



San Mateo County Health System

Main number: 650-573-2346
After hours: 650-363-4981
Fax: 650-573-2919

Scott Morrow, MD, MPH, MBA,
Health Officer
Catherine Sallenave, MD,
Communicable Disease Controller

HEALTH ADVISORY– February 22, 2016

Updated Zika Virus Disease Information for Healthcare Providers

SITUATION

Since our last advisory dated February 3, 2016, CDC has issued new interim guidance related to Zika virus disease. For full information, please visit:

- **Update: Interim Guidelines for Health Care Providers Caring for Pregnant Women and Women of Reproductive Age with Possible Zika Virus Exposure – United States, 2016** (http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e2er.htm?s_cid=mm6505e2er.htm_w)
- **Interim Guidelines for Prevention of Sexual Transmission of Zika Virus – United States, 2016** (http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e1er.htm?s_cid=mm6505e1er_w.htm)
- **Update: Interim Guidelines for Health Care Providers Caring for Infants and Children with Possible Zika Virus Infection – United States, February 2016** (http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1er.htm?s_cid=mm6507e1er_e)

ACTIONS REQUESTED OF CLINICIANS:

1. **OBTAIN A TRAVEL HISTORY** from all patients presenting with a febrile illness.
2. **CONSIDER TESTING** for dengue fever, chikungunya, or Zika virus disease in persons with compatible clinical presentation and a history of travel to Latin America, the Caribbean, or the Pacific Islands in the 14 days before symptom onset. **Testing for Zika virus may also be offered to asymptomatic pregnant women 2-12 weeks after return from a region with active Zika virus transmission.**
3. **CONTACT San Mateo County** at 650-573-2346, 8:00 am to 5:00 pm Monday through Friday to obtain approval prior to sending specimens for Zika testing. After hours, call 650-363-4981 and ask for the on-call Health Officer.
4. **COUNSEL PATIENTS** who are pregnant or who are attempting to become pregnant about special travel precautions and preventing mosquito bites. Women of reproductive age should also be counseled regarding the risks of Zika virus infection and prevention of unplanned pregnancy.
5. **REPORT** suspected or confirmed cases of dengue, chikungunya, or Zika virus disease to the San Mateo County Communicable Disease Control Program.

Briefly, key points of new guidance from CDC include:

- Recommendation to offer testing for Zika virus infection to **all pregnant women** with travel to regions with active Zika virus transmission (updated list is available at <http://www.cdc.gov/zika/geo/index.html>).
 - **Symptomatic** individuals (clinical criteria described below), including pregnant women, should ideally be tested by **RT-PCR and/or serology within 7 days of illness onset**. A convalescent specimen may be indicated 2-3 weeks after the first specimen is collected.

- **Asymptomatic** pregnant women may be offered **serologic testing 2-12 weeks after return** from a region with active Zika virus transmission.
- Interpretation of serologic results may be complex due to cross-reactivity with other flaviviruses (e.g., Dengue Fever, Yellow Fever virus, West Nile Virus).
- Recommendations for prenatal management of women residing in areas with active Zika virus transmission, with or without symptoms of Zika virus disease.
- Recommendations for women of reproductive age including mosquito bite prevention, reproductive life planning, and preconception care to discuss the risks of Zika virus infection and prevention of unplanned pregnancy.
- Recommendations for prevention of sexual transmission of Zika virus through abstaining from sexual activity or consistently and correctly using condoms during sex, particularly for men who travel to or reside in regions with active Zika virus transmission and have a pregnant partner.

CLINICAL PRESENTATION

Acute Zika virus disease: An estimated 80% of persons infected with Zika virus are asymptomatic. If symptoms occur, they usually begin 3-7 days after the person is bitten by an infected mosquito, and commonly include acute onset of fever, maculopapular rash, joint pain, and/or nonpurulent conjunctivitis. **To meet clinical criteria for Zika virus testing, 2 or more of these symptoms must be present within 14 days of travel to a country with ongoing Zika transmission.** Symptoms are generally mild and last several days to a week. There is no specific treatment, only supportive care. Aspirin and nonsteroidal anti-inflammatory drugs should be avoided until dengue can be excluded, to reduce the risk for hemorrhage. As symptoms of Zika, dengue and chikungunya overlap, all 3 diseases should be considered in a returning traveler from Latin America or the Caribbean.

Congenital Zika virus infection: Zika virus maternal infections have been confirmed in infants with microcephaly. In the current outbreak in Brazil, an unusual increase in the number of microcephalic infants has been reported and cerebral calcifications have been described in some cases. However, the number of microcephaly cases that are associated with Zika virus infection, pathologic mechanisms, and the role of other contributory factors are unknown. A causal relationship between Zika virus infection and adverse fetal outcomes, including fetal loss has not been confirmed. The full spectrum of clinical outcomes that may be associated with Zika virus infections during pregnancy is unknown.

Other syndromes: Guillain-Barré, meningitis/encephalitis, and myelitis have been associated with Zika infection.

TRANSMISSION

Zika virus is a flavivirus that is transmitted by *Aedes aegypti* (which also transmit dengue and chikungunya viruses) and *Aedes albopictus* mosquitoes, which are found throughout much of the Americas and some parts of the United States. Although not native to California, these mosquitoes have been detected in 12 California counties; *Aedes aegypti* mosquitoes have been found in San Mateo County but are not established. Thus far, Zika virus infections in California have only been reported in returning travelers. No local transmission has been documented in the continental United States, but transmission has been reported in Puerto Rico. Local spread of the virus is possible if an *Aedes* mosquito bites an infected returning traveler, then bites another person. As noted above, Zika virus may be transmitted from mother to fetus.

Sexual transmission of Zika virus is possible, although there is limited data about the risk. CDC recommends that men who reside in, or traveled to, regions with active Zika virus transmission abstain from sexual activity or consistently and correctly using condoms during sex to prevent sexual transmission of Zika virus. These recommendations are of particular importance for men who reside in, or travel to, areas with active Zika virus transmission who have a pregnant partner, and should be practiced for the duration of the pregnancy. Testing of men for the purpose of assessing risk for sexual transmission is not recommended at this time. It is not known whether infected men who never develop symptoms can transmit Zika virus to their sex partners.

LABORATORY TESTING

Obtain public health approval: Zika testing is only available at the Centers for Disease Control and Prevention (CDC) and the California Department of Public Health (CDPH). The San Mateo County Communicable Diseases Control Program must approve Zika virus testing for patients who are residents of San Mateo County. To request approval, contact us at 650-573-2346, 8:00 am to 5:00 pm Monday through Friday. After hours, call 650-363-4981 and ask for the on-call Health Officer.

Testing will be considered for patients with:

- Symptoms meeting clinical criteria for acute Zika virus disease (described above) AND history of travel to a region with active Zika virus transmission.
- Serologic testing may be offered to asymptomatic pregnant women with history of travel to a region with active Zika virus transmission; serum must be collected between 2-12 weeks after return from travel.
- Testing should also be considered for pregnant women with history of travel to a region with active Zika virus transmission if there is ultrasound evidence of fetal microcephaly or cerebral calcifications.

Test requests will be reviewed by San Mateo County and the clinician will be contacted with further instructions.

Specimen collection:

- If collecting serum for molecular (RT-PCR) and/or serologic testing for Zika virus disease, submit at least 2mls of serum, but preferably 2 separate tubes with 2 mls each. Serum specimens for **symptomatic** individuals should be collected within 7 days of illness onset for RT-PCR. Serology can be performed on serum collected >4 days after illness onset date and a convalescent serum specimen may be indicated 2-3 weeks after collection of the first specimen.
- For **symptomatic** individuals, consider collecting 3-5mls of urine *in addition to serum* to assist with validating Zika virus testing on urine.
- Serum for **asymptomatic pregnant women** should be collected between 2-12 weeks after return from a region with active Zika virus transmission.
- For testing of amniotic fluid, CSF or tissue, please consult with San Mateo County prior to collection.

Specimen storage and shipping: Specimens should be stored in refrigeration until shipped on cold packs to the San Mateo County Public Health Laboratory. If you have questions regarding specimen collection, storage or shipping, please contact the Public Health Laboratory at 650-573-2500. Specimens must be received between 8:00 am and 5 pm, Monday-Friday and will be sent to CDPH's Viral and Rickettsial Diseases Laboratory (VRDL). Specimens must be accompanied by CDPH VRDL General Submittal Form:

www.cdph.ca.gov/programs/vrdl/Documents/VRDL_General_Human_Specimen_Submittal_Form_Lab300.pdf.

Additional information is available in the Zika Laboratory Testing Guidance document from CDPH VRDL at: <http://www.cdph.ca.gov/programs/vrdl/Pages/ZikaInfo.aspx>.

TRAVEL PRECAUTIONS AND PREVENTION

Travel precautions and pregnancy: The CDC and CDPH recommend that:

- Pregnant women postpone travel to areas where Zika virus transmission is ongoing. Pregnant women who must travel to these areas should talk to their health care provider first and follow steps to avoid mosquito bites during the trip.
- Women trying to become pregnant consult with their healthcare provider before traveling to these areas and follow steps to avoid mosquito bites.

Prevention: There are no vaccines to prevent Zika, dengue, or chikungunya infection. Preventing mosquito bites is the best way to avoid infection.

- Use insect repellents containing DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol for long lasting protection. If using both sunscreen and insect repellent, apply the sunscreen first and then the repellent.
- **Using insect repellent is safe and effective. Pregnant women and women who are breastfeeding can and should choose an EPA-registered insect repellent and use it according to the product label.**
- When weather permits, wear long-sleeved shirts and long pants.
- Use air conditioning or window/door screens to keep mosquitoes outside, or sleep under a mosquito bed net.
- Empty standing water from containers such as flowerpots or buckets to reduce mosquitoes near residences.

Counsel women of reproductive age regarding reproductive life planning and provide preconception care including a discussion of the risks of Zika virus infection, and prevention of unplanned pregnancy.

CDC advises that there is no evidence that prior Zika infection poses a risk for birth defects in future pregnancies.

Infection Control: Standard precautions should be implemented for suspect and confirmed cases of Zika virus disease, dengue fever, or chikungunya virus disease.

REPORT CASES

Suspected or confirmed Zika virus disease, chikungunya virus disease and dengue fever are reportable to Public Health. Fax a Confidential Morbidity Report (CMR) available at smchealth.org/communicablediseasereporting or call 650-573-2346 Monday through Friday 8:00 am to 5:00 pm. After hours, call 650-363-4981 and ask for the on-call Health Officer.

RESOURCES

- CDC Zika Virus general information: www.cdc.gov/zika
- CDC list of Zika-affected areas: www.cdc.gov/zika/geo/index.html
- Travel notices related to Zika virus: wwwnc.cdc.gov/travel/notices
- CDC Update: Interim Guidelines for Health Care Providers Caring for Pregnant Women and Women of Reproductive Age with Possible Zika Virus Exposure – United States, 2016: <http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e2.htm>
- CDC Interim Guidelines for Prevention of Sexual Transmission of Zika Virus – United States, 2016: <http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e1.htm>
- CDC Interim Guidelines for the Evaluation and Testing of Infants with Possible Congenital Zika Virus Infection – United States, 2016: www.cdc.gov/mmwr/volumes/65/wr/mm6503e3.htm
- Instructions for completing the CDC Arbovirus Diagnostic Laboratory submission form: www.cdc.gov/ncezid/dvbd/specimensub/arboviral-shipping.html
- CDPH Zika Virus Information: <http://www.cdph.ca.gov/programs/vrdl/Pages/ZikaInfo.aspx>
- CDPH Zika Laboratory Testing Guidance: http://www.cdph.ca.gov/programs/vrdl/Documents/Zika_Testing_VRD_L_Quicksheet_021016.pdf