## Editorial

## An Epidemic Is Coming- What has Tanzania learned from Ebola and Cholera?

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**The Ebola virus** gained global attention one year ago. It spread quickly and killed with marked efficiency. In September of 2014, an Ebola patient arrived in the United States, and the world became panicked. News reports, facebook posts, and conversations between friends at that time all included Ebola as a subject. However, the Ebola epidemic had not just started. It had been ravaging West Africa for months and a large-scale organized, worldwide response had not yet taken place. The world took time to notice Ebola, and the result is that more than 11,000 people have lost their lives.<sup>1</sup>

Many elements contributed to the devastation caused by the Ebola epidemic in West Africa. Some of these elements include that the region was in a post-conflict state with poor hospital infrastructure and poor sanitation. Cultural burial practices, and erroneous beliefs about the Ebola virus also resulted in the spread of the disease.<sup>2</sup> Finally, once action was called for, there were few trained personnel on the ground. Medicins Sans Frontiers was able to respond fairly quickly, but the majority of other countries and large organizations took more than a month to mobilize when the Ebola epidemic was worsening daily.<sup>2</sup>

In late 2014, as Ebola was prominently featured as a worldwide threat, scientists at Oxford University in the UK identified Tanzania as one of the 15 African countries most at risk for this deadly virus. Ebola had traveled to the United States and it remained to be seen if it would travel to Tanzania.<sup>3</sup>

Our hospital located in Dar es Salaam, Tanzania, houses the first full-capacity Emergency Department in Tanzania, and is the teaching facility for the first Emergency Medicine residency program in the country.<sup>4</sup> We knew that if Ebola did come to Tanzania, we would be at the forefront of care with very little notice as undifferentiated and undiagnosed patients present to our department directly. We had to be ready. We also recognized that with the crowded urban conditions in Dar es Salaam, cultural practices including washing the dead, visiting relatives and friends that fall ill, and the social stigma that Ebola held, that if Ebola did arrive in our city it would absolutely devastating.

With this in mind, our Emergency Department leadership worked in collaboration with multiple partners including the Ministry of Health and World Health Organization to guard the country against getting the Ebola virus, and to put mechanisms in place in case this tragedy struck. Screening points were implemented in major airports, citizens and healthcare workers were educated on the signs of Ebola through mass media and targeted campaigns, protective equipment was dispensed to healthcare facilities, Ebola treatment sites were designated, and the country prepared hospitals to encounter patients with Ebola.

Our Emergency Department took part in efforts that educated over 2500 healthcare workers across the country on how to detect and protect themselves against this deadly virus through a combination of in-person and telemedicine education sessions. In our own department, we implemented screening procedures, trained all staff, practiced donning and taking off the protective gear, held practice scenarios on how to treat Ebola patients, and installed more handwashing stations that had chlorine solution.

We prepared for Ebola while praying that it would not come to Tanzania. We were proud of our efforts at this time of worldwide crisis. And, we were all thankful that Ebola did not come to our city and our country.

**However, Cholera did come.** Unlike Ebola, Cholera is well understood, predictable and preventable. Cholera is also in the midst of the second large epidemic in Tanzania this year. The first epidemic this year was in Western Tanzania, in the Burundi refugee camps. Only a few months later, in an unrelated epidemic, Cholera struck our own city, Dar es Salaam. In the midst of this epidemic healthcare workers at our hospital, as well as nearby regional hospitals have been diagnosed with Cholera. As of November 1<sup>st</sup>, 2015 there have been over 4800 cases and 68 deaths reported by the World Health Organization.<sup>5</sup>

Although Cholera is endemic in this region, outbreaks in the dry season are infrequent and should be controllable. Cholera is a problem of poor environmental conditions and has a high impact on the urban poor and refugee populations. However, Cholera is a problem that can be managed with the appropriate response from citizens and urban authorities. As healthcare professionals, we must ask ourselves difficult questions: With the lessons learned from Ebola, why was Cholera able to spread so efficiently? Why is it that despite deaths, media coverage, and regulations prohibiting the sale of food outdoors, Cholera caused so much devastation in Tanzania?

Another epidemic will come. That is why it is important for us, as healthcare professionals, to examine the Cholera outbreak and strengthen the capacity of our country's healthcare system to respond to such events.

History has shown that outbreaks and epidemics will happen, and when they happen, countries must be prepared, or there will be devastating consequences. Although aid organizations and other countries will respond, they may take too long, as was the case in the Ebola response. A local capacity to respond to such crises is key.

As the news stories about Ebola become less frequent, and the Cholera epidemic becomes contained, let us not forget the lives lost. Let us continue to prepare for such events by educating our healthcare professionals on the identification of outbreaks and epidemics, improving our early warning and detection systems, training personnel and volunteers that can be called upon in times of crisis, and coordinating efforts within Tanzania and the global community so that if an outbreak occurs, it can be contained quickly.

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