



Communicable Disease Control Division

Updated Zika and Dengue Virus Surveillance and Guidance

January 7, 2020

Due to the changing global epidemiology of Zika virus disease, the US Centers for Disease Control and Prevention (CDC) updated their serologic testing recommendations in November 2019 to no longer endorse routine serological IgM testing for Zika virus.

Cases of locally transmitted Zika in the continental United States or territories have not been reported since May 2018, and limited-to-no Zika virus transmission is currently being reported globally. In 2019, California reported only one confirmed, symptomatic case of Zika virus in an international traveler, and none were reported in Orange County.

In contrast, there are large and ongoing outbreaks of dengue virus in many parts of the world. As of December 1, 2019, 180 dengue cases have been reported in California compared to 107 cases over the same time period in 2018.

Eighteen dengue cases were reported in Orange County in 2019. In comparison, 12 cases were reported in 2018. 10 (53%) of Orange County's dengue cases in 2019 resulted from exposure in Mexico. Cases were also identified following travel to Asia, Central America, and the Caribbean.

For Providers:

- The CDC no longer recommends routine serological IgM testing for Zika virus. Because Zika IgM antibodies can persist for months to years following infection, their presence might not indicate a recent infection. Moreover, there is significant cross-reactivity between dengue IgM and Zika IgM antibodies in serologic tests. Antibodies generated by a recent dengue virus infection can cause a falsely positive Zika IgM.
- For asymptomatic pregnant women with recent international travel to an area with risk of Zika, testing is not routinely recommended, but nucleic acid amplification testing (NAAT) may still be considered up to 12 weeks after travel.
- Dengue should be considered in any recent traveler to a dengue-endemic area (CDC guidance on areas with dengue can be found [here](#)) who develops a febrile illness. About 1 in 4 infected persons will develop symptoms. Following an incubation period of 3-14 days (usually 4-7 days), classic dengue manifests with fever, often accompanied by some combination of muscle, bone, or joint pain, headache (often retroorbital), injected oropharynx, macular or maculopapular rash, and petechiae or other minor bleeding manifestations. Laboratory testing may reveal leukopenia, thrombocytopenia, and/or elevated AST and ALT levels.
- About 1 in 20 dengue infections will progress to severe dengue, which presents with an increase in vascular permeability leading to a shock syndrome with a significant mortality risk. Warning signs for severe dengue include abdominal pain, persistent vomiting, clinical fluid accumulation, mucosal bleeding, lethargy, restlessness, and/or liver enlargement. A rising hematocrit or thrombocytopenia are also harbingers for severe illness and call for careful attention to fluid management. The progression to decreased circulatory volume and shock often occurs suddenly with defervescence.

- Dengue infection can be confirmed by serum testing using dengue NAAT or anti-dengue virus IgM antibodies. Dengue virus is detectable by NAAT from the start of fever until 7-10 days after illness onset. Dengue IgM antibodies are detectable beginning 3-5 days after illness onset but positive results can be difficult to interpret due to cross-reaction with IgM antibodies against Zika virus and other closely related flaviviruses.
- Chikungunya virus occupies a similar geographic distribution as dengue, and can have a similar febrile illness presentation. Chikungunya virus infection is more likely to cause severe arthralgia and arthritis, while dengue virus infection is more likely to cause neutropenia, thrombocytopenia, hemorrhage, and shock. When evaluating a patient for dengue, providers should also consider testing for chikungunya infection using serum NAAT or IgM.

More information can be found at the following links:

CDC guidelines:

- [Revised Zika and Dengue Testing Guidance \(Updated November 2019\)](#)
- [Denque and Zika Virus Diagnostic Testing for Patients with a Clinically Compatible Illness and Risk for Infection with Both Viruses](#)
- [Chikungunya Information and Guidance](#)

Contact Information:

For questions or concerns or to report a suspect case of dengue, Zika, or chikungunya infection, please contact the **Communicable Disease Control Division at 714-834-8180**.