenda focus their attention on health conflicts that are potentially dangerous to American and western security rather than on funding programs that would eradicate preventable diseases entirely.
Overall, the Global Health Security Agenda approach will not be successful at protecting Americans, or eliminating infectious diseases.

Conclusion Part II:

So what could America do to help nations that suffer from infectious diseases? First of all, that is not exactly what the Global Health Security Agenda aims to do. Sadly the point of the program is not to help local people suffering from infectious disease. But rather, the point is to stop those diseases from affecting, or spreading into America. So sadly, these recommendations are futile for the Global Health Security Agenda, if the purpose is not helping affected communities in a humanitarian perspective. However, the solutions are important to understand and recognize. Regardless, and they are quite simple. So then if the American government, and other involved first world countries want to really stop infectious diseases from spreading across the world, what could be done?

The first and arguably the most important recommendations, to stop infectious diseases, are to support and provide education, provide access to reproductive care, and alleviate women out of poverty. There is ample research that proves that educating women leads to a healthier life, and thus healthier children. One study shows that, "more educated women know more about prenatal care and child health, and hence might have lower fertility because of greater confidence that their children will survive. Female education has a greater impact on age of marriage and delayed fertility than male education"(Pradhan, 2015). Other studies show that, "[i]f all women had a primary education, there would be 15% fewer child deaths. If all women had a secondary education, child deaths would be cut in half, saving 3 million lives" (UNESCO, 2013). Providing reproductive and basic education, as well as equality and access to health services is critical in stopping infectious diseases. The Global Health Security Agenda does not address women's

equality or education at all, which is a huge issue. Adopting a more humanitarian outlook on solving infectious diseases could be extremely successful for the Global Health Security Agenda.

The second recommendation is to stop supporting corrupt governments. There are often ample infectious diseases in corrupt nations for several reasons. Most times, the governments keep the money which is meant to provide health services to its citizens. Because of this, the people do not trust health workers, doctors are underpaid, and there is no incentive for nurses to show up to work in a time with Ebola ravaging throughout their hometown. Even with huge hospitals and high tech resources, with no trust between the government and its people, diseases like Ebola, Zika and Influenza will not stop. People will not show up to hospitals if they believed the government is corrupt and trying to kill them. Even when health workers come to the villages the locals will not trust them. Most international health workers, especially ones that work for programs similar to the GHSA, do not regard any cultural obstacles. For the Ebola epidemic, this was a huge issue. International organizations paid no attention to the individual cultures of villages affected by Ebola. Without the government gaining the trust of its people, it is extremely difficult to achieve a infectious disease free country. Again, the Global Health Security Agenda fails to recognize this as a realistic solution to stop infectious diseases.

Another suggestion is to support and monitor local and domestic health initiatives, which is extremely helpful in combating infectious diseases. Local health initiatives that gain the trust of the people and create a safe and accessible place to seek health services are some of the most important solutions. Giving money to these local programs could be beneficial both domestically and internationally. It is necessary to monitor these programs, especially in countries with history of corruption and repressive governments, but, doing this would have been beneficial for Ebola,

Zika and Influenza. Accessible and safe care is a luxury that many people around the world have no access to. Sadly, the Global Health Security Agenda does not focus on domestic and local health initiatives. The program focuses on building hospitals, sending over SWAT teams, and creating high tech laboratories to stop infectious diseases. But this still doesn't give access to remote and high risk citizens. It's not that they need huge hospitals to treat these diseases, but they need a trusting local and domestic health system whom they will listen to if an epidemic comes to their village. While international organizations can help for short term, emergency care, it will not provide a long term stable health system across the globe.

Another important solution is to distribute funding and attention towards high mortality health issues. While infectious disease prevention is important, high numbers, of specifically children and women, die from pregnancy complications and preventable infections, which with the correct funding, attention and a basic health care system could easily be eliminated. Billions of dollars are being used in the Global Health Security Agenda to combat future disease threats, but they likely won't be successful. Re-evaluating the process and implementation of preventing and treating diseases is extremely critical. Lastly, it is important to modify the intervention in every outbreak. Having the exact same intervention tactics to stop an outbreak is pointless. Every country, every town, and every person will respond different to an epidemic.

All of these suggestions are important to stop infectious diseases domestically and internationally. Sadly the Global Health Security Agenda does not address any of these tactics. As shown previously, and examined within the Ebola, Zika and Influenza epidemics, the problems which fuel epidemics are often more political and social than one would think. It is easy to say that providing hospitals and men in white suits and yellow gloves to developing

nations will stop diseases, but that is extremely incorrect. Every country needs basic, accessible, safe and equal health treatment in a country that is provided in a transparent environment and is looking out for the best interest of its people. Sadly, as shown, this is not available to most of the world. America has the power to shine this light on the world and keep everyone safe from infectious diseases. It is extremely discouraging to see this amount of support and money being fueled into a project that will not be successful in the long term. The world needs to stop looking at disease as a poor person's problem, but rather a predisposing barrier that barricades people from living up to their full potential. Recognizing this is the first step to a long list of political and social behavior changes that need to be implemented. This paper makes it extremely clear that the Global Health Security Agenda will not stop diseases from spreading domestically, and into the United States. The future of emerging diseases is extremely uncertain and alarming. By looking in a different lens, it is apparent and obvious what steps need to be taken, however rich governments fail to recognize the true reasons, which are less expensive and difficult than building giant hospitals. In a paper such as this, it truly highlights the importance of reflection and critical thinking. If only governments and international organizations could see beyond their traditional path, and start progressing, a world without epidemics is possible.

Personal Remarks

When I first began this project, I knew very little about to solve infectious diseases. But I knew I had one question in mind, and that was, "what is the most effective way in combating infectious diseases, especially in developing nations." In the grand scheme of things, I still know very little. But throughout this project I have gained the knowledge to further understand the reason for how, why and where epidemics spread.

This paper just barely dives into the extremely complicated subject of international disease, but I feel like I now have the foundation to make a difference in the health world. It's sad to read and write about how impoverished people are often the worst off, but it's also important to understand, so something can be done about it.

Health should be a priority for all governments, and safe and affordable care should be accessible to every person regardless of their gender, income and age. Even though infectious diseases are important to treat, most mortalities, in both developing and developed nations, come from noncommunicable diseases and complications in health emergencies. Education and training is very critical for both health workers and the public. Reproductive education for young girls, and adults, should also be provided to all people regardless of their governments politics and religious background. And arguably above all else, a strong health system, where all people have access to safe care should be implemented.

This paper was a great way to end my time at Bard College and I am very grateful for all the help I received along the way. I hope that one day, every person will have access to safe and affordable health care. For now, I hope this paper teaches people about infectious diseases, and that instead of being afraid of them, governments and it's citizens should work together.

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