

Dengue Information for Clinicians

Dengue infection is caused by any of four distinct but closely related dengue virus (DENV) serotypes (called DENV-1, -2, -3, and -4). Dengue viruses are flaviviruses, a family which includes other medically important vector-borne viruses (e.g., West Nile virus, St. Louis encephalitis virus, etc.). Dengue is currently the most frequent cause of acute febrile illness among returning U.S. travelers from the Caribbean, Central and South America, and Asia. It is widespread throughout the tropics and sub-tropics and an outbreak was recently identified in Key West, Florida. The primary method of **transmission** is through the bite of an infected *Aedes aegypti* mosquito. Dengue may also be transmitted from mother to fetus in utero or to neonate at parturition. **Incubation** period is 3-14 days. Infected persons may be asymptomatic in up to 53-89% of cases. **Clinical presentation** in those who become ill can range from a mild non-specific febrile syndrome, to classic dengue fever (DF), or in the most severe forms of the disease (2-4% of cases), dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS). Early clinical recognition and treatment for those who develop DHF or DSS can save lives. Dengue should be considered when persons that live in or have traveled to a dengue endemic area in the two weeks prior to symptom onset have **fever and two of the following signs and symptoms:**

- Ache and pains (headache, retro-orbital pain, myalgia, arthralgia)
- Anorexia and nausea
- Rash
- Positive tourniquet test
- Leucopenia
- Warning sign for severe disease. Warning signs typically manifest after a two to seven day febrile phase and include abdominal pain or tenderness, persistent vomiting, mucosal bleeding, liver enlargement greater than two centimeters, clinical fluid accumulation, lethargy/restlessness, or laboratory results indicating an increase in hematocrit concurrent with a rapid decrease in platelets.

Patients at risk for severe disease:

Previously infected with another dengue virus	Diabetes mellitus
Pregnant women	Chronic renal failure
Infants	Obesity
Elderly	

Laboratory testing is necessary to confirm whether local transmission is occurring and to identify circulating virus types (PCR). Serum samples collected during the first five days post onset should be submitted for PCR testing to DOH Tampa Laboratory. Most convalescent serum samples (≥ 6 days onset) should be submitted for IgM antibody detection by ELISA at a commercial laboratory. Either PCR or ELISA samples can be collected in a red or tiger top tube. Your county health department can provide guidance on how and when to submit samples to DOH Laboratories. The Florida Department of Health is relying on physicians to identify suspect cases of dengue and report them to their county health department. **Please contact your county health department by the next business day if you suspect dengue to ensure prompt mosquito control efforts.**

Resources:

Local County Health Department phone number: **XXXXXX**

CDC guidelines for clinical management of dengue infection

<http://www.cdc.gov/dengue/clinicallylab/clinical.html>

FL DOH dengue and general arbovirus information:

<http://myfloridaeh.com/medicine/arboviral/index.html>

More information on the 2009 Key West dengue outbreak:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5919a1.htm>