The Ebola Tragedy in West Africa: An Examination of the Sierra Leone Experience and Recommendations for the Future

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Introduction

The three West African countries (Guinea, Sierra Leone, and Liberia) that have been most hardly hit by the Ebola outbreak have many things in common, four of which are mentioned here. First, geographically, they share boarders that allow the free flow of people from one country to the other with little entry and exit requirement protocols. Second, they have long-standing ethnic relationships that came about when members of the same ethnic group were divided by arbitrary national boundaries created during the colonial period. These ethnic ties and geographical proximity to one another have also resulted in long-standing trade relations. Business operatives crisscross these national boundaries on daily basis for the purposes of commerce. Third, Liberia and Sierra Leone also experienced brutal civil wars mostly in the 1980s and 1990s that ruined their health infrastructure. Although not to the same magnitude, Guinea similarly experienced its own political conflicts that have resulted in the loss of lives and property. Fourth, for a long time poverty and high illiteracy rates have been affronts to developmental aspirations in all three countries. These geographic, economic, and socio-political commonalities are important characteristics in understanding why the current Ebola outbreak has been so virulent and difficult to contain.

Previous Ebola outbreaks in sub-Saharan Africa have occurred in only a few countries and three different species of the virus (EBOV, Sudan ebolavirus and Bundibugyo ebolavirus) are confirmed as causative agents of those outbreaks (Baize, Pannetier, Oesterreich et al. 2014). These outbreaks have occurred in the Democratic Republic of Congo, Sudan, Gabon, Republic of Congo and Uganda. None of those countries is found in West Africa. As of the time of writing, the West African outbreak has reached six countries that include Guinea, Liberia, Sierra Leone, Nigeria, Senegal and Mali. So far, morbidity and mortality data show that Liberia, Sierra Leone and Guinea have borne the brunt of the epidemic, with Sierra Leone currently the major hot spot for the virus. The current projections of the economic impact of the epidemic run in the hundreds of millions of dollars as the outbreak continues.

It was in March of 2014 that news of the outbreak of Ebola in West Africa was first heard in Guinea (Ansumana, Bonwitt, Stenger, Jacobsen, 2014). In a few weeks the first case of Ebola in neighboring Sierra Leone was confirmed as a woman who had returned from Guinea to attend the funeral of a relative who died of the Ebola virus disease. Many people, especially health professionals, were worried that it could be only a matter of time before the disease spread in Sierra Leone. Health officials in Sierra Leone paid keen attention to the emerging threat. In the weeks that followed many more people in the Eastern part of the country started exhibiting the signature symptoms of Ebola – severe fever, muscle pain, fatigue, diarrhea and vomiting –
sometimes with blood. To date, the first patient of the outbreak (patient zero) has been confirmed to be a two year old girl in Guinea (Baize, Pannetier, Oestereich et al. 2014).

The origin of the Ebola virus and its transmission path to humans has been the subject of discussion by many virologists and is not the focus of this article. The most widely accepted theory is that fruit-eating bats are the source of the virus. It is suggested that antelopes and other primates like monkeys and apes will come in contact with the virus when they eat fruits that have been partly eaten by bats (CDC, 2014). Scientists believe that humans become infected when they come in contact with the fluids and tissue of infected animals or fruits that have not been properly processed or cooked.

Enabling conditions for the transmission of infectious diseases include poor sanitary environments, congested living quarters, dilapidation following the outbreak of wars and antiquated health systems, poverty, cultural practices such as handshaking, washing of human corpses, and many more. These conditions account for easy transmission of disease agents (viruses or bacteria) from one person to the other.

While many developed countries in Europe and North America have shifted major emphasis from infectious to chronic disease treatment and management (Skolnik, 2008) many developing countries still dream of such achievement. The limitations in both therapeutic and disease prevention capabilities have made even easily controlled infectious diseases like cholera become major epidemics. Deficiencies in disease surveillance capabilities, lack of adequate medical personnel and insufficient funding of health systems in the affected countries are some of the major reasons that have made this outbreak the worst of its kind thus far. The purpose of this article is two-fold: 1) To catalog some of the factors that have exacerbated the spread of the Ebola virus disease; 2) To offer some recommendations so that future disease outbreaks (to include non-Ebola outbreaks) can be more effectively handled. The article’s major focus is Sierra Leone, although some of the factors that have aided the spread of the disease are similar in the most affected West African countries of Guinea, Liberia and Sierra Leone.

The Magnitude of the Outbreak

Health experts around the world have agreed that the magnitude of this Ebola outbreak is unlike any other in recorded history to date. As of the time of writing this article, estimates and projections about the full scale of the outbreak (in terms of mortality, morbidity and lost productivity) have been constantly revised to reflect new data. It is reasonable to say that the full impact in terms of mortality rates may never be known due to inaccurate data reporting, especially during the early stages of the outbreak. Nonetheless, credible international actors (organizations and governments) such as the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC) in the United States, and Doctors Without Borders (MSF), to name a few, have all provided grim warnings and estimates about the potential number of infections before the outbreak is contained.

The Centers for Disease Control and Prevention provided earlier estimates of 8,000 or 21,000 Ebola cases (with improved data reporting) by end of September 2014 in affected countries. These figures are further projected to reach a combined 550,000 cases for Sierra Leone and Liberia or even 1.4 million (with improved reporting) by January 20, 2015 unless additional measures are taken (Meltzer, Atkins, Santibanez, et. al. 2014). As of November 7, 2014 the World Health Organization reported 13,268 of Ebola cases and 4,960 deaths in eight affected countries (including Spain and the US). Guinea, Liberia and Sierra Leone accounted for 1,054,
2,766 and 1,130, respectively (WHO, 2014). As treatments centers are hurriedly built in strategic locations within the affected countries, personnel to staff them remain in short supply.

One aspect of this tragedy with long-term implications is the multitude of orphans that are left behind by deceased Ebola victims. Dr. Peter Salama, Global Ebola Emergency Coordinator of UNICEF is reported to have said that 5 million children have been affected by the epidemic and 4,000 have been orphaned (Sierra Express Media, 2014). In Sierra Leone the issue is of such magnitude that the newly constructed Ebola treatment center named Kerry Town will be operated by a UK-based NGO called Save the Children in the post Ebola period. If they survive malnourishment and homelessness during the epidemic many of these children will have little or no prospects to receive an education unless the government and other philanthropic organizations and distant relatives step in.

On the economic front, the economies of these countries have been dealt a serious blow. Guinea, Liberia and Sierra Leone are projected to lose $1.17 billion in lost Gross Domestic Product (GDP) (UNICEF, 2014). Following the intensity of the outbreak, governments have declared public health emergencies that have temporarily halted or slowed local business activities and significantly affected the agricultural and mining sectors and the services industry. These sectors are the mainstay of these economies and account for the lion share of Sierra Leone’s Gross Domestic Product. In Sierra Leone, agriculture accounts for 57% of the country’s GDP (UNDP, 2014). As the outbreak worsened many companies have scaled down operations or stopped them altogether. It is not surprising that the World Bank and the World Health Organization have constantly released revised projections of the amount of money needed to jolt the economies of these countries in the post Ebola period to avoid major financial catastrophe. The UN Secretary General, Mr. Ban Ki-Moon, offers an appropriate assessment of the full ramifications of the crisis when he said, “The Ebola crisis has evolved into a complex emergency, with significant political, social, economic, humanitarian and security dimensions. The suffering and spillover effects in the region and beyond demand the attention of the entire world. Ebola matters to us all” (Ban Ki- Moon, WHO 2014).

The World Health Organization’s situation report issued on November 5, 2014 (WHO, 2014) showed that the three West African countries of Sierra Leone, Liberia and Guinea have taken different trajectories in handling the outbreak. Guinea’s infection rates somewhat stabilized. Liberia was reporting slowly declining rates even though some experts fear this may be related to underreporting. Sierra Leone on the other hand was still reporting high infection rates at the time of the report. As reports are constantly updated these numbers can change quickly.

**Factors that Contributed to the Spread of Ebola**

*Weak health systems prior to the Ebola outbreak*

Limited health care facilities perhaps have been the greatest catalyst in aiding the spread of the Ebola virus. Years before the outbreak two of the affected countries were emerging from the devastation of civil wars that left national health systems significantly ruined. Limited personnel, poor facilities and supplies have compounded the problem. In the area of personnel, for example, Sierra Leone and Liberia have a ratio of about two doctors to every 100,000 people in the country (Worthington, 2014). Although an unfair comparison, the United States has 245 for every 100,000 people (Culp-Ressler, 2014). Prior to the outbreak these countries had...
underdeveloped infectious disease prevention departments, if they existed at all. Investigating disease outbreaks does not only require lab tests, it also must have trained epidemiologists alongside systemic routine surveillance systems and hospitals for treating the sick. To illustrate, most of the individuals infected by the virus in Africa and flown to the United States or nurses in Texas infected in the United States fully recovered from their infections due to better supportive care/treatment. The only exceptions are Liberian immigrant (Mr. Thomas Duncan) and Sierra Leonean surgeon (Martin Salia) whose delayed treatment perhaps resulted in their deaths in the United States.

**Rumors suggesting that Ebola is a myth**

When the outbreak began many people did not believe that Ebola was real. In Sierra Leone there were rumors that Ebola was a machination of the government to decimate populations in some parts of the country. Still others simply did not believe that the virus existed much less its virulence. This disbelief probably prevented some people from taking precautionary measures to avoid infection. The President of the Republic of Sierra Leone, Ernest Bai Koroma, had to deliver a national broadcast to emphasize the seriousness of the Ebola virus disease.

**The scale of the outbreak and lack of prior experience dealing with Ebola**

Previous Ebola outbreaks were few and far between and much smaller in scope than the current one. In 1976, the first outbreak (named Ebola after the river Ebola) occurred in what was Zaire, now the Democratic Republic of Congo (DRC) and was quickly contained (Magana, Kapetshi, Berthet, et al. (2014). In Uganda in 2012, another outbreak was also quickly brought under control. The current outbreak, in a part of the world without previous experience of dealing with this disease, has left already weak health systems struggling to cope.

**Delayed government response**

Closely related to the lack of prior experience with the disease is the issue of delayed response by the governments of affected countries. Many argue that a proactive response to tackling the spread of the virus during the early phases would have prevented what became a ubiquitous problem. In Sierra Leone, many complain that it took the government several weeks to declare a state of public health emergency and establish an effective coordinating body to handle the crisis. The current outbreak is in bigger towns and regions within Sierra Leone, Guinea and Liberia, compared to the outbreaks in the DRC and Uganda, which were confined to small rural communities. Although the DRC and Uganda are much bigger countries than the affected West African countries, the outbreak was not widely spread within those countries as in Sierra Leone and Liberia where the disease quickly became ubiquitous. Added to that are trade activities in the densely populated urban areas of the Mano river region. The swift and decisive response of Nigeria to the outbreak is considered a textbook example of how to nip the disease in the bud (WHO, 2014). Senegal, which has registered only one case to date, is another example worth citing.

**Abandonment of health care facilities**

As the number of new infections and fatalities, especially among health workers, continued to increase, health professionals started to feel a sense of helplessness. Those who got sick saw no
possibility of recovery from the disease. Although Ebola has no treatment at this time, those who received good nutrition and supportive care as soon as they tested positive had a great chance of recovery. Doctors have confirmed that good nutrition and resupply of electrolytes help develop bodily immune systems. In Sierra Leone for example, eleven doctors have so far perished from Ebola (Drs. Sheik Umar Khan, Sahr Rogers, Modupeh Cole, Olivet Buck, Godfrey George, Martin Salia [who died in the US], Victor Willoughby, etc). Inadequate record keeping makes it difficult to account for the number of nurses and other health care workers that have died to date. The infection of missionary health workers, Dr. Kent Brantly and Nancy Writebol, with the Ebola virus in Liberia was much publicized, and flying them out of the country to America was probably the only thing that saved their lives. Many other cases of local health personnel in Liberia, Guinea and Sierra Leone died “secretly.” Without proper Personal Protective Equipment (PPEs) and adequate treatment centers, workers saw no hope of recovery when they were infected. They became disillusioned and many subsequently abandoned health facilities. As such, infected individuals who came to those facilities died due to lack of care. Sometimes, those with suspected Ebola symptoms were refused treatment and even those who suffered from non-Ebola related illness sometimes became situational casualties.

An initial lackluster response by the World Health Organization and the international community

During the early phases of the outbreak, Doctors Without Borders (MSF), a humanitarian non-governmental organization involved in international health crises, issued warnings about the looming tragedy unless swift action was taken. In spite of these early warnings the international community remained largely unresponsive and sometimes paid only lip service to the problem. The Western world and many other developed countries and the World Health Organization grossly underestimated the magnitude of the problem. Poorly coordinated response efforts were spearheaded mostly by affected countries with the help of other organizations. It took hundreds of needless deaths and escalating rates of infections for the World Health Organization, World Bank, African Union, European Union, the United States and many others to champion relief efforts. Many airlines operated by wealthy countries simply suspended flights to and/or from the affected regions, thereby thwarting the delivery of supplies provided by West Africans in the Diaspora and other donors. Even African countries like the Gambia and Kenya banned or placed restrictions on travelers from the three most affected countries.

Stigmatization of Ebola victims

Stigma, like in other illnesses such as TB and HIV/AIDS, has caused havoc in combating the Ebola threat. Actions of some individuals have revealed that they will rather perish in “secret” than submit to testing for Ebola due to the stigma attached to the disease. Truly, being associated with Ebola has debilitating consequences. One local staff in Sierra Leone wrote that “Stigmatization has been a big problem in the Ebola fight, health workers have been thrown out of rented houses and survivors ostracized in their communities…” (Sheriff, 2014). Additional consequences include suspected cases going underground to avoid detection by authorities by moving to new locations even if that means death or spreading the infection to others. In Sierra Leone such migration warranted the government to quarantine northern towns of Makeni and Port Loko because many people were migrating to Waterloo and Freetown, thereby increasing the number of new infections.
Cultural practices

This is perhaps the greatest factor that has exacerbated the spread of the disease. Citizens of all countries observe cultural practices in one way or the other. Sierra Leone, like the other affected countries in West Africa, is an open society that practices communal activities. These activities can include religious ceremonies and burial practices of the dead. The latter has posed major challenges in the fight against Ebola because people prepare the bodies of deceased relatives using the traditional practices of washing and shrouding the body by family and community members. Stories abound about people engaging in such practices under cover from authorities. Such acts became easy means of transmitting the disease to others. It is now widely known that an infected person is most infectious after the person is dead and chances of disease transmission increases exponentially.

As burial teams became overstretched, bodies of infected persons have been abandoned in alleys and along streets in residential areas. At times local residents have protested before bodies are removed for burial. As this article goes into publication, the situation has improved somewhat.

Misinformation and slow information dissemination about Ebola

In a country with high illiteracy rates, sharing life-saving information requires both effective non-written as well as published messages. Before the establishment of a national information center in Sierra Leone, information dissemination, for the most part, was a patchwork of radio announcements and periodic national broadcasts. Many in the rural areas without radios were unintentionally left out. Also, during the first couple of months of the outbreak, misinformation was rife. Some believed that washing with salt water was a prophylactic to Ebola infection. Such misinformation about an unproven antidote probably encouraged its use as home remedy instead of going to a hospital.

Lessons Learned: Recommendations for Handling Future Outbreaks

The Ebola outbreak in West Africa should prompt or inspire new thinking for health professionals, policy makers, political leaders, foreign and local development partners in handling future health emergencies. The scale of the outbreak has forced the leadership of affected countries to avoid nonchalant attitudes towards improving health systems, and the international community to never again ignore a festering health problem no matter its location and size.

Understanding the factors that have led to the spread of Ebola should inevitably lead to critical analysis of these lessons and towards developing better response systems for future health problems. The following paragraphs provide recommendations for the immediate and long-term although some may have been previously suggested. In fact, the author previously shared some of these recommendations in an opinion article published by some Sierra Leonean online newspapers like The Patriotic Vanguard and Sierra Express Media. Nonetheless, as the outbreak continues to evolve new lessons are learned. It is hoped that those involved in the current and future infectious disease prevention in Sierra Leone, and to some extent in other countries in the sub-region, will find such recommendations useful.
Immediate and mid-term recommendations

Reduce the rate of transmission

Efforts must be increased to cut Ebola transmission through reduction of hospital-based transmission, community education and awareness and Contact tracing, among other measures. In spite of additional efforts from local and international health professionals the rates of new infections have continued to increase. All new infections are an indication that the epidemic is not yet over. This is because Ebola is not a chronic disease with longevity and there are only two possible outcomes for an infected person: recovery within two to three weeks or death. Either of the two outcomes will reduce the cumulative number of cases unless there continue to be new infections.

Strengthen data collection processes

Closely associated with the above is encouraging hospitals in the country and the Ministry of Health and Sanitation to strengthen their capacities in collecting health data. With such routine practice, even contact tracing concerned with finding suspected and confirmed cases of a disease will be easier to do. The health system should treat patients and routinely collect pertinent demographic and health-related data from them. Such information, had it existed, would have been invaluable in the current epidemic.

Develop and rapidly disseminate tailored health messages

Another recommendation is for the government to intensify the provision of tailored information messages about Ebola to specific audiences. The current level of misinformation about this epidemic is high – from suggestion of washing with salt as prophylactic to the outbreak being a political machination. An Information Center has since been established but this center should outlast the current outbreak. The center can be affiliated with the Ministry of Health and Sanitation or be a stand-alone entity as long as it is sufficiently resourced. Health information dissemination can also be done through the use of loud speakers placed in the hands of trained personnel who can correctly share such information with the public outside of large gatherings. The use of role models and influential musicians, artists, politicians, religious and other community leaders both young and old to spread prevention messages is important. These messages must be disseminated through formal channels (press releases, radio broadcasts etc.) and informal channels (word of mouth, cell or mobile phones) and taken to the people where they reside. Health communication experts must be involved in developing tailored health messages that are periodically revised to reflect changing attitudes of the people towards the information.

Develop rapid response strategies to disease outbreak

There is international acknowledgement that the World Health Organization and other global institutions like the World Bank and the African Development Bank initially responded sluggishly to the outbreak. Because of this and other factors, initial response was disjointed and fragmented. The World Health Organization and institutions like the Centers for Disease Control and Prevention must take early leadership roles in future outbreaks even if only to provide professional guidance to affected countries/regions that may lack such expertise and other
relevant resources. In the case of Sierra Leone, the Sierra Leone Medical and Dental Association (SLMDA) was largely dormant in the first few months of the fight to contain the outbreak. With few or less developed health research institutions, the SLMDA must play a leadership role in health emergency preparedness in the country. This professional association will be a trusted source of health information and can provide guidelines that many people are likely to follow.

*Establish a national coordinating body for future crises*

Following the onset of Ebola in Sierra Leone, the government established the National Ebola Response Centre (NERC) to address the current outbreak. While this is a good move in the right direction, government must look into the future and establish a special task force or center with sufficient funding, expertise and capable leadership to manage current and future health emergencies. When this was lacking in Sierra Leone at the beginning of the outbreak, valuable time was wasted in organizing various components of the response strategy.

*Set aside a fund for health emergencies*

It is advisable for the government to establish a fund to finance health emergencies. At the height of this crisis critical equipment needed to adequately respond to the crisis were largely unavailable. From basic equipment such as hand gloves and chlorine to more sophisticated ones like vehicles (including ambulances), mobile laboratories, Personal Protective Suits and stipends for employees strongly affected, or in some cases, prevented the delivery of care to patients. The contributory role of ordinary Sierra Leoneans has been critical. Sierra Leoneans at home and in the Diaspora have and continue to make meaningful financial and in-kind contributions towards the outbreak. This role must be acknowledged in specific ways (e.g. erect a memorial in honor of fallen health and other service workers). The awarding by TIME of 2014 Person of the Year to Ebola fighters is a powerful acknowledgement and recognition that should serve as inspiration to governments.

*Utilize cultural brokers and health experts to explain the connection between health and culture*

Cultural practices are integral and indispensable aspects of life in every culture. However, some practices can be inimical to health as we have seen in the current outbreak. In such a scenario, the use of “cultural brokers” (such as religious leaders – Imams and Pastors and traditional leaders) who can navigate the inextricable link between local traditional practices and religious beliefs is critical. With appropriate training these leaders can engage communities to explain burial practices that have been an affront to stopping the virus. Religious leaders are trusted by their congregations and their contributions in faith-based health promotion are well documented in the research literature (DeHaven, Hunter, Wilder, et al. 2004). Traditional leaders like paramount and other chiefs and heads of small communities are equally important in cultural brokerage.

*Improve training of local health workforce*

There is no substitute to training local health professionals. Countries affected by the current outbreak as well as non-affected ones must think more seriously about training their own local professionals than relying on the international community to do so. Recent experience has shown that foreign countries’ desire to help is limited by many factors. For example, worsening rates of
infection in affected countries may result in protests and outcry from citizens of donor countries whose loved ones are sent to help. The use of foreign health professionals during an emergency has drawbacks that include logistics of training and shipping them to affected regions, which is both costly and time-consuming. In addition to local training programs the government of Sierra Leone must establish and routinely coordinate additional health training programs conducted by Sierra Leonean health professionals based abroad. This will be a significant boost to the healthcare workforce at minimal cost to the government since many of those in the Diaspora are willing to pay for air travel if government will provide other logistics.

Local health workers who exhibit valor and professionalism during the crisis must be given monetary incentives such as risk allowances. They must also be considered for promotions when they have the requisite qualifications. This will increase their resolve to serve during challenging times. In the current outbreak there have been stories of delayed payment of salaries and allowances or bonuses that periodically led to strike actions.

**Long-term Policy Recommendations**

In policy terms, the confluence of three factors—a problem, a potential solution, and political will—should lead to new policy initiatives (Longest, 2010). Sierra Leone currently has a raging problem with potential solutions that should lead to new health policy initiatives aimed at improving the public health infrastructure in the country. New policies must seek to significantly improve human and material resource capabilities. The following paragraphs are long-term policy recommendations.

**Improve or establish departments within the Ministry of Health**

The Ministry of Health should establish an Epidemiology Department with strong emphasis on infectious diseases. Epidemiology is the study of the cause and distribution of diseases in human populations (Merrill, 2010); which is why many of the experts now sent to Sierra Leone from other countries are epidemiologists and disease prevention specialists. A well-resourced department of epidemiology will conduct disease outbreak investigations in the country and routinely collect pertinent health data. Such data are crucial during health emergencies. In the current crisis, the Ministry of Health and Sanitation has made reasonable efforts in tallying mortality and morbidity data but few will disagree that its capacity needs to be further enhanced.

Furthermore, an effective department of epidemiology (with surveillance capabilities) could strengthen collaboration with medical doctors in the country to encourage the practice of evidence-based medicine. Evidence-based medicine is the use of proven research knowledge to treat patients. The fight against Ebola would have been less difficult if such a department and collaboration existed.

**Develop academic public health and allied health sciences programs in the country to improve human capacity**

The country needs to introduce new public health and other allied health sciences programs or improve existing ones to meet the health needs of a growing population. Academic public health programs will train a cadre of Biostatisticians, Behavioral Scientists, Health Policy experts, Environmental Health Scientists and Epidemiologists. Having strong local academic programs in
health will continuously train indigenous Sierra Leoneans, many of whom will always be available to help during emergencies, and train future generations. A country with limited clinical or therapeutic capabilities must improve its structures on health promotion and disease prevention.

Alongside public health is the need for other allied health specialties. The number of allied health professionals in the country must be increased to reduce critical and life-threatening personnel shortages. Examples of allied health professionals include sonographers, hygienists, dieticians or nutritionists, health information managers, speech pathologists, physical therapists, respiratory therapists and many more (Stanfield, 2012). These health care professionals often work in teams to augment the services of doctors, nurses and pharmacists to improve the quality of care. The current areas of specialization and scope of allied health training need to be expanded at home, as well as vigorously seek more advanced training opportunities abroad.

*Encourage interdepartmental collaboration*

During emergencies, it is more difficult to maintain the effective functioning of a system with fragmented operational units. Effective interface among departments and agencies will prevent key ministries from working in silos and encourage comprehensive “systems thinking.” Current and future governments must encourage interdepartmental, inter-agency and inter-ministerial collaboration (to include the private sector) in order to more effectively handle new and existing health problems. Such cooperation must not end with the containment of the current Ebola outbreak; and the mechanisms developed to foster such collaboration must be decentralized throughout the country as much as possible. Interagency collaboration is an irreplaceable element for success during serious health emergencies.

*Increase funding for the health sector in the national budget*

The current budget for the health sector as a percentage of the country’s gross domestic product is 15.1% according to the World Health Organization (WHO, 2014). Since Sierra Leone does not have a health insurance system or Universal Health care where the government provides care for all its citizens, payment for health services is mostly done by citizens from out-of-pocket. It is true that the government provides certain health services. For example, it subsidizes the cost of education for health professionals through scholarships and/or grant-in-aid, and also subsidizes cost of a number of drugs through cost recovery programs. Furthermore, most of the big hospitals are owned and sponsored by the government. In spite of these overtures, however, the majority of citizens cannot adequately afford healthcare. Additional budgetary allocations to the health sector will alleviate this problem.

**Discussion**

The health systems of the three West African countries mostly affected by the outbreak have crumbled in the face of this outbreak. Many have pointed to slow and inadequate response during the early stages of the epidemic. That is unacceptable by any measure and such mistakes must be prevented from recurring. However, handling an epidemic of this proportion is unlike any that Sierra Leone has dealt with before. Developed countries like the United States have faced their criticism in coordination protocols. Mr. Thomas Duncan, the Liberian immigrant on a visit to the United States who was infected with the virus, reported to a hospital in Texas when he
experienced the telltale symptoms of the disease. As protocols were slighted and his treatment delayed, two other nurses got infected in the process. He was not immediately quarantined and many other people came in contact with him before he was hospitalized. The lesson here is that even developed health systems can experience missteps in the face of a harrowing health emergency.

It has been mentioned earlier in this article that international response to the Ebola crisis was initially slow. Even to date, some countries have made only minimal contributions both in financial donations and contributions of healthcare personnel. This slow or none response dramatically changed when the outbreak was declared a global public health threat. Non-state actors directly involved in the fight include, but not limited to Doctors Without Boards, The World Bank, the United Nations and its agencies (WHO, UNICEF, UNDP etc.), Save the Children and many more. At the national level major contributors include countries like the United States of America, Great Britain, Cuba, China and the Netherlands while others like Australia and Canada have done little and even enacted legislation to temporarily prevent persons traveling from the affected West African countries from entering their countries.

Local contributions from government officials and departments, local organizations, private citizens and businesses, local and foreign companies operating in the country were the early donors towards the crises before the international community paid any attention. This cooperation must be acknowledged and maintained into the future.

From now on, affected countries must place heavy reliance on local solutions to addressing similar health problems in the future. This will include revisiting local cultural practices, investing more in health, changing health-related behaviors and accelerate training of local health professionals, among others. Although the international community has a human and moral responsibility to help during disasters that threaten human existence, it is first and foremost the responsibility of governments and citizens in the affected countries to find response strategies. Outside help sometimes arrives late, if it does at all.

Many people have wondered why it has taken so long to find a vaccine or treatment for Ebola in spite of the fact that this virus has been known for a few decades. The World Health Organization’s Director General offered one plausible suggestion – that pharmaceutical companies are a profit-making industry and do “not invest in products for markets that cannot pay” (UNICEF, 2014). It is now common knowledge that for the four decades since this virus was discovered, it has been found mostly in sub-Saharan Africa – a region of the world where the majority of the people are poor.

Despite efforts by the global health community to halt the spread of Ebola there is no scientifically proven treatment for the disease to date. Many vaccines are at the experimental stages with the World Health Organization promising to fast-track testing and production so that effective medication could be available by the first quarter of 2015. As potential drugs are tested ethical considerations may cause additional delay as scientists debate the most ethical way to test these experimental treatments for a virus that has shown no mercy to its victims. Another issue to worry about is cost. Will those seriously affected in Africa be able to pay for Ebola vaccines and medications?

The current Ebola crisis has also provoked what some people have come to label as “Ebola racism.” They are referring to the issue of associating Africans with the virus and hence discriminating against them. At times these “innocent bystanders” are not even originally from affected countries, and if they were, many have not visited those countries in more than a year. Stories of Ebola-based discrimination abound. Andrew Jones of The Intercept writes about
stories of refusing admission to students from Africa to denying them housing, to mocking residents of Texas who are originally from Liberia (Jones, 2014). He argues that the hysteria surrounding the virus in the West is an example of “ignorant discrimination that immigrants in general and Africans specifically have endured for decades.” The author of this article believes that the hysteria about the virus is not completely unfounded, since many people are still learning about this disease. However, associating an entire racial or ethnic group with the virus because of one’s fear of the disease is equally troubling.

On a final note, it must be acknowledged that important and thorny questions remain about the outbreak in Sierra Leone. For example: How did the government fail to adequately prepare for the outbreak while the virus was still in Guinea and Liberia by training health workers, burial teams, contact tracers, as well as secure protective equipment for health workers, etc.? How did the government fail to contain the virus when it first emerged in the country? Why is the virus still spreading in Sierra Leone at an alarming rate while Guinea and Liberia seem to have contained it? What is Liberia doing right that Sierra Leone is doing wrong? It is hoped time will help us answer these questions fully, especially as such answers will help us craft a more proactive and effective response to future outbreaks and other emergencies.
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References


