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## Ethics of Ebola Quarantines

By Aaron Pomerantz

The history of quarantines is wrought with fear, with misinformation, and sometimes-even with sound science...science that helps protect people from highly infectious diseases. And it's been this way for a very long time.

During the 1400's, ships arriving in Venice were required to sit at anchor for 40 days before landing due to the Black Plague. It was at this time that this specific practice, was first given its name: quarantine, which was derived from the Italian words *quaranta giorni* which means "40 days".<sup>1</sup> Quarantine was meant to help mitigate the spread of the Black Plague by separating those who may have been in contact with infected people. An important differentiation should be made between quarantine, which is for asymptomatic individuals who may have been exposed to a communicable disease, versus isolation, which is for individuals who are symptomatic with a communicable disease.<sup>2</sup>

Recently, there has been a resurgence of the idea of quarantine usage regarding the current outbreak of Ebola Virus Disease (EVD) in West Africa. At the height of this Ebola outbreak, Sierra Leone, Liberia and Guinea quarantined almost two million people in an effort to stem the spread of Ebola into neighboring countries as well as other regions of the countries. Guinea, Sierra Leone and Liberia utilized a system of quarantine known as a *cordon sanitaire*, which is French for a sanitary cordon. The

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<sup>1</sup> "History of Quarantine." 2014. *Centers For Disease Control and Prevention, Quarantine and Isolation*. Centers for Disease Control and Prevention. <http://www.cdc.gov/quarantine/historyquarantine.html>.

<sup>2</sup> Koenig, K L. 2014. "Health Care Worker Quarantine for Ebola: To Eradicate the Virus or Alleviate Fear?" *Annals of Emergency Medicine*. doi:10.1016/j.annemergmed.2014.12.003.

concept, originally, denoted a barrier that was implemented to stop the spread of communicable diseases, and was common in the medieval times, as well as being used to contain the Black Plague. In practice, a line is drawn around an afflicted area and no one is allowed in, or out, thus leaving people to either die, or survive until the outbreak ends.

In past outbreaks, EVD has essentially burned itself out by its fast replication and infection, quickly spreading from host to host in small villages. These characteristics were beneficial to Public Health practitioners, but highly lethal and detrimental to the villages afflicted by EVD.<sup>3</sup> Herein lays a major difference between previous EVD outbreaks and the one currently happening in West Africa. The current outbreak of EVD has reached major cities, rather than just small, isolated villages. With this increased access to a far greater population of people, letting the disease burn itself out is no longer an option. By forcing cordon sanitaires, Public Health officials run an incredibly high ethical risk, which must be acknowledged, regardless of the danger posed to communities. If countries, NGO's and the WHO can ensure that the basic needs of those who are caught in forced quarantines are met, then these methods may work. However, if these needs are not met, major ethical issues arise, and those must be dealt with. These ethical issues include infringement on individual liberties, limitations of autonomy, and violations of basic human rights.

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<sup>3</sup> Kalra, S, D Kelkar, S C Galwankar, T J Papadimos, S P Stawicki, B Arquilla, B A Hoey, R P Sharpe, D Sabol, and J A Jahre. 2014. "The Emergence of Ebola as a Global Health Security Threat: From 'Lessons Learned' to Coordinated Multilateral Containment Efforts." *Journal of Global Infectious Diseases*.

Additionally, New York and New Jersey attempted to implement quarantines on providers returning from volunteering in Ebola stricken nations in an attempt to stem the spread of the disease, as well as the spread of fear and panic in the United States. The same ethical issues apply in the US as well. However, an added issue is that these forced quarantines of returning health professionals may cause fear and reluctance to volunteer in the outbreak among providers. This fear and reluctance to volunteer places a burden on West African countries whose health providers have been decimated by EVD by prohibiting providers from volunteering.

How can we ethically analyze something as complex as the implementation of quarantines in the West African EVD outbreak? We first would look to medical ethics as a guide to discussing these issues, however, as Nancy Kass points out, medical ethics often ignore the health and safety of the greater population in favor of the individual.<sup>4</sup> Thus, Kass took it upon herself to design her own framework of ethics for Public Health that she felt better reflected these issues. We will use this framework to guide our analysis of the current EVD outbreak. Kass' ethics framework is divided into six sections based around six questions of analysis and we will go through each one to reach our conclusion.

### **Ethical Analysis**

The first question looks at objectives, and is posed in this way:

#### **1. What are the public health goals of the proposed program?**

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<sup>4</sup> Kass, N E. 2001. "An Ethics Framework for Public Health." *American Journal of Public Health* 91 (11): 1776–82. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446875/>.

Ideally, as Kass points out, the fundamental goal of every public health program is to decrease the morbidity and mortality of the population it seeks to impact. This decrease of morbidity and mortality is the ultimate outcome by which a program must be assessed.<sup>4</sup> In the EVD outbreak the ultimate outcome of the program, in this case quarantining of either individuals or large groups of people, was to reduce the morbidity and mortality caused by EVD infection. Many public health programs are designed to protect a population from themselves, such as is seen in the quarantining of large groups of people. This act is an effective degradation of autonomy, as well as a paternalistic act. In this case, individual's rights and liberty's have been taken away to help protect the greater good from risk of infection to EVD. Is this ethically acceptable? At the most ideological level, the answer clearly must be, "yes." Public health is intended to protect the wellbeing of the greater population, even at risk to individuals, for instance: mass vaccination campaigns... polio, measles, chicken pox. However, once we stray away from pure public health ideology, as we have with the implementation of quarantines in this EVD outbreak, the ethical acceptability drops. If basic human rights have been violated, the program in question should be halted, or adjusted to provide for those rights. Additionally, ensuring that people who are caught in quarantines are at least comfortable also helps to ensure that those people will maintain their quarantines, unlike what occurred in Guinea, Sierra Leone and Liberia, where the cordon sanitaire has done the exact opposite of what it originally intended to do: rather than causing the impacted populations to restrict their movements, it caused them to flee.

The second of the six question investigates *effectiveness*, and asks...

**2. How affective is the program in achieving its stated goals?**

Proposed interventions or programs are based on certain assumptions that lead us to believe the programs will achieve their stated goals.<sup>4</sup> This questions asks us first, to examine what those assumptions are and, then to look at what data exist to substantiate each of them. In this case, we must ask if EVD quarantine can contain people who are having their basic human rights violated...who may be starving, who may suffering and who quite possibly are dying without access to care. When placed in situations like this, people will not stay in the place they are told to. Rather, they will attempt to run away in order to seek help, and this is exactly what we have witnessed in the current outbreak. So how can we ethically justify and analyze public health program goals? Kass reasons we must ask what quantity of data is enough to justify a programs implementation.<sup>4</sup> It is likely to assume that since the quarantines in West Africa affect a *vulnerable* population, we must have powerful evidence to support their usage.

In the US, when we impose quarantines, we must present powerful evidence to support their usage despite the impact of these quarantines *not* being imposed upon a vulnerable population. However, the impact of these recent EVD quarantines does in fact affect vulnerable populations in West Africa, and it does so by denying them professional assistance in the fight against EVD by causing fear and panic in providers who may volunteer.

Additionally, the burden of proof for a public health program lies on governments and public health practioners. This is because populations do not seek out public health programs; rather they are imposed by governments, and their associated ministries upon a population, thus limiting their choices and autonomy. Kass also states that if some data does not exist for a program to demonstrate its validity, said program is ethically

questionable, and therefore must be terminated.<sup>4</sup> In our ethical analysis of EVD quarantines, there is little, to no published data available currently that reflects the validity and efficacy of their usage. It is extremely difficult to find any information from government organizations regarding: #1, quarantine procedures, #2 information, and most importantly #3... data. Nearly all information regarding implementation, as well as number of people affected by quarantines is coming from popular news sources. Thus, in Kass' opinion, our ethical analysis should itself terminate because we have no evidence with which to continue. We however, will bear on, at our own risk.

The third question, an inquiry into burdens, posits:

### **3. What are the known or potential burdens of the program?**

If data suggest that a program is reasonably likely to achieve its stated goals, then the third step of Kass' framework asks us to identify burdens or harms that could occur through the implementation of a public health program.<sup>4</sup> Most public health program burdens fall into three broad categories: risks to privacy and confidentiality; risks to liberty and self-determination, given the power accorded public health to enact almost any measure necessary to contain disease; and risks to justice, if public health practitioners propose targeting public health interventions only to certain groups. It is within the final two risks that we find the most troublesome ethical considerations for the implementation of EVD quarantine.

First, and most obviously, we must address the risks to liberty and self-determination that quarantines impose upon populations, as well as individuals. In West Africa, limitation of movement can be the cause of lack of food, water, and basic health needs. By removing the rights of people to their fundamental human requirements,

quarantines become both burdensome *and* ethically questionable. Additionally, in the US, by limiting providers ability to work, move, and interact with people, we are again violating basic human rights, and putting people, both affected, and unaffected at risk.

Second, if public health practitioners propose targeting public health interventions *only to certain groups*, the ethical implications of this burden to justice are high. In this case, both the quarantines in West Africa, as well as the intended ones in the US, are targeted at specific groups of people. In West Africa, that population is individuals in communities that have been afflicted by EVD. In the US, that population is providers who have volunteered their service and expertise in the treatment of EVD in West Africa. The targeting of specific populations increases these populations risk for stigmatization and ostracization from their communities. Stigmatization of providers, as well as patients can have serious repercussions for public health programs. For example, such attitudes and behaviors could discourage health care workers from treating Ebola patients both in West Africa and the US, with important implications for the capacity of health care teams dealing with patients on the ground.<sup>5</sup>

Kass discusses several types of public health program that may put communities at risk, one of which is: disease reporting. This has been a major issue in the West African EVD outbreak. The primary issue with disease reporting is that it puts the burden of programs on affected countries, not those unaffected by a disease. In this case, many Western countries have been asking for disease reports to help keep our own countries

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<sup>5</sup> Jacobson, Roni. 2014. "Ebola Relief Is Stymied by Unnecessary Restrictions on Health Workers - Scientific American." *Scientific American*.  
<http://www.scientificamerican.com/article/ebola-relief-is-stymied-by-unnecessary-restrictions-on-health-workers/>.

safe, rather than as a means of caring for the safety of other nations. In an op-ed for the New York Times, Microsoft founder Bill Gates stated that it is in our most vital interest to help developing nations create and maintain strong, and effective systems with which to monitor emerging public health threats.<sup>6</sup> However, how do we provide assistance and effective health monitoring without risking a paternalistic, and autonomy infringing policy that places undue burdens on other countries for our protection? Other high-risk public health programs include restrictive and coercive legislation and regulations.<sup>4</sup> Quarantines are an example of this in that their usage imposes penalties for non-compliance, ranging from lack of basic human rights, to stigmatization, to even death.

Question four delves further into the subject of burdens, this time looking at them through a different lens.

#### **4. Can burdens be minimized? Are there alternative approaches?**

Kass' framework ethically requires us to determine if the program can be modified in ways that *minimize burdens* yet, while not greatly reducing program efficacy.<sup>4</sup> Thus, we must return to the need for sound data to analyze the efficacy of the implementation of a public health program. In this case, this means analyzing non-existent data. Data of case counts from the CDC and WHO show that the case counts from the beginning of August, the start of the use of cordon sanitaires in Guinea, Sierra Leone, and Liberia, to the beginning of October, when the restrictions were eased,

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<sup>6</sup> Gates, Bill. 2015. "Bill Gates: The Ebola Crisis Was Terrible. But Next Time Could Be Much Worse. - NYTimes.com." *New York Times*.  
<http://www.nytimes.com/2015/03/18/opinion/bill-gates-the-ebola-crisis-was-terrible-but-next-time-could-be-much-worse.html>.

increased.<sup>7</sup> Going by this data we can say that the ethical risk is an undue burden that can only be minimized by the removal of restrictive and coercive public health programs.

In question 5 we are considering the notion of fairness in quarantine programs, and doing so by asking,

### **5. Is the program implemented fairly?**

This part of the framework corresponds to the ethics principle of distributive justice, which requires fair distribution of benefits and burdens.<sup>4</sup> Accordingly, *a single populace cannot be subjected to disproportionate burdens that do not apply to other populations*. So, we must ask, *is it fair to subject a single populace*, in this case, people in Sierra Leone, Guinea and Liberia to a cordon sanitaire or returning medical providers volunteering their service to a mandatory quarantine? I would argue yes, *it is fair* if the public health benefit of a program is there, then public health providers are ethically required to protect the health of the public. However, if the program does nothing to protect the greater population, as well as actually causing harm to those affected by the program, then public health providers are ethically required to terminate the use of the program.

John Rawls posits that justice requires us to allocate our resources unequally to help the least well off.<sup>8</sup> This argument supports the notion of a well-implemented and

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<sup>7</sup> “Ebola.” 2015. *WHO Ebola Situation Report*. <http://apps.who.int/ebola/current-situation/ebola-situation-report-1-april-2015-0>.

<sup>8</sup> Rawls, John. 1999. *A Theory of Justice*. 2nd ed. Cambridge, MA: Harvard University Press. [https://www.uta.edu/philosophy/faculty/burgess-jackson/A Theory of Justice \(Excerpts\).pdf](https://www.uta.edu/philosophy/faculty/burgess-jackson/A%20Theory%20of%20Justice%20(Excerpts).pdf).

fairly used quarantine in communities affected by EVD. However, it does not support the mandatory quarantining of medical volunteers returning from West Africa. As a result, this practice creates fear and an aversion to volunteering in afflicted countries, which would *not* be a fair implementation of resources to the least well off.

The sixth, and final point asks us to consider how fairly balanced a program is:

**6. How can the benefits and burdens of a program be fairly balanced?**

If it is determined that a proposed public health intervention, policy, or program is likely to achieve its stated goals, if its potential burdens are minimized and recognized, and if the program is expected to be implemented in a nondiscriminatory way, a decision must be reached about whether the expected benefits justify the expected burdens.<sup>4</sup>

Public health officials must advocate for programs that improve health, and must work to remove programs and policies that are unethical, whether that be because of insufficient data, its discriminatory nature or unjustified limitations on personal liberties. EVD quarantines therefore must be removed, because none of their restrictions are based upon sound evidence, all of them are discriminatory, and all present unjustified infringement on personal liberty.

Additionally, Kass states that public health policies must be built upon open discussion.<sup>4</sup> However, this discussion cannot lead to decisions based solely on the will of the majority, as was seen in the EVD quarantine implementation in the US. This implementation relied on general fear in the public mind of what EVD was, and how it was spread, rather than sound science. In the face of this fear, people chose the most restrictive, and unethical policy choice, which resulted in a program that should not have

been implemented in the first place. Coercive, liberty-restricting programs should *only* be implemented in the face of clear public health need and sound data.

## Conclusion

So what is the outcome of this ethical analysis? The implementation of quarantines, while useful in certain cases, is not ethical in the current EVD outbreak. Neither in West Africa, nor in the US, has the usage of quarantines been well carried out. This apparent lack of disregard for basic human rights is frightening, as well as concerning, in that it has served to greatly diminish our trust in public health providers.

In its study of the current EVD outbreak, the Presidential Commission for the Study of Bioethical Issues stated that they believed the usage of cordon sanitaires is/was troubling in its extremity and apparent disregard for basic needs and fundamental freedoms of both individuals and communities.<sup>9</sup> Additionally, these leading bioethicists felt that the implementation of quarantines is based on assuaging public fear, rather than a utilization of sound science for their ethical decision-making. A telephone poll was conducted in October 2014 after the first imported case of Ebola was diagnosed in the US. When asked, "Are you concerned that there will be a large outbreak of Ebola inside the United States within the next 12 months?" 50 percent of respondents reported being "very" or "somewhat" concerned.<sup>10</sup> So we can come to the ultimate conclusion that if

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<sup>9</sup> "Ethics and Ebola: Public Health Planning and Response | Presidential Commission for the Study of Bioethical Issues." 2015. *Presidential Commission for the Study of Bioethical Issues*. <http://bioethics.gov/node/4637>.

<sup>10</sup> Rasmussen Reports. (2015, January 8). Americans are far less fearful of Ebola. Retrieved February 8, 2015 from

quarantines had been implemented earlier, in attempts to control smaller pockets of people, and not as a last ditch effort to protect people, their usage would have been well done and ethically correct. However, in the current implementation of quarantines, much is wanting in terms of basic human rights for people caught inside quarantine zones, as well as their coercive nature and ability to negate autonomy. Thus, we can say that the use of quarantines in the current EVD outbreak is unethical, and should not have been done at all.

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