



Why Can We See a Local Spread of Chikungunya Virus (CHIKV) Infection?

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Dear Editor

Chikungunya virus (CHIKV) is a mosquito-transmitted alphavirus that causes acute fever and acute and chronic musculoskeletal pain in humans [1]. CHIKV represents a new global health threat [2].

As of August 29, 2014, local transmission had been identified in 31 countries or territories in the Caribbean, Central America, South America, or North America. A total of 650,468 suspected and 8,899 laboratory-confirmed chikungunya cases had been reported from these areas (Updated data from the Pan American Health Organization-[PAHO]) [3]. With the recent outbreaks in the Caribbean and the Pacific, the number of chikungunya cases among travelers visiting or returning to the United States from affected areas will continue to increase. These imported cases could result in local spread of the virus in the continental United States [4].

The mosquitoes that transmit the virus are found throughout much of the Americas, including parts of the United States. Since CHIKV is new to the Americas, most people in the region are not immune. This means they can be infected and spread the virus to other mosquitoes [3].

There are two main vectors of CHIKV, *Aedes aegypti* and *Ae. albopictus*. Both mosquito species are widely distributed throughout the tropics with *Ae. Albopictus* also present at more temperate latitudes. Given the vectors' distribution throughout the Americas, the entire region is susceptible to the virus' invasion and spread [5].

As of now CHIKV infection has been found in people with a history of travel to areas endemic for CHIKV but given the reasons above, it will not be long before we see the local spread of CHIKV infection in areas that are not endemic for CHIKV.

Prevention of CHIKV infection consists of minimizing mosquito exposure [6]. Treatment of CHIKV infection consists of supportive care including anti-inflammatory agents that relieve symptoms in many patients and analgesic agents [7]. No antiviral agents have been shown to be effective in human infection, although ribavirin and interferon-alpha appear to have in vitro activity against virus replication [8]. Chloroquine sulfate has been suggested as a possible treatment because of its anti-inflammatory properties but has not been demonstrated to be effective [9].

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