

Report Suggests Nearly 5 Percent Exposed to Dengue Virus in Key West

An estimated 5 percent of the Key West, Fla., population—over 1,000 people—showed evidence of recent exposure to dengue virus in 2009, according to a report from the Centers for Disease Control and Prevention (CDC) and the Florida Department of Health.

After three initial locally acquired cases of dengue were reported in 2009, scientists from the CDC and the Florida Department of Health conducted a study to estimate the potential exposure of the Key West population to dengue virus.

Dengue is the most common virus transmitted by mosquitoes in the world. It causes an estimated 50 million-100 million infections and 25,000 deaths each year. From 1946 to 1980, no cases of dengue acquired in the continental United States were reported, and there has not been an outbreak in Florida since 1934.

"We're concerned that if dengue gains a foothold in Key West, it will travel to other southern cities where the mosquito that transmits dengue is present, like Miami," said Harold Margolis, chief of the dengue branch at CDC. "The mosquito that transmits dengue likes to bite in and around houses, during the day and at night when the lights are on. To protect you and your family, CDC recommends using repellent on your skin while indoors or out. And when possible, wear long sleeves and pants for additional protection."

Since 1980, a few locally acquired U.S. cases have been confirmed along the Texas-Mexico border, which coincided with large outbreaks in neighboring Mexican cities. In recent years, there has been an increase in epidemic dengue in the tropics and subtropics, including Puerto Rico.

"These cases represent the reemergence of dengue fever in Florida and elsewhere in the United States after 75 years," Margolis said. "These people had not travelled outside of Florida, so we need to determine if these cases are an isolated occurrence or if dengue has once again become endemic in the continental United States."

On Sept. 1, 2009, a New York state physician notified the Monroe County (Fla.) Health Department and the Florida Department of Health of a suspected dengue case in a New York state resident whose only recent travel was to Key West. In the next two weeks, two dengue infections in Key West residents without recent travel were reported and confirmed. By the end of 2009, 27 cases had been identified.

For the study, a total of 240 blood samples were collected from randomly selected households in Key West and tested for the presence of virus or evidence of a previous

dengue infection. Among the samples, 5 percent had dengue active in their systems or had dengue antibodies, suggesting that the disease had been experienced within the previous three months of the study. Key West residents, physicians and hospitals were also enlisted in a surveillance program to identify new cases, and mosquitoes were tested for the virus.

CDC and the Florida Department of Health continue to monitor cases in and around Key West. As of the end of June 2010, there have been 12 additional cases of locally acquired dengue reported from Key West and surrounding areas. For more information on dengue, please visit www.cdc.gov/dengue.

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The International Conference on Emerging Infectious Diseases is organized by the CDC, the American Society for Microbiology, the Council of State and Territorial Epidemiologists, the Association of Public Health Laboratories and the World Health Organization. More information on the meeting can be found online at www.iceid.org.