

Emergency facilities a vital key to Ebola survival

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Emergency health facilities could be the key to survival for Ebola patients, an international study involving University of Queensland researchers has found.

UQ epidemiologist Dr Ricardo Soares Magalhaes said Ebola was a highly contagious, acute haemorrhagic fever that was often fatal if not treated.

"Patients who were hospitalised were 74 per cent less likely to die in the short term, compared with those people who did not receive medical treatment," he said.

"Setting up emergency infrastructure in future outbreaks will be the key to reduce the number of deaths and improve [patient outcomes](#)."

Dr Soares Magalhaes, of UQ's School of Veterinary Science and Child Health Research Centre, said the University of Florida-led study examined the 2014 Ebola virus disease outbreaks in West Africa.

It aimed to identify ways of improving surveillance for Ebola virus to better target disease control.

Dr Soares Magalhaes said the study found an overall death rate of 53.5 per cent, which decreased as access to medical treatment increased.

People who reported contact with another Ebola case were more likely to

be infected, as were those who attended a funeral.

He said the research revealed that patient deaths increased with age, male patients were more likely to die, and fever, vomiting, diarrhoea and unexplained bleeding were associated with increased deaths.

"Setting up emergency infrastructure in future outbreaks will be the key to reduce the number of deaths and improve patient outcomes," he said.

The researchers found that even treatment with only basic supportive care such as intravenous rehydration therapy could improve patient survival rates.

"The keys to success are early detection – how fast the disease can be detected and cases isolated – and rapid hospitalisation," Dr Soares Magalhaes said.

Dr Soares Magalhaes said the research, published in *Global Health Research and Policy*, was the second study in a series involving collaborators in Sierra Leone and the Queensland University of Technology.

"In the first investigation, published in *The Lancet Global Health*, we used digital surveillance – basically five Google search terms for Ebola virus – as an early notification system for an outbreak," he said.

"This anticipated by two weeks the World Health Organisation's official notification of an Ebola virus disease outbreak.

Dr Soares Magalhaes said although the unprecedented size of the Ebola outbreak in West Africa had challenged the international community's ability to respond to such an emergency, it had also provided unique opportunities to understand ways to control Ebola transmission and

improve the clinical management of the disease.

More information: Gabriel J Milinovich et al. Role of big data in the early detection of Ebola and other emerging infectious diseases, *The Lancet Global Health* (2015). [DOI: 10.1016/S2214-109X\(14\)70356-0](https://doi.org/10.1016/S2214-109X(14)70356-0)

Provided by University of Queensland

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