



HEALTH ADVISORY ZIKA VIRUS DISEASE

March 11, 2016

KEY UPDATES

- Additional reports of sexual transmission of Zika virus have been published; only sexual transmission from symptomatic males to female partners has been described.
- The California Department of Public Health (CDPH) Viral and Rickettsial Disease Laboratory (VRDL) is now performing PCR for Zika virus on serum specimens approved by ACPHD Acute Communicable Disease Unit (ACD) for PCR testing. Other specimen types accepted for PCR testing for clinical purposes will be sent by VRDL to Centers for Disease Control and Prevention (CDC).
- The CDPH VRDL is now also performing serology for Zika virus on all serum specimens approved by ACD for testing using an immunofluorescence assay to detect IgM. Specimens with reactive serology (ie. Zika positive specimens) must be sent to the CDC for confirmatory testing with the flavivirus Plaque Reduction Neutralization Test. **All specimens must be first be submitted to the Alameda County Public Health Laboratory (ACPHL).**
- CDC form 50.34 (DASH form) is *no longer required* from providers for *approved serum* specimens but must be submitted for other specimen types. All specimens approved for testing by ACD must be submitted with a completed VRDL [General Purpose Specimen Submittal Form](#). ACD staff will complete this form and assist with the CDC DASH form when required.
- ACPHD continues to regularly update the criteria for Zika testing approval to reflect the most current CDC and CDPH guidance and available evidence about Zika virus disease. Due to limited Zika testing resources, pregnant women, infants, and symptomatic persons with compatible exposure and relevant clinical history in the appropriate time frame are prioritized for testing.

ACTIONS REQUESTED OF CLINICIANS:

1. **OBTAIN TRAVEL HISTORY** from patients with a febrile and/or rash illness.
2. **CONSIDER ZIKA TESTING** for any person with a compatible clinical presentation (two or more of the following: fever, maculopapular rash, joint pain, non-purulent conjunctivitis OR fetal abnormalities) and a history of Zika virus exposure, defined as: (a) travel to areas with ongoing Zika transmission in the 2 weeks before symptom onset; or (b) condomless sexual contact with a male partner who traveled to an area of ongoing Zika virus transmission and had symptoms of Zika disease during travel or within 2 weeks of return.
3. **CONSIDER ZIKA SEROLOGY** for pregnant women without symptoms who have a history of Zika virus exposure as defined in #2 above;
 - Only serum samples for serology collected *within 2-12 weeks of travel* will be tested
4. **CONSIDER ZIKA SEROLOGY** in infants with microcephaly or other congenital abnormalities and their mothers if the mother has a **history of Zika virus exposure**, as defined above.
5. **FAX the [ACPHD ZIKA VIRUS TESTING REQUEST FORM](#) to PUBLIC HEALTH at 510-268-2111** to obtain approval and receive further instructions **prior to sending specimens**.
6. **COUNSEL PATIENTS who are pregnant or who are attempting to become pregnant** about special travel precautions and preventing mosquito bites
7. **COUNSEL MEN** who reside in or who have traveled to an area of ongoing Zika virus transmission and who have a pregnant partner to abstain from sexual activity or consistently and correctly use condoms during sex with their pregnant partner for the duration of her pregnancy.
8. **REPORT** suspected or confirmed cases of dengue, chikungunya, or Zika virus disease to ACPHD Acute Communicable Disease Unit (ACD) by faxing a Confidential Morbidity Report form to 510-268-2111.



SITUATION

As of 3/9/2016, 37 countries and territories in the Latin America, the Caribbean, Oceania/Pacific Islands and Cape Verde in Africa have reported active Zika virus transmission. See <http://www.cdc.gov/zika/geo/index.html> for an updated list of Zika-affected countries and territories and <http://wwwnc.cdc.gov/travel/notices/> for travel notices. As of 3/11/16, one Alameda County resident has been confirmed by laboratory testing to have had travel-associated Zika virus infection. For California Zika case counts, see the California Department of Public Health (CDPH) Zika Website: <https://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx>. Monitor the [ACPHD Zika web page](#) for the most up-to-date Alameda County forms and instructions.

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 (range 3-14 days) after exposure, and commonly include fever, maculopapular rash (90%), joint pain, and/or nonpurulent conjunctivitis. **To meet clinical criteria for Zika infection, 2 or more of these symptoms must be present within 2 weeks of travel to a country with Zika transmission.** With the exception of congenital disease, symptoms are generally mild and self limited, lasting several days to a week. Zika infections have been associated with Guillain-Barré syndrome, meningitis/encephalitis, or myelitis but these outcomes are rare. There is no specific treatment or vaccine. Symptoms of Zika overlap with those of dengue and chikungunya, and all 3 diseases should be considered in a returning traveler from Latin America, the Caribbean, Oceania/Pacific Islands, or Cape Verde in Africa.

Microcephaly and other adverse fetal and infant outcomes have been described in multiple studies of infants or fetuses of mothers who were infected with Zika virus while pregnant. The full spectrum of clinical outcomes associated with Zika virus infection during pregnancy remains unknown and is being investigated.

TRANSMISSION

Zika virus is typically transmitted by *Aedes aegypti* and *Aedes albopictus* (invasive *Aedes spp.*) mosquitoes. Although not native to California, invasive *Aedes spp.* mosquitoes have been detected in 12 California counties; *Aedes aegypti* mosquitoes have been detected once in Alameda County but are not established here. Congenital, perinatal, sexual and rare transfusion transmission events have also been reported. Thus far, sexual transmission has only been described to occur from symptomatic males to female partners. Zika virus has been detected in urine and saliva, as well as in breast milk of viremic mothers. At this time, there is no evidence of Zika transmission by exposure to these fluids and no reported cases of transmission by breastfeeding. To date, Zika virus infections in California have only been travel-associated.

LABORATORY TESTING & APPROVAL

Zika virus testing must be approved by the ACPHD Acute Communicable Disease Unit (ACD). To request Zika testing approval, fax the [ACPHD Zika Virus Testing Request Form](#) to 510-268-2111. Zika testing is currently only available at the CDPH VRDL and CDC. ACD must approve Zika virus testing for patients who are residents of Alameda County (for City of Berkeley residents, Berkeley Public Health must be consulted). Test requests will be reviewed by ACD and the clinician will be contacted with further instructions. **Specimens shipped directly to CDC and CDPH will not be tested for Zika without ACD approval.**

Key testing categories include*:

1. **Symptomatic**⁺ patients (including pregnant women) with symptoms within 2 weeks of **potential Zika exposure**[^]
 - For serology, serum samples collected *>12 weeks after symptom onset* will *not* be tested
2. **Asymptomatic pregnant women** who have a history of **potential Zika exposure**[^]
 - Only serum samples for serology collected *within 2-12 weeks of travel* will be tested



**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
PUBLIC HEALTH DEPARTMENT**

Division of Communicable Disease Control and Prevention
1000 Broadway, 5th Floor
Oakland, CA 94607

Rebecca Gebhart, Acting Director
Muntu Davis, MD, MPH, Director & Health Officer

Erica Pan, MD, MPH
Division Director & Deputy Health Officer
(510) 268-3200 FAX (510) 268-2140

3. **Infants born to a mother *who has potential Zika exposure*[^]** with symptoms or signs concerning for intrauterine or perinatal infection, or maternal Zika testing positive or inconclusive
4. Any individual with **Guillain-Barré Syndrome (GBS)** and **potential Zika exposure[^]** (Serology only)

*other cases with concerning Zika exposure and relevant symptoms may be considered on a case by case basis

⁺**Symptomatic** defined as ≥ 2 symptoms of acute Zika virus disease (fever, maculopapular rash, arthralgias, and/or non-purulent conjunctivitis)

[^] **potential Zika exposure** defined as either a) a history of travel to an [area with active Zika transmission](#) or b) condomless sex with a male partner who traveled to an [area with active Zika transmission](#) and develops symptoms consistent with Zika infection within 2 weeks of return from travel

Specimen collection:

1. For all suspect cases of Zika virus infection approved for testing, collect 2 ml of serum. For testing of amniotic fluid, CSF or tissues, please consult ACD at 510-267-3250 prior to collection.
2. Plasma is acceptable, though serum is preferred. If plasma is provided, collect 2ml; only EDTA or Sodium Citrate plasma tubes are acceptable for testing.

Specimen storage and shipping:

1. Zika virus testing specimens should be stored refrigerated (4°C). Transport refrigerated specimens on cold packs.
2. **All approved specimens must be submitted with the CDPH VRDL [General Specimen Submittal Form](#).**
 - **Non-serum specimens also require the [CDC specimen submission form 50.34 \(DASH form\)](#).**
 - **Submit original hard copies of VRDL and (if required) CDC forms with laboratory specimens**
 - **ACD staff will assist in completing forms.**
3. Ship specimens and forms to the ACPHL at the address below. Specimens must be received between 8:30 am and 5 pm, Monday-Friday, excluding holidays.
Alameda County Public Health Laboratory
2901 Peralta Oaks Ct. Room 206
Oakland, CA 94605

Contact the ACPHL directly at 510-382-4300 with questions about specimen collection, storage or shipping.

TRAVEL PRECAUTIONS & PREVENTION

See <http://www.cdc.gov/zika/prevention/index.html> for CDC recommendations.

INFECTION CONTROL

Standard precautions should be implemented for suspect and confirmed cases of Zika virus infection, dengue fever, or chikungunya virus infection.

REPORT CASES

Suspected or confirmed Zika & chikungunya virus infection are reportable to Public Health as Unusual Occurrence of Disease. Dengue fever is also reportable to Public Health. Fax a Confidential Morbidity Report (<http://www.acphd.org/media/127468/cdph110a.pdf>) to the ACD at (510) 268-2111 immediately upon identification.



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RESOURCES

Alameda County Public Health Department Zika Virus <http://www.acphd.org/zika.aspx>

ACPHD Specimen Submission: <http://www.acphd.org/zika/specimen-submission.aspx>

CDPH Zika Virus: <http://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx>

CDPH Posters: Zika & Pregnancy - March, 2016:

<http://www.cdph.ca.gov/HealthInfo/discond/Documents/ZikaandPregnancyPoster.pdf>

CDPH Zika Virus FAQs for Healthcare Providers - 3/11/16:

<https://www.cdph.ca.gov/HealthInfo/discond/Documents/ZIKAVirusFAQsforHealthCareProviders.pdf>

CDC Zika Virus general information: <http://www.cdc.gov/zika/>

CDC list of Zika-affected areas: <http://www.cdc.gov/zika/geo/index.html>

Travel notices related to Zika virus: <http://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 - 2/5/16:

http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e2.htm?s_cid=mm6505e2.htm_w

CDC Interim Guidelines for the Evaluation and Testing of Infants with Possible Congenital Zika Virus Infection – United States, 2016 – 1/29/16: <http://www.cdc.gov/mmwr/volumes/65/wr/mm6503e3.htm>

CDC Interim Guidelines for Prevention of Sexual Transmission of Zika Virus — United States, 2016 – 2/12/16

<http://www.cdc.gov/mmwr/volumes/65/wr/mm6505e1er.htm>