

The next outbreak? We're not ready

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When I was a kid, the disaster we worried about most was a nuclear war. That's why we had a barrel like this down in our basement, filled with cans of food and water. When the nuclear attack came, we were supposed to go downstairs, hunker down, and eat out of that barrel. Today the greatest risk of global catastrophe. If anything kills over 10 million people in the next few decades, it's most likely to be a highly infectious virus rather than a war. Not missiles, but microbes. Now, part of the reason for this is that we've invested a huge amount in nuclear deterrents. But we've actually invested very little in a system to stop an epidemic. We're not ready for the next epidemic.

Let's look at Ebola. I'm sure all of you read about it in the newspaper, lots of tough challenges. I followed it carefully through the case analysis tools we use to track polio eradication. And as you look at what went on, the problem wasn't that there was a system that didn't work well enough, the problem was that we didn't have a system at all. In fact, there's some pretty obvious key missing pieces.

We didn't have a group of epidemiologists ready to go, who would have gone, seen what the disease was, seen how far it had spread. The case reports came in on paper. It was very delayed before they were put online and they were extremely inaccurate. We didn't have a medical team ready to go. We didn't have a way of preparing people. Now, M decins Sans Frontiers did a great job orchestrating volunteers. But even so, we were far slower than we should have been getting the thousands of workers into these countries. And a large epidemic would require us to have hundreds of thousands of workers. There was no one there to look at treatment approaches. No one to look at the diagnostics. No one to figure out what tools should be used. As an example, we could have taken the blood of survivors, processed it, and put that plasma back in people to protect them. But that was never tried. So there was a lot that was missing. And these things are really a global failure. The WHO is

funded to monitor epidemics, but not to do these things I talked about. Now, in the movies it's quite different. There's a group of handsome epidemiologists ready to go, they move in, they save the day, but that's just pure Hollywood. The failure to prepare could allow the next epidemic to be dramatically more devastating than Ebola. Let's look at the progression of Ebola over this year. About 10,000 people died, and nearly all were in the three West African countries. There's three reasons why it didn't spread more. The first is that there was a lot of heroic work by the health workers. They found the people and they prevented more infections. The second is the nature of the virus. Ebola does not spread through the air. And by the time you're contagious, most people are so sick that they're bedridden. Third, it didn't get into many urban areas. And that was just luck. If it had gotten into a lot more urban areas, the case numbers would have been much larger.

So next time, we might not be so lucky. You can have a virus where people feel well enough while they're infectious that they get on a plane or they go to a market. The source of the virus could be a natural epidemic like Ebola, or it could be bioterrorism. So there are things that would literally make things a thousand times worse. In fact, if there's one positive thing that can come out of the Ebola epidemic, it's that it can serve as an early warning, a wake-up call, to get ready. If we start now, we can be ready for the next epidemic.

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