

Stopping Ebola Globally and in West Africa

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The response to Ebola in Africa has not stopped its growth. There isn't expectation that the new levels of effort will stop the exponentially growing number of cases. Without changes in what we are doing, the one case in Dallas will turn into ten, then a hundred, an exponentially growing number arriving in the US. What should be done?

At the global level we must prevent new outbreaks. As the US debates whether or not it will be safe, a sick individual may end up in India, China or anyplace that airplanes fly. Travel limitations should be dictated by the global risk. Will restrictions prevent aid workers from reaching Africa? Not if they are properly done. What is needed is conservative screening in West Africa. If some individuals have to wait 21 days under observation, so be it. The family, friends and business partners they will visit will be safer. Airlines should be able to fly to Africa without the risk of the sick, with symptoms or without, boarding on the return.

And is the U.S. at risk? The discussions of effective healthcare systems miss the high connectivity of developed societies. What could go wrong? A restaurant worker, taking Advil to avoid missing work, may sicken hundreds who disperse across the country in just days. A politician shaking many hands may do the same. Direct physical contact is not needed, indirect contact through objects that are touched is enough. It is easily enough transmitted by contact that the fact that it is not airborne is giving false security.

How can we overcome the outbreak in Africa? The key is reducing transmission. Waiting till sick people report to a hospital for care is too late. Early detection at the moment a person has a fever, and becomes contagious, can work. What is needed is a community based approach that monitors people daily for fever.

How would this work? Start by providing food to neighborhoods.

For each local community of a few thousand individuals, a neighborhood in a city, put a team camped out in an intersection. The team has health providers, security, logistics, communication and respected community members.

Each day, everyone in the neighborhood has to come to the local square for a food pickup and is screened for fever without contact. Anyone with fever is isolated from physical contact for observation. Those who have symptoms are cared for locally, at least initially. A health provider engages in or supervises the care is helpful. Transfer to a hospital can be done if the transport is low risk for transmission and there are enough hospital beds.

It is only necessary to reduce the contagion rate by 70% to stop the epidemic in its tracks and start an exponential decline in the number of cases.

Many neighborhoods can be expected to be declared clear even after a single contagion cycle. Monitoring by teams should continue in neighborhoods with infected individuals as well as those nearby, because of cross infection. Elsewhere, in areas that have no Ebola patients, the teams can pack up and move to the areas with patients improving the care they receive. The areas served will contract until they disappear. In cleared areas, normal activity can resume, people can be cleared to travel and even, with sufficient precautions, to fly.

Rolling this out to an entire country may seem like a daunting task, but there are experts at logistics that know how to get it done. With international cooperation the number of people and resources to get this done are possible.

Proactive rather than reactive measures have worked to prevent the spread of Ebola to Senegal and to the Koinadugu district of Sierra Leone. If we decrease transmission of Ebola cases in affected areas it will decline exponentially and disappear.