

RABIES IN AUSTRALIA: WHAT WOULD BE THE IMPACT IN OUR NORTH?

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Rabies is a serious disease: following infection and without treatment, it invariably leads to death. Australia is free of rabies; the only ever incursion was likely in Tasmania in 1867. In countries infected by rabies the disease usually exists in domestic dogs. Humans are infected via the bite of a rabid dog.

Indonesia has been infected by rabies since the 1880s. Between 1997 and 2012, rabies spread to several islands in Indonesia previously free of the disease, including Flores (1997), Ambon (2003), Bali (2008), Larat (2009), Yandena and Babar (2010) and Kisar (2012). The recent spread of rabies in the southern part of Maluku province brings rabies to about 300 km north of the Top End. Australia's extensive northern borders are difficult to regulate, and infected dogs travelling on fishing vessels or pleasure craft are a potential risk.

Management of dogs in remote northern communities and the long incubation period of rabies (up to 2 years) means that if an incursion occurred, rabies could go undetected for many months.

We have initiated a project to estimate the impact of a rabies incursion in Indigenous communities in northern Australia by addressing the following questions:

How will rabies spread in free-ranging dog populations within remote communities?

How long will it take to detect the disease?

How far will the disease have spread between communities when detected?

Which groups of dogs should be vaccinated and at what level of coverage to control the disease most effectively?

To address these questions, how often dogs come into contact within communities, and how often they are moved between communities, needs to be measured. This information will be obtained via observational methods, including questionnaires, surveys and cameras. In related work, the potential spread of rabies in wild dog populations is being investigated.

Once rabies is endemic in Australia, it would be extremely labour- and resource-intensive, if not impossible, to eradicate. Knowing how rabies would potentially spread is essential for developing response plans, should an incursion occur.