Opinion

Ebola: why this epidemic is different and long term solutions

Abstract

This is an article on the on-going 2014 Ebola Virus Disease Epidemic. It looks at few key differences in the epidemiology of the past and present outbreak and suggests solutions to help victims of the outbreak. It also offers opinions on how to build a stronger health system to prevent and respond adequately to future epidemics.

Keywords: ebola, pandemic, viral hemorrhagic disease, epidemics, emergency preparedness, health, strengthening, west Africa health systems

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Abbreviations

EBOV, zaire ebola virus; WHO, world health organization; EVD, ebola virus disease; TB, tuberculosis; NGOs, non-governmental organizations; YMH, yambuku mission hospital

Opinion

The Ebola epidemic has exposed again the direct links that modernization and globalization have created across vast geographies. Global travel and commerce has integrated vast spaces so much that no place can be considered incredibly remote. Ebola outbreaks used to be confined to 'remote' villages in central Africa. This is no longer the case, since the virus is now also endemic in West Africa. Not only did it relocate to a new region, the epidemic has sustained itself beyond the usual duration. In Central Africa, Ebola outbreaks never lasted as long before it became contained. This raises the questions as to why this outbreak is different; what is fueling it; and how to prevent this from happening again.

The answers to these questions are seen in Ebola's evolving epidemiology (persons, place and time). Although 'Zaire Ebola Virus' (EBOV) has been identified as the culprit causative agent in both central Africa and current outbreaks, other variables including location and duration are different. The West Africa outbreak, which started in Gueckedou a rural forest region in Guinea, has since spread into bigger cities with larger population.[1] The problem with outbreaks in cities is that larger numbers are at risk and contact tracing is difficult. The West African outbreak can be classified into community acquired or nosocomial. Community acquired spread appears to be the chief propellant of the epidemic. Although a good deal of transmissions has occurred in health care facilities, these are easily and readily identified and contained.

In America and Europe, apart from the index cases the outbreak has been limited to health care workers.[2] The reason why it has not spread into communities can be attributed to the differences in health care access. In developed countries, if a person is sick, he/she visits to the hospital emergency room or call an ambulance. In Africa it is not so. For the most part, people seek professional assistance as a last resort and in some instances, such service is non-existent. This lag period allows time for symptomatic patients expose other people to the virus.

Another difference is in the healthcare infrastructure. This probably determines the outcome of the disease. According to the World Health Organization (WHO) fact sheet on Ebola 'The average Ebola virus disease (EVD) case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks'.[3] This is even less with improved care and healthier immune system. In America, only the index case died. The rest beat or a beating the odds. The difference in outcome supports the argument that poor healthcare infrastructure (both human and material) remains a key driver of this epidemic.

To stop Ebola or similar epidemic, in its tracks requires dedicated, sustained global effort. Africa and its government lack the resources to combat and prevent the epidemic given the fact that other diseases like malaria, HIV/AIDs and Tuberculosis (TB) are competing for already depleted resources. It is time to build up the health care infrastructure in Africa. The era of the syringe and needle sharing is gone. The intervention should be at all levels. From world government, to Non-Governmental Organizations (NGOs), hospitals and religious organization. NGOs, hospitals and churches in the west can adopt local hospitals in Africa and provide support in the form of new/ used equipment, supplies and training for local staff.

The stigma of Ebola diagnosis fuels the spread of this disease. A lot of people in the endemic region perceive the disease as a death sentence and fail to seek care until it is too late. Such behavior is largely due to the perception that hospital care makes no difference in clinical outcome, other than that it only intensifies the stigmatization and quarantine of friends and family. Efforts should be geared towards changing this belief. The first step towards this is rebuilding the trust in the healthcare systems of affected communities, states and countries. This strategy was successful in previous outbreaks in central Africa in 1976. During that outbreak in Zaire, the epidemic reached its peak when it claimed the life of the medical director of the Yambuku Mission Hospital (YMH) and subsequent closure of the hospital. This led to a breach of the trust that the community had in the ability of the healthcare system to contain the epidemic.[4] Ebola victims stayed at home to die or sought traditional healers rather than seek western medicine. This resulted in the escalation of the epidemic. The situation was only turned around when the formerly Center for Disease Control in partnership with the Zairian government and other volunteers, increased their supplies of both human and material healthcare resources. This robust healthcare system with

strong leadership and committed stopped the 1976 outbreak. The media plays a large role in the trajectory of public health epidemics. Their role could both to: educate and empower the communities or scare people and propagate stigmatization. The former should be the case. The media should cover the stories of survivors and the fact that diarrhea and malaria still kills a greater number of people. De-stigmatizing Ebola would improve the success rate of surveillance and early detection of cases. People should be educated on all aspects of the disease, including identifying and eliminating cultural practices that promote disease transmission.

The response to Ebola epidemic should be fought on two fronts:

i. Crisis management

ii. Consequence management

Crisis management entails providing logistics for isolation, contact tracing, quarantine and clinical management of cases. Consequence management involves immediate assistance to victims and their families in the form of providing their immediate daily needs. Special funds (Ebola Relief Fund) should be set aside to support families that are affected by Ebola. These funds should be used to provide or augment the incomes of those afflicted or affected by the disease, provide counseling and mental health services, health education and burial of the deceased. Pleasant encounters with the Ebola health care response infrastructure would create a league of survivors and family advocates that would help turn the stigmatization on its head. Such positive experiences would also improve people's belief in the health care system. Just as the world responds to hurricanes, floods and earthquake with not just health care intervention, the current disaster response should also cater to the needs of shelter, food etc. of the affected families.

At the local level, religious organizations should step up to help. It is a known fact that religion plays a big role in the lives of countless Africans. Hence, religious leaders are regarded as mini gods. This belief system should be exploited as a viable channel for intervention. Governments should partner with religious organizations and encourage them to invest their tax free incomes in health care. The situation where church leaders own private jets and mansions should be discouraged. These organizations should emulate similar church organizations in America that own and run several not for profit hospitals and healthcare systems. Religious faith, a source of hope to numerous people is a veritable tool against stigmatization.

Fear mongering, travel ban, unrequited pledges can only worsen the situation and can only lead to further deaths and spread of the disease into new geographies. This current disaster has exposed once again the whopping gap between health care services in developing and developed countries. This gap if not bridged poses a threat to global health. As the world integrates its economy by international travels, trade and commerce, the healthcare infrastructure gap across the globe should be supported in order to mitigate the threat of a global pandemic.

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Conflict of interest

The author declares no conflict of interest.

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