

West Africa struggles to contain Ebola outbreak

Health workers in west Africa are trying to control an Ebola outbreak that started in Guinea and has already spread to neighbouring Liberia. Andrew Green reports.



Published Online April 3, 2014 http://dx.doi.org/10.1016/ S0140-6736(14)60579-1

Guinea is struggling to contain west Africa's first major Ebola outbreak. Laboratory tests have confirmed an appearance of the Zaire strain—the most deadly subtype of the virus—originating in the impoverished country's rural southeast. Of the more than 100 suspected infections, at least 70 people have died, according to the country's health officials. Four of the dead are health workers.

If the initial fatality reports hold, Guinea's outbreak is already deadlier than recent appearances of the disease in DR Congo in 2012 and in Uganda that same year. An estimated 25 people died during the DR Congo outbreak and 21 in total during the two occurrences in neighbouring Uganda. With no vaccine to stem the spread of the disease, there are worrying signals that the situation in Guinea will worsen.

By late March the highly infectious disease had made its way to the densely populated coastal capital, Conakry—home to at least 15% of the country's population. Concerns were immediately raised about the virus spreading to neighbouring Liberia and Sierra Leone. On March 30, Liberia notified WHO that it had two laboratory-confirmed cases.

The disease's spread complicates the job of the international teams who have been called in to contain the outbreak. They were already playing catch up—the consequence of a sparse health-care system and a location where many diseases, including Lassa fever, share Ebola's symptoms. That made the appearance of the disease, which might have been as early as February, difficult to confirm. And it continues to hinder efforts to isolate and contain the ongoing outbreak.

"In Guinea, Sierra Leone, and Liberia, the health systems are not so strong", said Adinoyi Ben Adeiza, the International Federation of Red Cross and Red Crescent Societies' (IFRC) health coordinator in Africa. "This is not the kind of outbreak they are used to dealing with on a day-to-day basis. It calls for additional expertise, additional resources."

"With no vaccine to stem the spread of the disease, there are worrying signals that the situation in Guinea will worsen."

100 IFRC volunteers are travelling to the affected areas, educating people about Ebola's symptoms and encouraging them to report any suspected cases. They are also assisting in the dangerous job of burying the dead.

They join teams from WHO, Médecins Sans Frontières (MSF), and other international groups who are racing to isolate victims and provide what treatment they can—although, with no cure for the disease, all health workers can do is attempt to mitigate the symptoms.

Scientists caution that it is still too early to determine the extent of the outbreak, which they believe was initially transmitted to people by fruit bats, which can be reservoirs for the disease. The government has banned people from selling or eating bats and other forms of game meat.

Once infected, humans transmit the disease through body fluids, including breast milk. Funerals, which can bring dozens of people in contact with the remains of Ebola patients, are particularly dangerous and gatherings for suspected victims of the virus have also been outlawed.

Armand Sprecher, a specialist in haemorrhagic fevers working with

MSF, said teams from the emergency medical group are now doing the crucial work of investigating and testing suspected cases and tracking down any contacts those people had during the period when they were contagious.

MSF is also setting up a mobile laboratory to allow for a quicker turnaround on tests. Once possible patients are identified, the plan is to monitor and then isolate them if they show any possible symptoms. In the early days of an infection that includes fevers, headaches, and muscle pains, followed by vomiting, diarrhoea, and a possible rash. Eventually the virus can block vital organs, resulting in massive haemorrhaging.

Interrupting the disease's spread "depends on how fast you can run down the transmission chain", Sprecher said. In one instance, he said an MSF health worker trekked 8 km through rural southeastern Guinea to locate a potential patient.

It is no easy task to hunt the virus in rural Guinea, where people "suffer from awful things all the time", said Sprecher. "There are Ebola-like syndromes all over the place" and not enough doctors to handle even basic diseases. WHO estimates there is one doctor for every 10 000 people in the country.

The situation in Sierra Leone is even worse, although Liberia is slightly better. Regardless, neither health system is prepared to deal with an Ebola outbreak. And the prospect of coordinating a response with three different governments "never makes things easier", Sprecher said.

But it is the only way to stop Ebola from spreading to more of west Africa.

Andrew Green