International emergency declared in Ebola outbreak

John Rowe 11 August 2014

The World Health Organization declared the Ebola epidemic in West Africa an international public health emergency August 8. The disease has killed at least 959 people and infected 1,779.

Dr. Margaret Chan, the director of the WHO, characterized the epidemic as "the largest, most severe and most complex outbreak in the nearly four-decade history of this disease." She said that the outbreak was "of unusual nature."

The actual toll of death and infection are likely much higher than the reported figures due to the poor medical infrastructure, under-reporting of cases, and the uncertainty over when the outbreak began.

The three countries where the epidemic is centered, Guinea, Sierra Leone, and Liberia, are countries that have some of the lowest standards of living, and worst medical infrastructure, in the world. They have also been sites of bloody civil wars in recent years, as well as long-term economic exploitation by Western Europe and the United States.

The WHO reported Friday that the first cluster of Ebola victims had appeared in Nigeria, the most populous country in Africa. All of them were healthcare workers in contact with Patrick Sawyer, a Liberian official who holds Liberian and American citizenship, and who flew to Nigeria after contracting the disease but before the symptoms became visible (and therefore before he was contagious).

Ebola hemorrhagic fever (EHF) is a syndrome caused by the Ebola virus (EBOV), a virus endemic to central Africa, but until the current outbreak not widely seen in West Africa. The virus is spread through close contact with infected individuals, usually through infected bodily fluids, such as blood and semen.

Once infected, a person may take up to three weeks to start showing symptoms, which usually start as headache, fever, and malaise. This progresses to gastrointestinal distress, vomiting, diarrhea, and in severe cases internal and external hemorrhaging, and organ failure. Death usually occurs within two weeks of the first symptoms. Case fatality rates in some outbreaks are as high as 90 to 100 percent. In the current outbreak fatality rates have been around 60 to 70 percent.

Ebola is extremely deadly but not very infectious. Peter Piot, head of the London School of Hygiene and Tropical Medicine, told Agence France Presse, "I wouldn't be worried to sit next to someone with Ebola virus on the Tube as long as they don't vomit on you or something."

The spread of the disease is almost entirely the result of the conditions of poverty and lack of infrastructure in the affected regions, parts of Guinea, Sierra Leone and Liberia, among the poorest in the world.

As Thomas Frieden, director of the US Centers for Disease Control and Prevention (CDC) told the press, "Any advanced hospital in the US, any hospital with an intensive care unit has the capacity to isolate patients ... There is nothing particularly special about the isolation of an Ebola patient other than it's really important to do it right."

Extreme poverty in the countries most affected by the epidemic, especially in rural areas, has overwhelmed medical systems already ill-prepared to handle the needs of their populations. The use of unsterilized medical equipment, the lack of barrier protection for doctors in these areas, and the shortage of medical supplies allow for the virus to easily spread in medical settings, and for those treating the sick to likely fall ill themselves.

At least 60 health care workers have died from the virus, causing panic in the infected region's ill-

equipped medical system. Virologist Joseph Fair told the National Geographic that in the medical worker community "There's been a lot of abandoning ship." He described it as a "war." Liberia's foreign minister, Augustine Ngafuan, told Thomson Reuters that "the health care system is collapsing." He drew attention to the fact that the poor country has 50 doctors for every 4 million people.

In Liberia, where the death toll exceeds 300, riot police were called into the capital city of Monrovia. Residents had been protesting the government's poor response, particularly in failing to collect the bodies of disease victims. Lindis Hurum, director of Doctors Without Borders' emergency response in Liberia said that the situation was "catastrophic ... There are reports of dead bodies lying in streets and houses."

The country's information minister threatened protesters, telling them in a radio speech "police are on their way to you." He continued, "Security people are on their way to put things under control."

Currently there are two possible treatments for Ebola in different stages of clinical testing. The first, which was used to treat the two American missionaries who were infected, is ZMAPP, which is made from monoclonal antibodies obtained from a species of a flowering plant, and "humanized" for use to boost immunity.

The antibodies attach themselves to the surface of the Ebola virus and disrupt its ability to attack cells in the body. But because it requires plants to be grown in and the use of live animals as an intermediate stage, the production process is very expensive, with an estimated cost per dose in the tens of thousands of dollars. The procedure is also time-consuming, with an estimate by MAPP, the maker of the treatment, of three to four months to make 100 doses.

The second treatment, TKM-Ebola, after having testing halted by the FDA earlier last month due to distressing side effects, has in recent days been fast-tracked for human testing. This treatment uses interfering RNA (iRNA) to block viral replication and has shown success in treating non-human primates experimentally infected with high doses of EBOV.

These treatments are not likely to find their way to affected areas soon outside of limited use of infected individuals as test subjects. The areas most likely to see outbreaks are also some of the poorest, providing very little monetary incentive for profit-driven pharmaceutical companies to undertake the long-term and costly research required to produce drugs. Because of this, the current treatment used in most cases is supportive therapy, keeping blood pressure and electrolytes levels up and treating possible secondary infections.

An effective international response to the Ebola outbreak is virtually impossible under the present conditions of imperialist domination of the extremely poor region. As the spokesman for the medical missionary charity Samaritan's Purse told a House Foreign Affairs subcommittee hearing Thursday, "The international response to the disease has been a failure." He added that only after two American medical workers for the group, Ken Brantly and Nancy Writebol, contracted the disease, "that the world sat up and paid attention."

In her statement on the outbreak, WHO Director-General Margaret Chan warned against the prevailing posture of confining the disease to West Africa, saying that it was "extremely unwise" to avoid an aggressive fight against Ebola where it is epidemic. "Constant mutation and adaptation are the survival mechanisms of viruses and other microbes," she warned. "We must not give this virus opportunities to deliver more surprises."



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