

Dengue Fever

2008 Case Total	2	2008 Rate	0.05 per 100,000
2007 Case Total	3	2007 Rate	0.09 per 100,000

Dengue fever is a reportable condition in Oklahoma. Dengue fever is endemic in most of the countries in the tropics including those in Southeast Asia, Central America, and Western Africa. Cases of dengue fever are generally acquired outside of the US (imported or travel-associated), but autochthonous cases have been identified in Texas near the Mexico border as recently as the summer of 2005.

Dengue fever is transmitted through the bite of an infected mosquito. Differential diagnosis includes chikungunya, other arboviral infections, influenza, measles, rubella, malaria and other systemic febrile illness. Symptoms include fever, intense headache, myalgia, arthralgia, eye pain, vomiting and a generalized maculo-papular rash.

In 2008, 4,681 cases of dengue hemorrhagic fever and 24 cases of dengue fever were reported from the countries in the English-, French- and Dutch- speaking Caribbean. In Oklahoma, two cases of dengue fever were reported in persons who had visited the Caribbean in 2008. This article summarizes the epidemiologic, clinical and laboratory information from the investigation of Oklahoma's two cases.

Case One: The first reported case of dengue fever in an Oklahoma resident was a 50 year-old female from Woodward County. The individual visited St. Barthelemy Island in the Caribbean during February 2008. One day after returning to Oklahoma, the individual developed a fever, a macular rash, anorexia, diarrhea, myalgia, nausea and vomiting. The rash covered her extremities as well the palms of her hands and the soles of her feet. Additional symptoms were dehydration and bilateral neuropathy in all extremities. The patient presented to an area emergency department for evaluation where dengue fever was suspected based on clinical history and recent travel to the Caribbean. Dengue fever was confirmed by the detection of IgM antibodies.

Case Two: The second reported case of dengue fever in an Oklahoma resident was a 54 year-old female from Tulsa County. The individual visited St. Maarten during November 2008 for seven days. Two days after returning to Oklahoma, the individual developed a fever (max measured temperature = 102°F), retro-orbital pain, anorexia, backaches, chills, headaches, myalgia and severe fatigue. Approximately five days after symptom onset, the patient developed a macular rash on all areas of her body that lasted approximately three days; a petechial rash then developed on her ankles that lasted five days. The patient was evaluated by a physician five days after symptom onset where dengue fever was suspected based on clinical and travel history. IV fluids were administered and the patient was sent home with instructions for management of symptoms. Dengue fever was confirmed by serologic testing where IgM antibodies were detected. During the case investigation conducted by the Acute Disease Service, the patient recalled receiving several mosquito bites on at least one occasion during her trip to St. Maarten.

Prevention of dengue fever may be achieved by routine use of an insect repellent containing 20-30% DEET (N, N-diethyl-m-toluamide) when visiting or residing in an endemic area along with sleeping indoors with screened windows or mosquito netting protection. Neither case reported wearing insect repellent or taking precautions to prevent mosquito bites. The CDC Division of Vectorborne Infectious Diseases website has recommendations, news and updates for travelers and clinicians regarding dengue fever at <http://www.cdc.gov/NCIDOD/DVBID/dengue>.