

## In Ebola outbreak, bad data adds another problem

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People carry food aid from a British Navy helicopter after it made a food drop on Sherbro Island, Sierra Leone, Sunday, Dec. 7, 2014. The WFP, World Food Program and British Military took part in a three day food distribution effort to local residents on the remote Sherbro Island, where the amount of sick people due to the Ebola virus have prevented people from farming, fishing or gathering their own food. (AP Photo/Michael Duff)

As health officials struggle to contain the world's biggest-ever Ebola outbreak, their efforts are being complicated by another problem: bad

data.

Having accurate numbers about an outbreak is essential not only to provide a realistic picture of the epidemic, but to determine effective control strategies. Dr. Bruce Aylward, who is leading the World Health Organization's Ebola response, said it's crucial to track every single Ebola patient in West Africa to stop the outbreak and that serious gaps remain in their data.

"As we move into the stage of hunting down the virus instead of just slowing the exponential growth, having good data is going to be at the heart of this," Aylward said. "We are not there yet and this is something we definitely need to fix."

"Decisions about prevention and treatment should be data-driven, but we really don't have the data," agreed Irwin Redlener, director of the National Center for Disaster Preparedness at Columbia University.

A week ago, the World Health Organization insisted at a media briefing it had mostly met targets to isolate 70 percent of Ebola patients and bury 70 percent of victims safely in Guinea, Liberia and Sierra Leone. But two days later, WHO backtracked and said that data inconsistencies meant they really didn't know how many patients were being isolated. Then the U.N. health agency also conceded that many of the safe burials were of people not actually killed by Ebola.



A local resident awaits the landing of a British Navy helicopter as it drops food aid on Sherbro Island, Sierra Leone, Sunday, Dec. 7, 2014. The WFP, World Food Program and British Military took part in a three day food distribution effort to local residents on the remote Sherbro Island, where the amount of sick people due to the Ebola virus have prevented people from farming, fishing or gathering their own food. (AP Photo/Michael Duff)

Aylward said not knowing exactly how many Ebola patients there are in hotspots like western Sierra Leone means [health officials](#) might miss potential contacts who could unknowingly cause a surge of cases. Compared to other epidemics like malaria, which is more seasonal and can fade away without huge control efforts, ending the Ebola outbreak will require extraordinary attention to detail.

"This outbreak started with one case and it will end with one case," Aylward said. "If we can't get 100 percent of the contacts of cases, we will not be on track to shut it down. Unfortunately at the moment, the data right now is not enough for us to get to zero."

In West Africa, where health systems were already broken before Ebola struck, collecting data amid a raging outbreak has been challenging.

"Suddenly you have all these different sources of data that have to be compiled" from different aid agencies, said Ray Ransom, a data expert at the U.S. Centers for Disease Control and Prevention. "The ability to actually collect information is a different challenge than responding to the outbreak, and the energy has been focused on the response."

He said local officials are good at tracking known or suspected Ebola cases and their contacts but not as reliable relaying that information to national authorities.



British Navy helicopter operators stand next to their helicopter after they made a food drop on Sherbro Island, Sierra Leone, Sunday, Dec. 7, 2014. The WFP, World Food Program and British Military took part in a three day food distribution effort to local residents on the remote Sherbro Island, where the amount of sick people due to the Ebola virus have prevented people from



farming, fishing or gathering their own food. (AP Photo/Michael Duff)

The software built to track Ebola outbreaks was initially designed by the CDC to have one person entering data into a computer. That "was perfectly fine since the dawn of time up until" the [outbreak](#) exploded this summer, said Armand Sprecher, a public health specialist with Doctors Without Borders.

The CDC has redesigned the software so now multiple people can enter [data](#), although that created new problems like possible duplication, Sprecher said.



Local residents look at a British Navy helicopter after it made a food drop on Sherbro Island, Sierra Leone, Sunday, Dec. 7, 2014. The WFP, World Food Program and British Military took part in a three day food distribution effort for local residents on the remote Sherbro Island, where the Ebola virus has prevented people from farming, fishing or gathering food. (AP Photo/Michael

Duff)

When the epidemic starts to taper off, health officials should have more time to find every Ebola case and their contacts. But they may find they have to re-establish trust with the community to do that.

"If people were calling in cases for months and no one was coming ... and then suddenly that's no longer a bottleneck, do people suddenly realize that and say, aha, if I call in today, it'll work this time?" asked Sprecher. "If you've lost the community, you don't get anywhere."

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