

ISMUNHK



ISMUNHK 2017-2018 WHO CHAIR REPORT



TOPIC: THE CRISIS OF EBOLA

By Genevieve Cheung and Aimee Wong

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Introduction

In April of 2018, a new outbreak of the Ebola virus disease (EVD) began in the Bikoro health zone of the Democratic Republic of the Congo (DRC). The disease, first discovered in 1976 in northwest DRC, incited widespread alarm from 2014-16 for killing over 11,000 in West Africa. While significant medical research has been conducted since then, the resurgence of Ebola clearly indicates that the global response has been inadequate, especially in terms of disease prevention. This is especially notable in the DRC, as the 2018 outbreak is the ninth the country has had to face. As the outbreak continues, WHO must formulate an immediate response as well as consider measures to prevent future outbreaks from happening.

Key Terms

International Health Regulations (IHR)

- An internationally legally binding instrument that includes guidelines for WHO and requires countries to report disease outbreaks to WHO.

IHR Emergency Committee

- A panel of medical experts that advises the WHO director-general when determining if an outbreak is a PHEIC (defined below). It also offers recommendations for subsequent WHO action.

Public Health Emergency of International Concern (PHEIC)

- As defined by the IHR (2005): “An extraordinary event which is determined, as provided in these Regulations: to constitute a public health risk to other Member States through international spread of disease and to potentially require a coordinated international response.” An epidemic is only classified as such after the WHO director-general and the IHR Emergency Committee convene and make an official declaration.

Background Information and Key Areas to Consider

The 2018 outbreak of Ebola began in late April in the Bikoro health zone of the DRC, and as of the writing of this chair report, the exact first case has not yet been identified. The disease quickly spread within Bikoro, and on May 17, the first urban case in Mbandaka, DRC was identified. From April 4 to May 17, 44 cases of Ebola were reported, with 25 deaths in total. Compared to the outbreak in 2017, this outbreak will be harder to contain as it is no longer confined to a rural area; upon the arrival of EVD in Mbandaka, 1.2 million people were put at greater risk of coming into contact with the virus. The close proximity of Mbandaka to the Congo river is also concerning, as the disease may be spread to other countries along the river via river traffic. The majority of the cases being in remote areas also creates logistical difficulties for WHO both in its attempts to assess the spread of Ebola as well as to distribute vaccines.

The IHR Emergency Committee under WHO convened on May 18, and while they declared that the outbreak is not yet considered a PHEIC, the outbreak is still at “very high” risk, with the potential of spreading to nearby countries such as Congo-Brazzaville and Central African Republic. Should any further developments occur, the IHR Emergency Committee will reconvene.

About Ebola:

- General Information:

- Ebola virus disease (EVD) is often fatal in humans, with an average case fatality rate of 50%. It was first discovered in 1976, where two outbreaks in Sudan and the DRC occurred at the same time. Outbreaks often begin in villages in the tropical rainforests in Central and West Africa when the disease is transmitted from wild animals to humans. There are 5 known species of Ebolavirus: Zaire, Bundibugyo, Sudan, Reston and Tai Forest. The first three have caused widespread outbreaks in Africa. Notably, the Zaire species was responsible for the 2014-16 West African outbreak in Guinea, Sierra Leone and Liberia, the most complex and large-scale outbreak of Ebola to date. The 2018 DRC outbreak is also due to the Zaire ebolavirus species.

- Symptoms:

- The incubation period of Ebola ranges from 2-21 days (on average 8-10 days), after which symptoms begin to develop. The first symptoms to emerge are fatigue, fever, abdominal pain, muscle pain, headache and sore throat. Subsequently, vomiting, diarrhoea, rashes, and impaired kidney and liver function may occur. In serious cases, there may be internal and external hemorrhaging.

- Transmission:

- Humans/animals are only infectious once their incubation period has ended and symptoms develop.
- Animal-to-human transmission occurs when humans come into contact with the organs, secretions or bodily fluids (especially the blood) of infected animals or their corpses, often found in rainforests. Common animals that carry the disease include fruit bats, primates, porcupines and forest antelopes, with fruit bats of the *Pteropodidae* family generally recognised to be natural hosts of EVD.
- Human-to-human transmission occurs when direct contact with the organs, secretions or bodily fluids (especially the blood) of infected patients or with surfaces contaminated with infected fluids is made. Sexual transmission via contaminated semen is a prominent method by which Ebola is spread. As long as the virus is present in the person's bloodstream, he/she is still at risk of spreading it. Health workers are particularly susceptible given their close contact with infected people.

- Treatment and recovery:

- As of the writing of this chair report, there is no treatment for that has been widely used to combat large-scale outbreaks of EVD. As such, no specific treatment has been proven to be effective for EVD. A large proportion of treatment methods have largely been supportive, mostly relying on the patient's immune system to overcome the virus. Those that do recover often develop antibodies in their blood that can last up to 10 years. Recent medical research has developed a new vaccine (called rVSV-Zebov) that will be used to deal with this outbreak, but it has yet to show its effectiveness in practical application (discussed in more depth below).

Recent medical developments:

- Without a specific cure, patients' immune response is the key factor in dealing with the disease, which greatly slows down medical efforts and prolongs outbreaks. The 2014-16 West African outbreak drew global attention to Ebola, increasing the urgency for medical research to develop a specific cure. Of all the drugs in development, WHO is currently discussing with the local medical

outbreaks. The 2014-16 West African outbreak drew global attention to Ebola, increasing the urgency for medical research to develop a specific cure. Of all the drugs in development, WHO is currently discussing with the local medical agencies in the DRC to introduce Zmapp, which is an experimental drug that has shown 100% effectiveness in infected primates, but results from clinical testing involving humans are not considered to be conclusive, despite its use in the 2014-16 outbreak. Another important development is the introduction of a new experimental vaccine, rVSV-Zebov. Clinical trials have shown that the vaccine offers 100% protection, and the vaccine has been used in a 2017 Ebola outbreak in the DRC under emergency conditions. The first shipment of rVSV-Zebov vaccines arrived in the DRC on 16 May, 2018, and vaccination is expected to begin on 20 May, 2018, with ring vaccination (the practice of vaccinating a ring of individuals in close contact with an infected person to prevent a virus from spreading) expected to be employed. However, the reliability of the laboratory results has been disputed, and the duration of effectiveness of the vaccine is still unknown.

Guiding Questions

1. What was lacking in the previous WHO responses to Ebola outbreaks?
2. What is specific to this particular outbreak and how should WHO respond?
3. What is the root problem of the repeated reemergence of Ebola in the DRC? What should WHO and relevant parties do to rectify it?

Key Parties Involved

World Health Organization

- The World Health Organisation is essential to the international medical response; it tracks the spread of the disease, does risk assessment, sets guidelines for medical personnel and coordinates the actions of the various parties involved.

Democratic Republic of the Congo

- With this being the ninth time the country has had to deal with Ebola, it can be seen that preventive measures in the DRC are inadequate. The DRC needs to make sure its medical personnel are fully equipped to deal with the new outbreak, and the government needs to work in tandem with WHO and other NGOs to track the disease and take relevant action.

Neighbouring countries

- The DRC's neighbours should be on high alert and begin conducting preparations and increased surveillance as WHO has declared that there is a very high risk of Ebola spreading to nearby countries.

NGOs

- NGOs such as Medecins Sans Frontieres and the Red Cross are fundamental to the medical effort given that they are able to reach remote areas and provide medical personnel and resources that the DRC may lack.

Timeline

Date	Place (Optional)	Event
8 May 2018	Bikoro, DRC	The Ministry of Health of the DRC notifies WHO of 2 confirmed Ebola cases in Bikoro
16 May 2018	Kinshasa, DRC	First batch of experimental vaccine rVSV-Zebov arrives
17 May 2018	Wangata, Mbandaka, DRC	1 new case of Ebola confirmed; Ebola arrives in an urban area

17 May 2018	Wangata, Mbandaka, DRC	1 new case of Ebola confirmed; Ebola arrives in an urban area
18 May 2018	Geneva, Switzerland	IHR Emergency Committee under WHO convenes; declares that the 2018 Ebola outbreak is not yet a PHEIC

Possible Solutions

Containment:

- As of the writing of the chair report, the 2018 EVD outbreak has been limited to the DRC. To prevent Ebola from spreading to other countries, delegates may consider methods to restrict the movement of personnel in and out of the DRC, such as exit screening at airports etc. Delegates should pay attention to WHO's announcements pertaining to their advice on travel bans, but as of 18 May, WHO advises against any form of travel ban.

Risk Assessment:

- Continued surveillance of the Ebola outbreak for risk assessment purposes is necessary in order for WHO to formulate and adjust its response. Areas that need to be monitored include the spread of the disease, rate of recovery, effectiveness of treatment as well as possible mutations in the virus. However, the major challenge for WHO in this particular outbreak surveillance-wise is the difficulty of monitoring outbreaks in remote, rural areas. Thus, delegates should propose methods to increase the ability of WHO to do so.

Diagnosis and treatment:

- The adoption of vaccines in the 2018 EVD outbreak is a relatively new method to deal with Ebola. It is worth noting that the drugs used in the 2018 outbreak intended to specifically target Ebola are all experimental, and they may have limited effectiveness when compared to clinical trials. The rVSV-Zebov vaccine especially may have side effects. Delegates should pay attention to any new developments about EVD treatments while they research, and also consider the availability and means of distribution of the medicine. Another area of consideration for delegates may be the establishment of quarantine facilities for the isolation and monitoring of infected patients.

Awareness:

- WHO identified one of the reasons for the ineffectiveness of medical response in 2014 to be the lack of awareness of the transmission of Ebola in medical personnel as well as the general public. For medical personnel, delegates should consider methods to properly implement the guidelines for dealing with Ebola designated by WHO. As for the general public, delegates should contemplate measures to introduce hygienic practices and to disseminate information about the transmission methods of Ebola to prevent people from engaging in activities (especially sexual activities) that expose themselves to the disease.

Cooperation:

- Responding to a global epidemic requires coordinated action with the country involved, its neighbours, WHO and NGOs. WHO puts an emphasis on the importance of international data, so delegates should examine methods to increase the efficiency of global communication and the availability of information. Delegates should also contemplate the roles of NGOs and local medical departments in an outbreak.

Infrastructure:

- The continued reemergence of EVD in the DRC and Central and West Africa may highlight a severe lack of medical facilities or infrastructure related to hygiene in the area. This is especially so in remote villages in tropical forests, where Ebola outbreaks tend to originate.

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Further research suggestions

<http://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease>

The webpage above lists basic information pertaining to EVD. WHO's website as a whole is a good starting point, and given that the outbreak is a recent one, delegates should pay attention to the WHO newsroom as well as other news outlets for updates.

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