



DEPARTMENT OF  
**HEALTH AND HUMAN SERVICES**

Promoting and protecting health, well-being, self-sufficiency, and safety of all in Marin County.



## PUBLIC HEALTH UPDATE

August 18, 2016

Zika Virus

Dear Colleagues:

This update provides information about recent Zika virus (ZIKV) activity, disease recognition, testing, reporting procedures, and additional resources for Marin County clinicians. Marin County Health and Human Services' Communicable Disease Prevention and Control (CDPC) unit is closely monitoring the situation as it is rapidly evolving. Updates are ongoing.

### Current Situation

Earlier this month, the California Department of Public Health (CDPH) reported that two infants with Zika-related microcephaly have been born in California to women who had ZIKV infections during pregnancy after spending time in a country where the virus is endemic. Centers for Disease Control and Prevention (CDC) has released two updated interim guidelines on ZIKV disease, one for prevention of sexual transmission and the other for healthcare providers caring for pregnant women and women of reproductive age.

ZIKV transmission has been documented in a total of 69 countries and territories, including the United States (South Florida). To date, there have been 1955 reported travel-associated ZIKV cases in the U.S. (excludes U.S. Territories where there are more than 4700 locally acquired cases reported). 529 pregnant women in the U.S. have laboratory evidence of ZIKV infection. In these pregnancies, there have been 16 live-born infants with birth defects and 5 pregnancy losses with birth defects. There are 22 cases of sexually transmitted ZIKV infection.

As of August 17th, Florida public health officials have confirmed at least 33 locally-acquired mosquito-borne cases of ZIKV disease in South Florida. The invasive mosquito responsible for ZIKV transmission has not been found in Marin County. To date, there have been no locally-acquired, mosquito-borne cases of ZIKV infection in Marin County, the Bay Area, or California.

### Updated ZIKV Testing Guidance for Marin County Health Care Providers

All ZIKV testing, including commercial testing, must be coordinated with Marin County Health and Human Services' CDPC unit (415 473 2092). Commercial laboratories performing Zika rRT-PCR testing currently do not offer confirmatory serologic testing (plaque reduction neutralization test, or PRNT). If using commercial laboratories for ZIKV testing, Dengue and Chikungunya diagnostic testing should be completed due to similar geographic distribution and clinical presentation.

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**Testing is recommended for the following situations:**

- Pregnant women with possible ZIKV exposure (see Figure, Interim Guidance)
  - The definition of potential ZIKV exposure is broadened to include: (1) travel to an area where ZIKV is circulating (includes Miami, FL); OR (2) having had sex with a person (male or female, symptomatic or asymptomatic) who traveled to an area where ZIKV is circulating.
  - If fetal ultrasound in a pregnant woman who tested negative for ZIKV shows fetal abnormalities consistent with ZIKV disease, maternal ZIKV retesting is recommended.
- Infants born to mothers with positive or inconclusive test results for ZIKV infection
- Children with microcephaly whose mothers traveled to or resided in an area with ongoing ZIKV transmission during their pregnancy

**Testing should be considered for the following situations:**

- Non-pregnant patients with two or more compatible symptoms (fever, maculo-papular rash, arthralgia, or non-purulent conjunctivitis) and history of travel to a ZIKV-transmission area
- Patients diagnosed with Guillain-Barre Syndrome (GBS) with a history of travel to a ZIKV-transmission area
- Women who are undergoing fertility treatment after a history of clinical symptoms associated with travel to ZIKV-transmission area(s)

**Testing is not recommended for asymptomatic, non-pregnant persons.**

**Summary of Updated Recommendations**

Pregnant women and their partners

- All pregnant women should be assessed for possible ZIKV exposure during each prenatal care visit, which includes their travel history as well as their sexual partner's travel history and potential ZIKV exposure.
  - If possible ZIKV exposure, evaluation should include an assessment of signs and symptoms of ZIKV disease (acute onset of fever, rash, arthralgia, and/or conjunctivitis)
- Pregnant women and their partners living in or traveling to ZIKV transmission areas should follow steps to prevent mosquito bites.
- Pregnant women with sex partners (male or female) who live in or have traveled to an area with ZIKV transmission should use condoms or other barriers to prevent infection every time they have sex or not have sex during the pregnancy.
- Pregnant women should avoid travel to areas with active ZIKV outbreaks, including Puerto Rico, and the U.S. Virgin Islands. (CDC Travel Notices). Pregnant women should also consider postponing non-essential travel to Florida.
- CDC maintains a 24/7 clinical consultation service for health care providers evaluating and caring for pregnant women and infants with possible ZIKV infection. Call CDC's Zika Pregnancy Hotline for Healthcare Providers at 770 488 7100 or e-mail [zikamch@cdc.gov](mailto:zikamch@cdc.gov) for any concerns related to clinical management.

### Couples thinking about getting pregnant

- Women with ZIKV disease should wait at least 8 weeks and men with ZIKV disease should wait at least 6 months after symptoms began to try to get pregnant.
- Women and men with limited risk and who do not report signs or symptoms consistent with ZIKV disease should wait at least eight weeks after last possible exposure to attempt conception.
- Women and men with ongoing risk of possible ZIKV exposure who do not have signs or symptoms consistent with ZIKV disease and are considering pregnancy should consult their healthcare provider.

### **Background Information**

ZIKV disease is a mosquito-associated flaviviral disease caused by ZIKV (ZIKV). It is related to other Flaviviridae, including Japanese Encephalitis, West Nile, Yellow Fever, St. Louis Encephalitis, and Dengue viruses. The natural cycle of ZIKV involves mosquito vectors and vertebrate hosts. *Aedes aegypti* & *Aedes albopictus* are the primary vectors of ZIKV (as well as Dengue and Chikungunya virus); both species have been detected in California. However, neither species has been detected in Marin County.

### **Clinical Presentation**

Asymptomatic infections are the norm; only one in four or five people (20-25%) infected with ZIKV are believed to develop clinical symptoms. Disease is generally mild, with symptoms that include: low-grade fever (<38.5°C), transient arthralgia with joint swelling mainly in the smaller joints of the hands and feet, maculo-papular rash often spreading from the face to the body, conjunctival hyperemia, and general non-specific symptoms such as myalgia and headaches.

The incubation period (i.e. the amount of time between exposure and symptom onset) is thought to range from 3 to 14 days. The disease symptoms usually last for 2 to 7 days. Most people recover fully without severe complications, and hospitalization rates are low. Viremia (the period when ZIKV is measurably present in the blood) has been estimated to last 3 to 5 days following symptom onset.

Although rare, neurological complications such as Guillain-Barré syndrome (GBS) have been reported.

### **Diagnosis and Treatment**

Because of similar geographic distribution and symptoms, patients with suspected ZIKV infections should also be evaluated and managed for possible Dengue or Chikungunya infection. Similar to Dengue and Chikungunya infections, no specific antiviral treatment is available for ZIKV infection. Treatment is symptomatic and supportive; including rest, hydration, and use of acetaminophen. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), like ibuprofen and naproxen, should be avoided to reduce the risk of hemorrhage (associated with Dengue).

## Infection Prevention and Control

The mosquitoes responsible for most ZIKV transmission are not believed to be widespread in California and have not been identified in Marin County. However, Marin County residents should use personal protective measures to avoid exposure to mosquitoes. Marin County recommends counseling patients to prevent exposure to mosquito bites by practicing the “Three Ds”:

1. DEET – Apply insect repellent containing DEET, picaridin, oil of lemon eucalyptus, or IR3535 according to label instructions. DEET can be used safely on infants and children two months of age and older. Apply sunscreen first and then the repellent. Pregnant women and women who are breastfeeding should choose an EPA-registered insect repellent and use it according to the product label.
2. DAWN AND DUSK – Mosquitoes bite in the early morning and evening so it is important to wear proper clothing and repellent if outside during these times. Make sure that your doors and windows have tight-fitting screens to keep out mosquitoes. Repair or replace screens with tears or holes.
3. DRAIN – Mosquitoes lay their eggs on standing water. Eliminate all sources of standing water on your property, by emptying flower pots, old car tires, buckets, and other containers. If you know of a swimming pool that is not being properly maintained, please contact the Marin/Sonoma Mosquito and Vector Control District (1 800 231 3236 or 707 285 2200).

## Laboratory

CDPH is now providing diagnostic testing (PCR, IgM and PRNT serology) for ZIKV as well as dengue and chikungunya viruses.

For persons with suspected ZIKV disease, a positive real-time reverse transcription–polymerase chain reaction (rRT-PCR) result confirms ZIKV infection, but a negative result does not exclude infection. In these cases, antibody testing can identify additional recent ZIKV infections. If Immunoglobulin M (IgM) test results are positive, equivocal, or inconclusive, a plaque reduction neutralization test (PRNT) is needed to confirm the diagnosis.

## Reporting

Clinicians and laboratories must report suspected ZIKV cases to Marin County Health and Human Services’ CDPC unit by phone (415 473 2092).

**Additional Information**

Marin County Health and Human Services

Zika homepage: <https://www.marinhhs.org/zika>

Health Care Providers: <https://www.marinhhs.org/zika-information-health-care-providers>

Centers for Disease Control and Prevention

Zika homepage: <http://www.cdc.gov/zika>

Travelers' Health: <http://wwwnc.cdc.gov/travel/notices>

California Department of Public Health:

Zika homepage:

<https://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx>

American Congress of Obstetricians and Gynecologists:

Practice Advisory: <http://www.acog.org/About-ACOG/News-Room/Practice-Advisories/Practice-Advisory-Interim-Guidance-for-Care-of-Obstetric-Patients-During-a-Zika-Virus-Outbreak>

Sincerely,

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