The West African Ebola outbreak: finishing the job, preparing for future

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The West African Ebola outbreak is thought to have started in December 2013. As we appear to be moving towards zero cases in all affected regions, it is important to take stock of the work that remains to be done.

In the beginning, the virus struck a region already devastated by civil conflict, inequality and economic deprivation. Health systems required urgent logistical, financial and technical assistance. The risk of a public health catastrophe was not just limited to West Africa, the threat of spread beyond was brought home by imported cases to the USA and Europe. Assistance eventually arrived and systems have been established for the identification, isolation and treatment of patients. We are only now being able to provide something close to the best globally available care to a small proportion of our patients in West Africa. In the meanwhile, more than 10 000 have lost their lives to Ebola.

As the emergency phase of this outbreak comes to a close, we must maintain focus. The recovery phase will take sustained effort. Even after the last case, Ebola’s death toll will rise through 42 days after which a country is declared Ebola free. The animal reservoir that likely triggered this outbreak remains. Another immediate concern is the arrival of the rainy season. Diseases such as typhoid, malaria and cholera are on the increase and mimic early symptoms of Ebola. The improved community awareness of warning symptoms will mean these suspect cases are now more likely to present to Ebola holding centres. In addition to maintaining sufficient capacity, testing must remain accessible and rapid. Developments such as the ‘15-minute’ point-of-care test may offer part of the solution.

Hospital infection control procedures will need to be upgraded with education, training and a guaranteed supply chain of gloves and personal protective equipment. Maintaining these supply chains in a healthcare system, which had already been close to breaking point, will require ongoing funding and support.

This outbreak has been brought under control, as previously, through public health outbreak control methods rather than vaccines or novel therapies. Trials for candidate drugs and vaccines continue but it will be challenging to demonstrate their impact on the few scattered cases remaining across multiple centres. Although their possible benefits have come too late, investment and development of these avenues must continue for them to be deployed in a future outbreak.

The clinical management of Ebola cases has evolved during the outbreak. From initial debates about the benefit of IV fluids and development of these avenues must continue for them to be deployed in a future outbreak. If, after an Ebola-free period, another case occurs, we must have the means to detect and isolate it before it turns into an outbreak. It might also be that the characteristic blood picture with raised liver transaminases and creatinine should automatically trigger Ebola testing on any blood sample in West Africa regardless of suspicious symptoms. Data on the predictive values of this approach will soon be available.

As the West African Ebola Outbreak moves towards the final stages, we must consider the importance of remaining work and take heed of lessons learned in preparation for future outbreaks. Several issues pertinent to preparedness must be considered, including the remaining animal reservoir and potential for sexual transmission. Testing must be accessible and contact tracing robust to trace the last patient. Improved infection control procedures alongside education and training require guaranteed supply chains and ongoing funding. Effort must be sustained to prevent an even greater catastrophe than the one inflicted on West Africa today.
However, treatment varied significantly between centres. The cohort of patients at varying stages and severity of disease at each centre make it difficult to assess the impact of any particular therapeutic approach on outcomes. This is highlighted by the difference in case fatality rates reported ranging from 40 to 65% in the early stages of the epidemic.

We must establish a framework for the sharing of outcome data and create a co-ordinating mechanism by which this might be done. A pooling of available data might allow the development of severity scores that help assess the response to particular therapies including aggressive fluid management, invasive ventilation and renal replacement therapy. This degree of transparency and cooperation will be a challenge but is our collective responsibility to our patients. In the meanwhile, it is hoped that updated WHO consensus guidelines will bring together the expertise developed across West Africa and in centres in the Europe and the USA.

International cooperation has been an uplifting development in this outbreak. Although important mistakes are being acknowledged, there has been an unprecedented deployment of resources, staff and support. The UK’s deployment of doctors, nurses, public health experts, laboratory staff and logistical support might represent a template for future responses. This involvement should be seen as a bilateral partnership rather than aid flowing from north to south. The staff deployed have had an opportunity to develop skills and expertise that increases the UK’s resilience and preparedness for future emerging infectious diseases. Staff should be encouraged and supported to continue to volunteer in similar settings in future.

Ebola has captured the attention of the media, the public and policy makers. As the death toll finally subsides, we must not allow ourselves to forget the lessons learnt at the cost of thousands of lives. Neglect of healthcare systems brought us to the brink of an even greater catastrophe than the one we have witnessed in West Africa. There is no question of ‘if’ another major outbreak will occur, but ‘when’. We have been warned and will have no excuse not to be ready for the next time.

Authors’ disclaimer: CP has worked for King’s Sierra Leone Partnership, Emergency and Médecins Sans Frontiers during the current Ebola outbreak. UNA worked for Emergency. The opinions expressed are those of the authors and do not necessarily reflect those of the organizations above.

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