EDITORIAL

Ebola virus disease epidemic in West Africa: a moving target!

This is a follow-up editorial on the Ebola virus disease (EVD) epidemic in West Africa, with its spread outside the region to the USA and Europe via the few individuals who travelled outside the three countries most affected by the epidemic. The number of infected individuals increases on a daily basis. As of 29 October 2014 (updated 31 October 2014), a total of 13 540 cases, of which 7 702 were laboratory confirmed, as well as 4 941 cumulative deaths, were reported in Guinea, Liberia and Sierra Leone.[1] During the same period, countries with travel-associated cases have reported a total of 25 cases (of which 24 were laboratory confirmed) and nine deaths, as follows: Mali, one case (one death); Senegal, one case (no deaths); Nigeria, 20 cases (eight deaths); Spain, one case (one death) and the USA, four cases (one death).[1]

We are now better informed of the microbiology of the virus. It is an RNA virus of the family *Foliviridae,* and four subtypes have been identified so far. Three of the four subtypes cause disease in humans, namely Ebola-Zaire, Ebola-Sudan and Ebola-Ivory Coast, while the fourth subtype is Ebola-Reston, which causes disease in non-human primates.[2] When reviewing the three subtypes, which are named after previous outbreak sites where they were first discovered, it is striking that a subtype existed in West Africa before the current epidemic, i.e. Ebola-Ivory Coast. Typically, sporadic outbreaks coincide with the rainy season. However, the disease has remained rare since its initial description in 1976, with no more than 2 000 diagnosed cases before 2014.[3]

While the whole world has focused on the EVD epidemic in West Africa, the Democratic Republic of Congo (DRC) has reported 66 cases (38 laboratory confirmed), and that 49 people have died from the disease.[4] It is reported that the DRC outbreak does not relate to the current epidemic in West Africa. However, the West African epidemic is caused by a variant of the Zaire ebolavirus, with 97% sequence identity to strains isolated from the DRC and Gabon, suggesting a parallel evolution of this virus in the affected area, as opposed to introduction from the endemic areas of central and east Africa.[5]

I asked the question in my last editorial: "Is South Africa ready to handle an Ebola virus disease outbreak?" If the experience of what happened in Durban, South Africa, is anything to go by, it seems that we may be caught off guard if a suspected EVD patient walks through the doors of any of the designated treatment sites. A male patient with fever who had just returned from work in Sierra Leone become anxious about his health and was allowed to walk out of Addington Hospital on Wednesday, 29 October 2014 when he decided that he no longer felt sick. The next day he was readmitted, this time with health officials dressed in protective gear and the police escorting the ambulance to the entrance of the isolation ward. The irony of the case is that the previous day, healthcare workers at the same hospital wore little or no protective gear while in contact with this patient, and it was only after the scare of EVD was raised that the designated EVD treatment site in Durban took action to protect its healthcare workers. We cannot afford to be complacent, bearing in mind the ease of air travel between countries. The incubation period of the disease ranges between two and 21 days before the symptoms manifest. So what proactive steps should we be taking, as a country?

The imposition of quarantine zones and travel restrictions will negatively impact on trade and cause severe lasting negative economic consequences regionally. In addition, with quarantine zones, access to food security will become a serious challenge, with damming consequences of malnutrition in the population. We must remember that EVD is most contagious in its acute phase, when the infected individual is too sick and unlikely to travel, let alone board a plane. South Africa has the health infrastructure to manage any EVD outbreak. However, healthcare workers are less informed about the disease and how they should protect themselves whenever a patient with fever and travel history from the epicentre of the current epidemic presents at any of our health facilities. We need to step up the in-service training of all healthcare workers to properly identify suspected EVD cases, and to implement appropriate infection control measures. On a more serious note, we should ask the next question: "How prepared is South Africa's private health sector to manage any suspected EVD case?" A quick snap survey should give us the answer. The current EVD epidemic in west Africa will be with us for the foreseeable future, hence strict public health measures need to be instituted across both South Africa's public and private health sectors and neighbouring countries. The EVD appears to be a moving target for now, but we can control its spread by providing appropriate and relevant information about the disease to healthcare workers and the public at large. We should avoid panic responses to any suspected EVD case, as occurred in Durban.

Prof Gboyega Ogunbanjo
Editor-in-chief, *South African Family Practice*

References

1. Centers for Disease Control and Prevention. 2014 Ebola outbreak in West Africa: case counts. CDC [homepage on the Internet]. c2014. Available from: http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html
2. Blanco-Silva F, Gruver S, Young-Ju K, Rizkalla C. The epidemiology of Ebola virus in western lowland gorillas and the human population in the Congo. 12 May 2003
3. Feldmann H, Gesibert TW. Ebola haemorrhagic fever. Lancet. 2011;337(9768):849-862.
4. Centers for Disease Control and Prevention. 2014 Ebola outbreak in Democratic Republic of the Congo. CDC [homepage on the Internet]. c2014. Available from: http://www.cdc.gov/vhf/ebola/outbreaks/drc/2014-august.html
5. Baize S, Pannetier D, Oestereich L. Emergence of Zaire Ebola virus disease in Guinea: preliminary report. N Engl J Med. 2014;371(15):1418-1425.