HEALTH UPDATE: ZIKA VIRUS
SEPTEMBER 20, 2016 (UPDATED FROM JULY 28, 2016)

WHAT HAS CHANGED
Several commercial laboratories now offer the convenience of Zika RT-PCR testing and/or Zika IgM antibody testing, and so clinicians may opt to order Zika testing through a commercial lab.

Due to the complexity of CDC Zika testing guidance, providers ordering testing through commercial labs should contact their lab to ensure the appropriate test is available and should order testing according to the recommended testing algorithm (see next page).

**ACTIONS REQUESTED OF ALL CLINICIANS**

1. **Counsel pregnant women in any trimester** to postpone travel to Zika transmission areas ([www.cdc.gov/zika/geo/](http://www.cdc.gov/zika/geo/)) and counsel patients regarding prevention of sexual transmission of Zika virus, especially pregnant women, women planning pregnancy, or their partners. See SFDPH Zika Health Advisory dated July 28, 2016 for details ([www.sfcdcp.org/healthalerts.html](http://www.sfcdcp.org/healthalerts.html)).

2. **Counsel all travelers** to Zika transmission areas to adhere strictly to recommended mosquito bite precautions.

3. **Test for Zika per CDC guidance.** Zika testing is recommended for: (A) individuals who develop illness consistent with Zika disease within 2 weeks after potential exposure, and (B) asymptomatic pregnant women with potential Zika exposure. *Initially test with serum and urine RT-PCR* if symptom onset or last potential exposure date (if pregnant) was less than 14 days before specimen collection. *Initially test with serum IgM* if symptom onset or last potential exposure date (if pregnant) was 2-12 weeks before specimen collection. Depending on results, additional testing may be required to confirm or rule out Zika infection.

4. **Providers ordering testing through commercial labs should contact their commercial laboratory** to ensure the appropriate test is available, and the current testing algorithm (see next page) is being followed. Please note that when necessary, commercial labs can route specimens to a public health laboratory to perform the plaque reduction neutralization testing (PRNT) needed to confirm Zika reactive IgM results.

5. **Providers who plan to send testing directly through Public Health should follow SFDPH-specific instructions** for test submission. See [www.sfcdcp.org/zika_providers](http://www.sfcdcp.org/zika_providers) to download the updated instructions.

6. **Coordinate between prenatal care and labor/delivery settings:** Prenatal providers should have a systematic way of communicating Zika testing so that Labor/Delivery personnel are aware of any pending Zika tests. Neonatal providers should consider holding a newborn serum specimen pending the maternal test result.

7. **Contact** SFDPH Communicable Disease Control Unit (CDCU) for questions at (415) 554-2830.

8. **Check for updates regularly** as knowledge and guidance are evolving rapidly.

Recommended Resources:

---

1 Zika exposure is defined as travel to an area of active Zika transmission or unprotected sex with a person who has recently traveled to a Zika area.
General Zika Virus Testing Algorithm – Information for Clinicians

Is symptom onset date (or last potential exposure date - for asymptomatic pregnant females only) <14 days from specimen collection date?

Yes

Zika RT-PCR
Serum: At least 2 ml serum (5-10 ml blood) in red top or serum separator tube.
Urine: At least 2 ml fluid in leak-proof container. (Urine specimen collection cup NOT recommended! Transfer to sterile screw-cap tube and use parafilm to seal.)

Positive
- Indicative of current Zika virus infection.
Negative
- Does not rule out current or recent infection. Order IgM testing during the 2-12 week window.

No

Is symptom onset or last potential exposure between 2 and 12 weeks from specimen collection date?

Yes

Zika IgM and Dengue IgM
Serum: At least 2 ml serum (5-10 ml blood) in red top or serum separator tube.

Either is Positive, equivocal, or nonspecific

Is patient pregnant?

Yes

Zika RT-PCR Testing (if not previously performed)
See specimen collection information above.

Positive
- Indicative of recent Zika virus infection.
Negative
- Does not rule out current or recent infection. PRNT testing to be done by public health lab.

No

Consider value of testing. Due to expected drop off in IgM after 12 weeks, a result of "not detected is interpreted as inconclusive/indeterminate.

No

Is symptom onset or last potential exposure between 2 and 12 weeks from specimen collection date?

Yes

Zika IgM and Dengue IgM
Serum: At least 2 ml serum (5-10 ml blood) in red top or serum separator tube.

Either is Positive, equivocal, or nonspecific

Is patient pregnant?

Yes

Zika RT-PCR Testing (if not previously performed)
See specimen collection information above.

Positive
- Indicative of recent Zika virus infection.
Negative
- Does not rule out current or recent infection. PRNT testing to be done by public health lab.

No

Both are Negative
- Indicative of no recent Zika virus infection.

PRNT Testing by Public Health Lab

Zika antibodies only detected
- Indicative of recent Zika virus infection.

Non-Zika flavivirus antibodies only detected (dengue, WNV, etc)
- Indicative of recent or prior infection with another flavivirus.

Antibody for Zika and other flavivirus detected
- Indicative of recent flavivirus infection, exact etiology cannot be determined.

No antibodies detected
- No evidence of recent flavivirus infection. Consider repeat testing if Zika virus infection is strongly suspected.

Algorithm based on CDC guidance; flow chart developed by Kern County Department of Public Health; updated 9/20/2016 by SFDPH