

Fight against little-known Zika virus applies lessons from Ebola

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While the world's attention has been focussed on Ebola, another outbreak has been spreading in a number of countries across the world. Now, Oxford University infectious disease specialists are applying the lessons from the Ebola outbreak to try to support local medics and researchers to get ahead of this new pathogen.

Zika, carried by the Aedes mosquito, has been known about for some years, typically causing mild illness and a rash. Now, however, reports

from South America suggest that it is causing birth defects in newborn babies of women who have had Zika.

The outbreak came to the attention of two Oxford-based organisations: The Global Health Network (TGHN), an online science park that guides and supports [medical research](#) around the world, especially in low and middle income countries and ISARIC, a global network of researcher groups whose aim is to enable research in disease outbreaks

Professor Trudie Lang explained: 'I was at an ISARIC meeting about Ebola when Fernando Bozza of the Oswaldo Cruz Foundation told us about the Zika outbreak. He asked what we knew about the Zika outbreak. The answer was not much.

'He briefed the ISARIC team and it was clear this was another situation where the [research community](#) had to come together to ensure that evidence was gathered as early as possible this time, and that we should apply the lessons from Ebola that we were discussing at that very meeting.'

Zika has been known about since the late 1940s but major outbreaks were not recorded until a 2006 occurrence on the Pacific island of Yap. In 2013 there were 30,000 cases in French Polynesia.

However, the South American outbreak is particularly concerning because of its apparent effect on foetal development. Dr Fernando Bozza said: 'Zika Virus has been reported in Brazil since April 2015 and up to mid-December, nine other countries in the Americas have reported local Zika transmission.

'In November, the Brazilian Ministry of Health reported an unusual increase in cases of microcephaly, with a causal link between Zika infection during pregnancy and congenital abnormalities. 2,401

microcephaly cases are under investigation in Brazil, with 134 cases confirmed related to Zika virus infection. Investigations are also ongoing to assess a possible relation between Zika and Guillain-Barré Syndrome and other neurological events.'

With Zika becoming a more serious disease, The Global Health Network recognised the need to move as rapidly as possible into obtaining data, which requires the integration of research into the medical and public health response. Developing research tools and strategies is key and this needed a resource for agreeing research priorities and sharing research documents

Professor Lang said: 'Medical research is vital to understand, manage and hopefully stop the [outbreak](#). However, if samples and patient information are to be used for research purposes then protocols are needed that have been given ethical approval by regulatory authorities and patients need to be informed and asked for their consent. Robust studies need to be planned and this all takes time to put into place. However, a lesson from Ebola was that it can be done faster. The researchers in the affected regions are poised to run and lead these studies, and the international research community, through ISARIC, is working to support them and provide any input and external expertise that is needed.

'The Global Health Network's website for Zika has been set up for the local research community. It will make available documents like case record forms and consent forms, as well as sharing research priorities. By providing a common and open sharing space that is driven by the regional researchers in Brazil and other countries it should be possible to speed up getting this crucial data that is needed to understand, manage and eventually treat Zika virus infection.'

The hope is that a joined up approach, where frontline health

organisations are supported by a global network, will mean Zika is understood quicker and that work on treatments can begin sooner.

More information: The site is at: zikainfection.tghn.org/

Provided by University of Oxford

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