

Investing in health systems is the only way to stop the next Ebola outbreak

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The ongoing Ebola outbreak in the Democratic Republic of the Congo (DRC) recently surpassed [3,000 infections](#). The outbreak had been [raging for nearly a year](#) by the time it was declared a "[public health emergency of international concern](#)" in July.



Unicef carers at a creche for children whose parents are being treated for Ebola. Building health infrastructure is crucial to stopping the next outbreak. Epa/ Hugh Kinsella Cunningham

Why, after all the lessons learnt in the DRC as well as earlier in West Africa, does it remain so difficult to prevent a small outbreak from becoming an emergency?

Since the West African epidemic, which [killed more than 11,000 people](#) between 2014 and 2016, governments and philanthropists have invested in tools to respond to Ebola-like outbreaks. Health authorities have refined their protocols and practices. And in the intervening years Ebola vaccines and treatments have become more readily available for outbreak response.

The emergency in the DRC demonstrates that despite all these positive changes, the global response to containing Ebola outbreaks is undermined by the lack of health care and public health infrastructure.

The DRC has [among the weakest basic health infrastructure in the world](#), with only about one doctor per 10,000 people and 55-65% access to essential medicines like antibiotics and insulin. Health facilities themselves have [limited resources for controlling infection](#): 20% of health facilities lack latex gloves, and only half stock disinfectants.

Public health capacity is just as poorly equipped to handle an outbreak. As of 2016, [only three of the DRC's 517 districts](#) had a qualified field epidemiologist. Such front-line personnel are critical to detect and contain outbreaks.

Without developing the stability and capacity of these systems in the DRC – and other countries at risk – more outbreaks are inevitable. And without infrastructural investments, we are likely to continue to detect outbreaks too late to contain easily.

But it needn't be this way. We can prevent new outbreaks of Ebola the same way we've prevented cholera, plague, measles, and the other infectious diseases that only persist under poverty and neglect. It requires building the capacity of health systems on the ground.

Time is of the essence

The outbreak that was announced in the DRC last August had likely been [ongoing for at least four months](#). This meant that by the time international authorities could react, cases were already scattered and difficult-to-track, and the growth of the epidemic was already out of control.

[Many of the first few dozen infected people](#), who fell ill between about April and August last year, must have demonstrated classic Ebola symptoms such as high fever, bleeding, and multiple organ failure. But these extreme symptoms went undetected and uncontrolled because the people didn't have access to basic health services.

This illustrates the problem: that few early Ebola cases in the DRC are likely to have access to a facility with the tools for accurate diagnosis of a rare disease. And even where there are health facilities, they are unlikely to have the resources to protect their workers against infection or to properly sanitise surfaces.

Just as critically, once the disease has started to spread, there are not enough local public health officials around to quickly raise the alarm and implement effective interventions such as quarantines, safe burials, and community engagement.

The failure to detect early cases isn't once-off oversight. It's a systemic problem.

A [study we published this summer](#) with colleagues at the University of Cambridge suggested that most outbreaks are never detected or reported as Ebola. We also estimated that, on average, the first case of any outbreak has less than a 10% chance of being detected. Without diagnostics, most of these cases are likely treated as other more common fevers, such as malaria or typhoid.

An example of the difference basic infrastructure and health services can make can be found across the border in Uganda. It has [a much greater ability](#) to prevent infections from spreading. Almost all facilities have access to gloves and disinfectant. They also have more consistent access to essential medicines, diagnostic tools, and public health workers trained in hemorrhagic fever response.

These very basic resources have dramatic affect. Uganda is [one of the only countries](#) in West and Central Africa to report isolated cases of Ebola. And its responses to contain cases from the DRC have been [swift and effective](#).

But investment in health infrastructure remains difficult to sell to decision makers.

What's needed

Attitudes are [slowly changing](#). But the global health community has a history of obsession with [“vertical” interventions](#).

These, like mosquito nets and other strategies to control a single problem cheaply, are easy to measure and economically efficient.

By contrast, lifting basic public health infrastructure to the level necessary to control disease outbreaks, can seem like an impossible and immeasurable goal. Nevertheless, it still may be more affordable in the long run than the status quo.

The [\\$324 million the World Bank committed](#) to fighting the DRC outbreak [could fund training](#) and [20 years of salary](#) for specialised epidemiologists in each district of the DRC. The [billions of dollars](#) spent fighting the 2014-2016 epidemic could be transformative.

Basic health infrastructure is the only way to consistently prevent Ebola. It's important for other reasons too.

Measles – a disease easily prevented by a cheap vaccine – has [killed more people in the DRC this year](#) than Ebola has. [Residents of Ebola-affected regions often wonder](#) why Ebola gets so much more attention than measles, conflict, or poverty. All of these take more lives, more consistently.

All could be improved by more consistent international support, not just when an outbreak catches our imaginations.

Ebola epidemics aren't inevitable. To prevent Ebola, we must invest in health systems, not just reactive Ebola responses.

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