

A model of the Ebola epidemics in West Africa incorporating age of infection

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Tomorrow, Sierra Leone is expected to be declared Ebola-free by the World Health Organisation. But what was key to eliminating the disease? A mathematical model published in the Journal of Biological Dynamics describes the reasons as complex, but confirms that increased identification and isolation of infectious cases played the major role.

Sierra Leone is situated in a region with many deep-rooted cultural traditions, and changing the way that death is mourned was key to stemming the spread of the disease. This includes deterring individuals from making physical contact with deceased and infected bodies in order to avoid infection.

The authors of the study are Prof. Glenn Webb and Prof. Cameron Browne of Vanderbilt University, Nashville, USA. They state: "Our model simulations indicate that this enhanced removal of infectious individuals is key to elimination of the epidemic. This removal is quantified in our model in two ways:

(1) with respect to the rate of infectious individuals hospitalized per day, and

(2) with respect to an earlier disease age of the infectious individuals hospitalized. Both of these considerations are critical for epidemic control and both can be influenced by public health policies and public awareness."

More information: G. F. Webb et al. A model of the Ebola epidemics in West Africa incorporating age of infection, *Journal of Biological Dynamics* (2015). [DOI: 10.1080/17513758.2015.1090632](https://doi.org/10.1080/17513758.2015.1090632)

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