

## EDITORIAL

### Ebola virus disease in West Africa: outbreak or epidemic?

By definition, a disease “outbreak” is “the occurrence of cases of disease in a community or region where it would not normally be expected, or at a much greater level than expected”, while an “epidemic” is “the occurrence of disease at a level greater than would normally be expected”.<sup>1</sup> In other words, an outbreak is synonymous with an epidemic, i.e. “the sudden rise in the incidence of a disease” vis-à-vis the “occurrence of more cases of disease than expected in a given area, over a particular period of time”.

Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans. In 1976, the disease first appeared in two simultaneous outbreaks, in Nzara, Sudan; and in Yambuku, Democratic Republic of Congo. The latter was in a village situated near the Ebola River, from which the disease takes its name. EVD is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals. In Africa, infection has been documented through the handling of infected chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines, found ill or dead or in the rainforest.<sup>2</sup>

The ongoing EVD epidemic in West Africa started in Guinea as an outbreak in February 2014, rapidly spreading to Liberia and Sierra Leone, which are neighbouring countries. By 2 July 2014, at least 779 infections and 481 deaths had been reported, resulting in a case fatality rate of approximately 62%.<sup>3</sup> However, new cases of the disease continue to be reported. On 3 July 2014, an emergency subregional meeting was held in Accra, Ghana, with health ministers from 11 African nations, namely the Democratic Republic of the Congo, Gambia, Ghana, Guinea, Guinea-Bissau, the Ivory Coast, Liberia, Mali, Senegal, Sierra Leone and Uganda. The meeting also included health experts, EVD survivors and World Health Organization representatives. It was held to determine the way forward with regard to urgent public health surveillance and case findings, in order to curtail the spread of EVD in West and Central Africa, considering the extensive movement of people within and across borders, which has facilitated the rapid spread of the infection.

Various organisations, including the US Centers for Disease Control and Prevention, the European Commission and the Economic Community of West African States, have donated funds and mobilised personnel to help to counter the outbreak. Médecins Sans Frontières is also working in the area. This EVD outbreak has been reported as the most severe ever, both in terms of the number of cases and those dead. The question to ask is: “Why did the affected countries wait for approximately six months to react to the EVD outbreak in the Republic of Guinea?” The answer is simple: “It’s a failure of the public health systems in these countries to have an active public health surveillance system in place to respond to infectious disease outbreaks”.

Whenever there is an infectious disease outbreak in Africa, the automatic or reflex reaction is to bury our heads in the sand like the proverbial “ostrich”, with the hope that it will pass. When the latter does not occur, we then quickly organise a high-powered meeting of health experts, with the request that international agencies assist us to curtail the outbreak. Is it a situation of waiting for things to go wrong, and then expecting others to solve the problem for us? The ongoing EVD outbreak is a call for action for African states to extensively fund functional public health surveillance systems. This would entail training healthcare professionals on the basics of disease epidemiology and rapid case findings, which would then assist in the establishment of active district surveillance systems and rapid response units to deal with the outbreaks with efficiency and skill.

EVD has a high death rate, of up to 90%.<sup>4</sup> There is no specific treatment for the disease. Therefore, supportive treatment includes oxygen therapy, intravenous fluid, blood transfusions, analgesic drugs and medication to treat shock. During outbreaks, healthcare professionals are at high risk, and should always wear special protective clothing, e.g. gowns, gloves, a full face mask and eye goggles, when attending to patients who are suspected of having EVD. The carers of the sick, usually family members, are another important group that should wear special protective clothing when attending to sick relatives. However, this is not the case, hence the continued spread of the disease.

This editorial is a clarion call to African states. Consider that it takes approximately eight hours for a flight from Abidjan, Ivory Coast, West Africa, to land in Johannesburg, South Africa. Is South Africa ready to handle an EVD outbreak? Yes, if it’s public health surveillance system is active, or else it may also be caught unprepared like the countries who are currently affected in West Africa. I appeal to African governments to truly support public health medicine, functional infectious disease surveillance systems and outbreak responses. Remember: “A stitch in time saves nine”!

**Prof Gboyega Ogunbanjo**

Editor-in-chief: *South African Family Practice*

#### References

1. Webb P, Bain C. Essential epidemiology: an Introduction for students and health professionals. 2<sup>nd</sup> ed. Cambridge: Cambridge University Press; 2013.
2. World Health Organization. Ebola virus disease fact sheet no103. WHO [homepage on the Internet]. c2014. Available from: <http://www.who.int/mediacentre/factsheets/fs103/en/>
3. World Health Organization. Ebola virus disease, West Africa: update. WHO [homepage on the Internet]. c2014. Available from: [http://www.who.int/csr/don/2014\\_07\\_03\\_ebola/en/](http://www.who.int/csr/don/2014_07_03_ebola/en/)
4. National Institute of Health, USA. Ebola hemorrhagic fever. PubMed [homepage on the Internet]. c2014. Available from: <http://www.nlm.nih.gov/medlineplus/ency/article/001339.htm>