Ebola and Bioterrorism

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Abstract

This paper will be a comparison of the United States government’s reaction to the recent outbreak of Ebola and will compare this response with the potential response by the United States government toward an act of biological or chemical warfare. The paper will analyze these responses from a cultural, political, legal, and policy standpoint.

I. Introduction

The Ebola Virus Disease (“EVD” or “Ebola”) Outbreak of 2014 is the largest in history, initially affecting countries in West Africa, leading to global health implications after spreading to other geographic regions including the United States. In December 2014, the outbreak began in Guinea and was declared to be a “public health emergency of international concern” on August 8, 2014 by the World Health Organization. Beginning in August 2014, the United States Government and American Health Organizations started to formulate and implement plans for how to contain the spread of the disease. These programs were not sufficient as Thomas Eric Duncan became the first person diagnosed with Ebola in the United States after several administrative errors by the United States government and the hospital to which he was confined in on October 31, 2014. On October 8, 2014 Thomas Eric Duncan died from the Ebola Virus, and the virus spread to other members of his treatment team. The failure to contain and to cure Mr. Duncan on American soil led to fear and speculation among the general public which was worsened by the media’s coverage of the outbreak.

The speculation resulted in many fears of a possible failure to not only combat and cure infectious disease in the United States, but what about the potential to mitigate the harm of an act of Chemical or Biological Warfare upon the United States by terrorists including ISIS. Even more concerning: the fact that even Ebola could be weaponized and used by terrorists. The Centers for Disease Control and Prevention (“CDC”) defines a chemical emergency occurs “when a hazardous chemical has been released, and the release has the potential for harming a person’s health.” The particular type of chemical emergency that will be examined here is Bioterrorism or “the deliberate release of viruses, bacteria, or other germs used to cause illness or death in people, animal, and plants.” Much of the governmental policy to respond to a Bioterrorism attack was put into place in response to the September 11th, 2001 and 2001

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6 Centers for Disease Control - http://emergency.cdc.gov/chemical/overview.asp
7 Centers for Disease Control - http://emergency.cdc.gov/bioterrorism/overview.asp
Anthrax Attacks and is outlined in the Department of Homeland Security’s (DHS) National Response Plan. The actual response to Ebola and the Bioterrorism response plans should be examined with the major administrative, political, and legal decisions in mind.

II. Cultural Implications of Spread of Disease/Chemical Weapons

There have been both positive and negative cultural attitudes revolving around the Ebola epidemic in the past several months. Ebola has been everywhere – on television, radio, the internet, and newspapers. Ebola has been talked about enough to convince 22% (1/5) of people in the United States to worry that they will be infected with Ebola, 52% of United States citizens are very or somewhat confident that the government will be able to handle the Ebola crisis in the United States, and in October 2014 Ebola appeared at #5 on the American’s Lists of U.S. Problems, tied with the federal debt. The non-stop media coverage is making widespread panic more likely because the media coverage covers the panic as if it is normal. The two major ways this is happening is through the constant questioning of who is in charge of the reaction to Ebola and by constantly spreading fear about the outbreak in the United States. For example, Ebola was reported as a mid-term election political issue, with each political party blaming the other for the outbreak, and CNN referred to Ebola as “The ISIS of Biological Agents” merging Ebola and terrorism fears together. These fears are attributed to deeper fears that science and medicine will fail, our government is inept, and that human life will completely transform.

In Anthropology there are many social phenomena that have been attributed to the fear of the failure of science and medicine, as well as the failure of fundamental institutions including the government, most notoriously the zombie. Jeffrey Cohen of the Ohio State University Department of Anthropology argues that modern takes on the zombie are portrayed as a reminder of the dangers of freedom and the costs of difference. In the United States, the differences are vast, if not in reality at least in our biased viewpoints: we have a more advanced health system, a better education system, and more financial resources than the countries in Western Africa. American Exceptionalism and Patriotism are in full force when comparing the United States to other countries. However, the initial transmission of Ebola into the United States and the death of Thomas Eric Duncan created a firestorm of fear. American culture took the viewpoint on the Ebola disease that because, like a fictional horror zombie, the disease is unknowable, unstoppable, and our more advanced health system and government cannot handle it, we must become violent and cold to succeed in stopping it. Some of the proposed solutions that followed the initial transmission were efforts characterized by uneducated viewpoints of not only Ebola, but of the positive impact public health initiatives in containing and managing the Ebola Virus.

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15 Undergraduate Slides from Anthropology 3334: The Anthropology of the Undead at The Ohio State University.
The need to have competent and informed policies for public health and bioterrorism emergencies reduces the fear, the panic, and makes the initial stages of any epidemic or outbreak less deadly. The majority of the fear with Ebola has centered on the fact that we had no defined effective treatment even when there is a 21-day transmission period. With Bioterrorism, we may have the appropriate resources, but there is not a 21-day transmission period, so the United States needs to have timely and effective means for using the measures that we have available. These plans would help deal with the expensive cost and high risk of creating effective and timely treatments for biodefense and emerging infectious diseases. By having an informed public, these fears can be transformed into critical thinking that develops the means and measures that save thousands of lives around the world.


Beginning in August 2014 the United States began implementing procedures to help manage the Ebola Outbreak. Several of these procedures and policies were met with controversy and cynicism toward their effectiveness and implementation. It is necessary to understand these policies to compare them with the policies in place for an act of Bioterrorism.

A. CDC vs. Obama vs. Health Care Entities: Who’s in Charge?

At the beginning of the Ebola Outbreak, there was confusion about who was in control of the government’s response to Ebola. Initially, President Obama never appointed or mandated a specific agency to be in control of the administration’s response to the Ebola Outbreak in the United States. This allowed the government agencies to handle the response to the Ebola Outbreak; where CDC Director Tom Frieden and DHS Adviser Lisa Monaco were credited as being leaders in their agencies in response to the outbreak. This dual leadership led to confusion among who was in charge and responsible for the policies that were being implemented to reduce the risk of Ebola spreading throughout the United States. President Obama, the CDC, DHS, individual health care entities, and to some degree individual states were all considered to be in charge by the general public of the initial reaction.

This confusion reached heightened states between October 10th and 13th when the second and third cases of Ebola virus were diagnosed in the United States. For the second case, Nina Pham, Tom Frieden initially blamed the spread on a “breach of protocol” by the nurse and by Texas Health Presbyterian Dallas. Tom Frieden then was criticized for the ever-changing policies of the CDC that had never been implemented before, with criticism saying that the United States has a “system failure.”

This disagreement between the CDC and Hospital led to legal speculation regarding liability for the outbreak. Theoretically, Nina Pham would be able to recover worker’s compensation benefits or sue Texas Health Presbyterian for negligence due to her lack of training. The hospital then could in turn try to sue the CDC to recover because of lack of training implementation for specific infectious diseases. This controversy was only furthered when the Associated Press released a series of reports detailing the treatment of Mr. Duncan at Texas Health Presbyterian Dallas which stated that works did not wear hazmat suits for several days,

and that his specimens were transported in a potentially dangerous method due to the changing conditions of the policies that were being used.\textsuperscript{19}

The third case of Ebola in the United States, Amber Vinson another nurse involved in treatment of Mr. Duncan, was allowed to fly to Cleveland shortly after treating Mr. Duncan, she then returned to Dallas several days later and was confirmed with a case of Ebola. CDC Director Tom Frieden stated publicly that she should not have been allowed to fly whilst failing to mention that Ms. Vinson had consulted the CDC before flying.\textsuperscript{20} This led to a conflict of stories and eventually Ms. Vinson retained a lawyer to defend claims that she did not violate CDC quarantine guidelines.\textsuperscript{21}

i. Appointment of Ebola Czar

The conflict between these groups, the growing criticism, the ongoing legal debate about liability, the excessive cost of treating the Ebola Patients, the inability to contain the initial case of Ebola, and other political concerns led President Obama to act to appoint Ron Klain as an “Ebola Czar” to handle the administration’s response to the outbreak.\textsuperscript{22} This was a political move to take some of the heat from CDC Frieden and the Department of Homeland Security while allowing them to focus on their other responsibilities including flu season and the emergence of ISIS, respectively.\textsuperscript{23} In August public pressure had urged President Obama to appoint someone who would be in control of the administration’s response, which President Obama opposed initially.\textsuperscript{24} President Obama changed course as the issues began to pile up, however there was opposition to the appointment as Mr. Klain has no medical experience and is a lifelong bureaucrat serving as aides to Vice President’s Biden and Gore.\textsuperscript{25}

Initial questions about what exactly Mr. Klain would be doing as the “Ebola Czar” were initially kept broad by the White House, but he goes between the agencies and the White House to make sure that everyone has the same central message, making sure the public healthy bureaucracy works efficiently, and making sure each of the agencies fit into the broader strategy of how to maintain and manage Ebola.\textsuperscript{26} From a policy standpoint, this position is incredibly important as it keeps the administration’s message the same which is a way to negate fear. If those who are in control are on the same page, some of the chaos with the initial spread of the disease is taken out of the picture. However, it is vital that the overall strategy that Mr. Klain and the administration is working toward is an effective use of Public Health Systems and Strategies to micro-manage the dangerousness of Ebola.

B. State Quarantine Policies for Ebola Outbreak

One of Mr. Klain’s first tasks as the “Ebola Czar” has been helping federal agencies usher in the CDC’s new guidelines for returning health care workers after state quarantines in New Jersey and New York were criticized by public health officials.\textsuperscript{27} On October 24, 2014

\textsuperscript{20} New York Post. http://nypost.com/2014/10/15/dallas-nurse-with-ebola-should-not-have-been-traveling-cdc/
\textsuperscript{24} CNBC. http://www.msnbc.com/msnbc/ebola-czar-ron-klain
\textsuperscript{26} See Footnote #22.
\textsuperscript{27} See Footnote #22.
New York and New Jersey became the first two states to mandate a 21-day quarantine period upon arrival in the United States for any medical personnel who had been treating Ebola patients in West Africa. The first person, Kaci Hickox, to be quarantined in New Jersey tested negative for Ebola but described her treatment under the quarantine as “inhumane” and that she should be released since she no longer shows signs of Ebola, prompting legal and civil rights actions from her, which a judge ruled in her favor on because local authorities showed no need to keep her as long as she monitors herself. Facing the similar type of pressure New York changed their policy to allow the monitoring to be done at home.

However, a full challenge to quarantines would likely fail under the U.S. Constitution. It is unlikely that an equal protection claim will be made by anyone being quarantined due to lack of evidence that people are being quarantined for discriminatory reasons. It would then fall to a due process claim which allows the government to use a rational and scientifically based quarantine. In the case of Ms. Hickox she was arguing that the quarantine had no science behind it, however Jacobson v Massachusetts allows the government to pick their own science experts in their determinations of what is “scientifically based.” Thus meaning a full over-ride to the monitoring would most likely fail. The Maine Court must be worried about the rationality aspect, since the quarantines seem to be a political move based on public fear.

These 21-day mandatory periods were longer than the CDC guidelines imposed and have varied from state-to-state in implementation. The CDC guidelines created confusion among the states and several states, such as Ohio, wanted a more clearly-defined plan. Dr. Anthony Fauci has stated that not every hospital can take of Ebola patients and ensure the safety of those healthcare workers around the patients, therefore states should be able to organize responses to make sure these systems work. These proactive measures by states are necessary to contain the spread of Ebola. States must have plans that allow them to combat these diseases on the front-line before federal assistance is required because if time lapses it may become too late to control the spread of these highly infectious diseases. However, it is also necessary that constitutional rights and common-sense are not swapped for these measures because of fear.

C. International Flight Debate

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33 Jacobson v Massachusetts, 187 U.S. 11 (1905).
34 See Footnote #30.
On October 8th the United States began screening for Ebola at five International Airports, covering 94% of the travelers from West Africa. On October 21st the Department of Homeland security extended the screening to all people flying from West Africa by directing those flights into one of the aforementioned airports. These were responses to congressional leaders, political commentators, and other personas calling for a complete ban on the issuance of visas from these countries. Although these may be the most effective containment methods with the Ebola disease there is no need to further discuss them as the signs, symptoms, and spread of a bioterrorist attack would be different and this method of containment would seemingly be unhelpful in that hypothetical situation.

D. Vaccination for Ebola

The vaccination for Ebola has raised significant practical, legal, and ethical considerations. Vaccination is one of the primary defenses the United States has against a possible act of bioterrorism so the debate about the treatment of Ebola via vaccine has significant weight in how the government would respond to a potential act of bioterrorism. For Ebola the controversy has centered on the cost of these vaccines, whether or not the potential vaccine candidates are safe and effective in Phase I Clinical Trials, and ethical considerations including who should have access to the vaccines and how rapid should we advance the development of these vaccines. Intriguingly enough, Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases (the researchers experimenting with one of the major vaccines in development) stated that there was “no miracle cure” for Ebola and that instead of a vaccine we need sound public health practices, management of affected communities, and considerable nationwide and international solidarity to prevent Ebola from becoming an even more severe problem. The fear that the world must have when an Ebola Vaccine is created is that we do not become complacent with our public health systems insofar as that they become ineffective. The cost of the Ebola Vaccine will limit it from being available in West Africa raising even more public health and ethical concerns. These considerations have led to succinct failures in the past and we must overcome these to combat a potential act of bioterrorism.

IV. Current Chemical/Biological Warfare Legal and Policy

A. Past Incidents

41 CNN. http://www.cnn.com/2014/10/07/health/ebola-vaccine-ethics/
42 See Footnote #34.
i. D.C. Anthrax Attacks

The majority of the United States policies dealing with Chemical and Biological Warfare stem from the 2001 D.C. Anthrax Attacks which occurred shortly after the attacks on September 11, 2001. These attacks consisted of letters laced with anthrax appearing in the United States mail system which killed five people and caused seventeen to become ill.\(^{43}\) The investigations into these attacks produced new scientific methods that could impact investigations and eventually led to the development of the National Strategy for Homeland Security, specifically the National Response Framework.\(^{44}\) The National Response Framework is the framework for the United States government to prepare for and provide a response to disasters including natural and acts of terrorism by numerous agencies in the government.\(^{45}\) This is an important step in theory, however the practicality and implementation of a plan that multiple government agencies with other tasks must know and follow raises suspicion into how practical this framework might be.

ii. Recent News of Untreated Chemical Attacks During Iraq War

More recent incidents of chemical and biological warfare occurred during the Iraq War. On October 14, 2014 the New York Times issued a report detailing that during the Iraq War American troops were exposed to chemical weapons and received inadequate medical attention due to government secrecy.\(^{46}\) This government secrecy occurred because these weapons were linked to being produced by the United States and its allies, not Iraq or terrorist organizations.\(^{47}\) This secrecy occurred while internally the military issued procedures in treating exposure to chemical and biological weapons, none of which was followed in most of the cases of US service members being exposed to chemical weapons.\(^{48}\) Not only does the report raise ethical considerations in treatment of chemical weapons, but the end of the report is also ominous to future concerns as the largest source of chemical arms was mishandled by Iraq’s new government and is now under the control of ISIS.\(^{49}\) The possibility of an act of bioterrorism or chemical warfare is a possibility that the United States must be prepared to handle on a domestic scale.

C. United States Chemical and Biological Defense Policies and Programs

i. Congressional Programs

The United States Congress has passed several acts that deal with potential acts of bioterrorism that shed light into our defense strategies and for how prepared we are for a large scale act.

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\(^{43}\) FBI. http://www.fbi.gov/about-us/history/famous-cases/anthrax-amerithrax/amerithrax-investigation
\(^{44}\) Id.
\(^{45}\) FEMA. https://www.fema.gov/media-library/assets/documents/32230?id=7371
\(^{47}\) Id.
\(^{49}\) See Footnote #44.
a. Project Bioshield

Project Bioshield was the first act passed by the United States Congress in response to 9/11 and the D.C. Anthrax Attacks. The bill authorized $5.6 billion of spending from 2004 until 2014 to develop and stockpile drugs to fight some of the conventional methods of bioterrorism. In September 2012 it was reported that the United States has acquired around 107k doses of an antitoxin for Botulism, around 29 million doses of treatment for Anthrax, and 5.9 million doses for smallpox. Project Bioshield has been praised for incentivizing the pharmaceutical industry to support national security by creating a market that did not exist before the act.


This act was passed to amend the Public Health Service Act in order to extend Project Bioshield and improve programs designed to prepare the United States “with respect to public health security and all-hazards preparedness and response.” This act specifically extended Project Bioshield with an additional $2.8 billion from 2014-2018. These acts although good in theory have been met with two major criticisms: The White House and Congress have transferred almost $2.2 billion from Bioshield for unrelated purposes to the act and for what we have accumulated it would not be effective in helping the country in the case of a real emergency.

ii. The Strategic National Stockpile

In March 2003, the National Pharmaceutical Stockpile Program became known as the Strategic National Stockpile Program under the Department of Homeland Security. This program was established to oversee the stockpile of pharmaceutical agents, vaccines, medical supplies, and equipment and make them available in case of an emergency. The Strategic National Stockpile will release a “push-package” of essential medical equipment and vaccines within 12 hours of the state making a request to the CDC director. The CDC Director will then evaluate the request with officials on multiple levels of the government and decide on a plan of action. The act relies on each state and local agency to unpack, apportion, dispense, and account for the assets of the package. Numerous researchers and scholars have deemed it “essential that health care providers are actively involved in the emergency preparedness planning, testing, and implantation phases of the community’s disaster plan to know how to take advantage of this resource.”

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55 Id.
56 Esbit, Debralee R.N., Disaster Management and Response: Volume 1, Issue 3 p. 68-70
57 Id.
58 Id.
59 Id.
60 Id.
iii. Fort Detrick

Fort Detrick in Maryland contains the majority of the United States resources for defending against bioterrorism. 61 This includes the United States Army Medical Research Institute of Infectious Diseases, the Department of Defense’s lead laboratory for medical biological defense research. 62 These are some of the most advanced research institutions in the world and the D.C. Anthrax attacks were linked back to an employee at Fort Detrick. 63 Although the majority of the research that has been completed at Fort Detrick under these programs is considered classified, it is no doubt an important and valuable asset in determining whether or not our programs are purposeful and practical in defending against these threats.

D. Effectiveness/ Accountability: Worth It?

From poisoned spears in ancient times to mustard gas on the battlefields of World War I, chemical and biological weapons have existed for almost as long as humans have. There has not been a confirmed bioterrorist attack in the United States for 13 years and even that was committed by a scientist from USAMRIID, one of the most advanced research institutions in the world. Yet, the United States is spending billions of dollars on a threat that may be over-exaggerated. The dominating theme in this debate is that the advancement of modern day technology is making it easier to create these weapons and distribute them to cause death. However, there must be external pressures that prevent this from happening whether it be knowledge, financial, technical, or logistical, since these attacks are so rare. The response of the government and public health officials may also reduce these attacks substantially even if they are to occur. 64

Ethical Considerations need to be weighed heavily in these debates as well. The United States is spending millions of dollars on researching micro-organisms that could potentially alter life if something were to go wrong. For example, the Smallpox virus only exists in laboratories around the world and is kept “for future scientific research” however, if it were to spread out of the control of these laboratories it could cause irreparable harm to human life. 65 There is reasonable fear of a potential act leading us to save lives with preventive research and then there is an over-reaction that results in us “playing God.” These decisions have no Legal Remedy. We can vote and change members of Congress but if these decisions have severe consequences it may be too late for us to sue a scientist or Congressman.

We also need to be realistic about whether or not we can stop or mitigate acts of Bioterrorism. These viruses and diseases spread quickly through the air and we have no effective way of eradicating them when they are free to mutate in nature. Even assuming that the CDC and States can distribute vaccinations to a specific region there is still a 12-hour period of chaos in which we would not be able to track the spread of these agents. We would also have to wait for the vaccinations to take effect since they do not start working immediately. By the time these resources are used we may have already lost hundreds of thousands of lives or more.

This debate mainly constitutes money and how much countries are willing to spend to get effective results. It seems like to be fully protected from an event such as this it would cost an unobtainable amount of money. As we stand right now in the 21st century, it seems as if the

61 http://www.detrick.army.mil/
63 http://www.fbi.gov/about-us/history/famous-cases/anthrax-amerithrax
64 http://io9.com/are-the-threats-from-synthetic-bioweapons-being-exagger-1636829313
money may be spent into less speculative ventures such as scientific research that enhances technology that one day may be able to combat these acts. The United States has to weigh all factors and decide if our current Bioterrorism response policies are effective and useful, or if we need a shift in our allocation of resources.

V. Comparing the Ebola Response and Chemical/Biological Warfare Policy

In order to have an effective Bioterrorism response plan the United States needs to learn from its initial failures during the Ebola Outbreak, or fear and confusion will spread as the theoretical attack devastates the population of the United States. There are two main points that can be ascertained from this comparison: 1) If our initial response from Ebola is similar in an act of Bioterrorism we will have casualties and chaos; and 2) As the 21st century America becomes more known for a public that distrusts the government, and a government that dislikes spending, with how much we have allocated to prepare for a potential act it is essential that the plan is effective.

A. Initial Response

Acts of Bioterrorism do not have 21-day waiting periods as the Ebola Virus does, we will not have time to adapt and develop policies that help us with an act of Bioterrorism; instead we will need immediate and effective reaction. The appointment of the Ebola Czar has been effective from a public relations standpoint, more so than as an actual leader in the response plan. It is worrisome that part of our National Emergency Response Plan did not have numerous people that have the same role of the Ebola Czar: employees at the main federal agencies (CDC, DHS, FEMA, etc.) that worked among the agencies to make sure everyone essentially agreed on the response. There is a necessity for more intermingling between the federal agencies when it comes to formulating these policies and procedures. We do not need a larger bureaucracy; we need a more serviceable bureaucracy. These administrative agencies also need to not only make sure that logistically everyone is on the same page, but they also need to safeguard that the goal of these policies is the best use of public health system to contain these potential threats and maintain livelihood.

States also need to take responsibility into their own hands by formulating their own plans for how to handle mass disasters including outbreaks and terrorist attacks. The proactive responses by states including: Ohio, New York, and New Jersey may have been controversial in the end due to the nature of Ebola, but they protected citizens in those states before the federal government came up with their own recommended guidelines. These state plans are especially important when it comes to the Strategic National Stockpile which places emphasis on the states to request, receive, administer, and monitor the resources that are distributed by the federal government in case of emergency. Local, state, and federal public health officials need to be consulted and involved with the creation and implementation of these procedures as they have the requisite knowledge and will be responsible for the on-the-ground action.

This response needs to take into account whether or not there shall be mandatory travel restrictions, quarantines, and vaccinations. Due to the controversial nature of these issues the United States need research on whether or not quarantine and travel restrictions would be effective in deterring the spread of a potential bioterrorism attack and whether or not the use of vaccinations would be helpful in stopping the proliferation of death that could occur.

B. Effectiveness
The ineffectiveness of the United States initial response to the Ebola outbreak cannot be repeated. Not only could an act of Bioterrorism lead to hundreds of thousands of innocent deaths, but we were able to see the ugly reality that most people in country do not trust the ability of our health structure and government to handle the response to the threat. In the past 40 years, public perception of our government has went from superpower to inept at solving problems. We have spent millions of dollars stockpiling vaccinations and coming up with plans that may not be effective in dealing with Bioterrorism and the most dangerous diseases. This era of government is faced with a major problem; lack of financial flexibility. With how tight the United States budget is, the government needs to make sure that we are spending every dollar in a suitable and operative manner. The government should not just look into if vaccinations would stop the spread of disease in a timely manner, but maybe or not we should be spending money on health care related research and development instead of stockpiling vaccinations. The United States needs every approach to be a possibility that we have for a potential act of Bioterrorism. A mass-scale attack could cause unprecedented damage that cannot be predicted in studies. Therefore, the response needs to be open-ended and customizable so the government and public health strategy can adapt and approach these evolving circumstances as they arise.

VII. Conclusion

Bioterrorism has global and societal implications. It has the potential to alter human life and culture as we know it. The United States must have effective policies in place in needs of crisis or we will have a similar initial response, to the one that our government had with the Ebola Crisis, which causes panic and fails the citizens of the United States.