

# Re-Emergence of Rift Valley Fever in Madagascar

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[Karen Hunter] Hello. I'm Karen Hunter. With me today is Dr. Pierre Rollin, an epidemiologist at the Centers for Disease Control and Prevention. We're talking about a paper in the June 2010 issue of the CDC's journal, Emerging Infectious Diseases. The article looks at two outbreaks of the Rift Valley Fever virus in Madagascar during two rainy seasons in 2008 and 2009. Welcome, Dr. Rollin.

[Pierre Rollin] Pleased to be here.

[Karen Hunter] Now, Dr. Rollin, let's start by describing Rift Valley Fever and how it affects animals and people.

[Pierre Rollin] Rift Valley Fever is a disease transmitted by mosquitoes. It's due to a virus and can infect humans, giving mostly mild disease but sometimes very severe and sometimes death in humans. In animals it can give abortion in pregnant animals but also death in animals.

[Karen Hunter] CDC set out to study these two outbreaks in 2008 and 2009 in Madagascar. What did you find?

[Pierre Rollin] We have a long term relationship with the Institut Pasteur in Madagascar and they invited us when they discovered that there were some human cases and animal cases of Rift Valley Fever in different parts of the country. They received some specimens from animals and humans and they were able to confirm twice about the virus, to confirm the disease in some human and animal and because of this relationship, they asked us to come and to help with the outbreak.

[Karen Hunter] Are outbreaks more likely during rainy seasons and, if so, why?

[Pierre Rollin] Outbreaks could occur anytime, but because it is transmitted by mosquitoes the rain is very important; helping to have higher and more important, mosquito populations. So it's always following big rain, heavy rain, unusual rain, where suddenly you have a large population of mosquitoes.

[Karen Hunter] What role do slaughterhouses play in the spread of this disease?

[Pierre Rollin] Humans can be infected by mosquito bites, but more likely by contact with sick animals, and very often when people have sick animals they bring them to the slaughterhouse to be slaughtered before they die so they can be consumed and the people in contact with the meat and with the animal can be infected. So the people in the slaughterhouse act as a sentinel population, if there is some sick animals due to Rift Valley Fever they can be concentrated in the slaughterhouse. That is why we chose that population.

[Karen Hunter] You later looked at blood samples from almost 2,000 volunteers. What did that tell you about the spread of disease outside of the outbreaks?

[Pierre Rollin] The human disease was reported in only a few areas of the big island of Madagascar, and the animal disease was also concentrated in the same place. But when we tested all these volunteers from all the districts of the island, we found that, in fact, the virus of infected animals enter in the slaughterhouse of nearly all the districts of the island. So the virus and the disease was more spread than we had thought in the beginning.

[Karen Hunter] What are the implications of this study for future outbreaks of Rift Valley Fever in this area?

[Pierre Rollin] I think there is a big surveillance system, mostly using some remote assessing with satellite and index of vegetation; so you don't have to be in the field to figure out that you have more rain, you can measure that from the vegetation index, and this system is very important because it helps to put surveillance in place and to predict a future outbreak and to be able to respond before the outbreak it is too high.

[Karen Hunter] Thanks, Dr. Rollin. I've been talking with CDC's Dr. Pierre Rollin about a paper in the June 2010 issue of CDC's journal, Emerging Infectious Diseases. You can see the entire article online at [www.cdc.gov/eid](http://www.cdc.gov/eid).

If you'd like to comment on this podcast, send an email to [eideditor@cdc.gov](mailto:eideditor@cdc.gov). That's eideditor – one word - at cdc.gov. I'm Karen Hunter, for Emerging Infectious Diseases.

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