



Tarrant County Public Health

Zika Virus Testing - *Interim Guidance* – Updated February 18, 2016

This interim guidance is for healthcare providers and clinical laboratories in Tarrant County. It contains guidance on testing criteria and laboratory testing procedures for patients with suspected Zika virus infection.

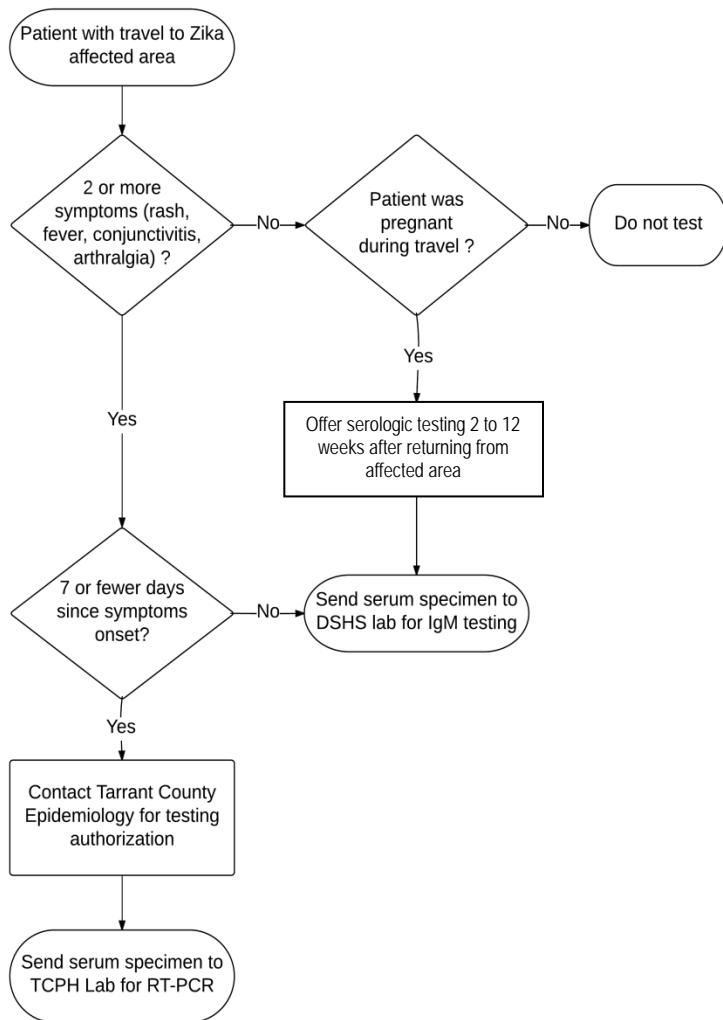
Many countries in the western hemisphere have reported locally transmitted Zika virus. Currently, no outbreaks have been reported in the continental United States. However, people with travel-associated cases have been identified in Texas. Per the Texas Administrative Code (Title 25, Part 1. Chapter 97, Rule §97.3), Zika is considered a notifiable condition because it is an “exotic disease.” Therefore suspected cases should be reported to Tarrant County Public Health by the most expeditious means.

Currently, there are no commercial reference lab tests available for Zika virus. This may change in the weeks ahead. In the meantime testing is available from some public health labs.

Patients with travel history to an area with current locally transmitted Zika virus and who have two or more compatible symptoms (rash, fever, conjunctivitis, and arthralgia) should be tested for possible Zika infection. As Dengue and Chikungunya circulate in the same areas where Zika occurs and have similar symptoms, lab tests for these additional viruses must be performed as well.

The appropriate test depends on whether the patient has been symptomatic and date of onset. Patients whose onset was seven (7) days ago or fewer should be tested by RT-PCR. The North Texas Regional Laboratory at Tarrant County Public Health has RT-PCR available for testing of serum from patients with appropriate travel history, compatible symptoms, and symptom onset within seven (7) days before testing.

Patients with symptoms during travel or within two weeks after returning whose onset was more than seven (7) days ago should be tested for IgM antibodies. Asymptomatic pregnant women may also be offered IgM testing in the two to twelve weeks after returning from an affected area. The IgM serology is performed at CDC and will be routed through the DSHS Lab in Austin.



General Testing Algorithm, Non-infants

Patients must meet epidemiologic criteria before testing will be done. These criteria may change as the situation evolves. Clinicians with questions concerning Zika testing or to report a suspected case should contact Tarrant County Public Health Department (TCPH) at 817-321-5350 weekdays 8AM-5PM or 817-994-3708 after 5PM and on weekends/holidays.

Testing Criteria

- Any patient (including pregnant womenⁱ) with **two or more of the following symptoms**: acute onset of fever, rash, arthralgia, or conjunctivitis, compatible with Zika virus infection **occurring within two weeks of travel to an affected country**. A current list of affected countries may be found at this CDC web page - <http://www.cdc.gov/zika/geo/>.
- Any patient with symptoms of Guillain-Barre syndrome (GBS) occurring within 1 month of travel to a Zika-affected country.
- An asymptomatic pregnant woman with recent travel to an area with ongoing local transmission of Zika virus may be tested for IgM antibody from 2 - 12 weeks after returning from an affected country^j.
- Infants born to women with a positive or inconclusive test result for Zika virus infection.ⁱⁱ
- Infants with microcephaly or intracranial calcifications born to women who traveled to a Zika-affected country while pregnant.ⁱⁱ
- Zika virus testing for a patient with a clinically-compatible illness who does not meet the above testing criteria, but for whom an alternate mode of transmission is plausible, e.g., sexual or blood-borne exposure should be discussed with the TCPH's Epidemiology division on a case-by-case basis.ⁱⁱⁱ

Tests to Request

Zika, Chikungunya and Dengue viruses are co-circulating in many countries. The CDC recommends diagnostic testing for dengue and chikungunya be requested in patients with possible Zika virus infection with a history of travel in the 2 weeks prior to onset to an area with ongoing transmission of these viruses.^{iv}

- For patients whose onset of symptoms occurred seven (7) or fewer days before collection, order RT-PCR for Dengue, Chikungunya, and Zika. For the TCPH lab forms to submit samples for RT-PCR, contact the TCPH Epidemiology Division.
- For patients whose onset was eight (8) or more days previous, order IgM serology for Dengue, Chikungunya and Zika. For DSHS lab forms to submit samples for serology, see the "Specimen Shipping" section below.

Specimen Collection Information

- Collect at least 5.0ml of blood either in a red top collection tube or a serum separator tube (e.g. SST, gold top, or tiger top) and centrifuge within 2 hours of collection to separate the serum from the red blood cells. Transfer the serum into a serum transport tube with a screw-on cap.
- Ensure a minimum of 2.0ml of **serum** is obtained; whole blood will not be accepted.

Other Specimen types:

Submission of specimens other than serum, e.g., semen, amniotic fluid, and cerebrospinal fluid (CSF) should be discussed with TCPH's Epidemiology staff for guidance on processing, storage, and handling.

Specimen Handling

- All tubes must be labeled with the following information: patient name, date of birth, date AND time of collection, type of specimen being submitted.
- Specimens should be double-bagged in a biohazard bag
- For specimens destined for Tarrant County Public Health's North Texas Regional Laboratory, please refer to the attached guidance titled "[Zika Virus Specimen Submission Instructions](#)."
- Specimens destined for the DSHS lab in Austin must be accompanied by a completed printed copy of the attached [Zika Virus Disease Case Investigation Form](http://www.dshs.state.tx.us/region2-3/programs/compprep/Zika-Virus-Clinical-Questionnaire_CDC.pdf) (http://www.dshs.state.tx.us/region2-3/programs/compprep/Zika-Virus-Clinical-Questionnaire_CDC.pdf) placed in the outer pouch of the biohazard envelope.
- Specimens that are shipped the same day of collection and will arrive at the lab within 48 hours of collection can be stored at 4°C. Specimens expected to arrive more than 48 hours after collection should be frozen and stored at -20°C.

Specimen Shipping

- Specimens that are shipped the same day of collection and will arrive at the lab within 48 hours of collection can be stored at 4°C and should be shipped with cold packs. Specimens expected to arrive more than 48 hours after collection should be frozen, stored at -20°C, and shipped on dry ice.
- Specimens should be packaged and shipped according to instructions for Category B, Biological substances. See <https://www.iata.org/whatwedo/cargo/dgr/Documents/packing-instruction-650-DGR56-en.pdf> for instructions.
- The TCPH and DSHS labs accept specimens during normal business hours Monday through Friday. When shipping use an overnight carrier for delivery Monday through Friday. Do not ship on Fridays, weekends, or before government holidays as the lab is closed on those days. Submitting facilities are responsible for arranging transport of specimens to the laboratory.
- Additional shipping information to the TCPH lab may be found in the accompanying guidance document titled "[Zika Virus Specimen Submission Instructions](#)".

The following is relevant to samples shipped to the DSHS Laboratory only

- To order IgM antibody tests, submitters need to have or establish an account with the DSHS Laboratory in Austin and obtain the appropriate forms. Please call the DSHS Laboratory at 512-776-7578 or send a submitter ID request form to get an account set up. Submitters can go to this link: http://www.dshs.state.tx.us/lab/mrs_forms.shtm under "Test Request Form Samples and G-9 Form - Laboratory Services" and fill out the submitter ID request form. Fax this form to 512-776-7533.
- For providers without a DSHS laboratory account who have a relationship with a local hospital, you may first try contacting the hospital laboratory for assistance in submitting/transporting specimens to the DSHS laboratory as many have an established relationship with the DSHS laboratory.
- Each specimen for serology testing must be accompanied by a completed G2A form. G2A forms can be requested also by calling Lab reporting at 512-776-7578. Make sure to check "Other" in section 7 and write in "Dengue, Chikungunya, and Zika." Check "Submitter" in section 9.
- If a patient is covered by insurance the DSHS lab will attempt to bill the insurance carrier. All necessary fields on the lab submission forms must be completed in order to facilitate the successful submission of claims to the appropriate payor (Medicare, Medicaid, etc.). This includes all noted required fields for billing as indicated on both the G2A and G2V forms (e.g., ICD-10 information, ordering physician NPI, patient insurance coverage information, etc.). Note: third-party reimbursement will depend upon medical necessity (as indicated by the ICD-10 provided) and/or various other data elements.
- Ship specimens to: **TX DSHS Lab Services, 1100 W 49th Street, Austin TX 78756.**

Check the TCPH Website for updates to [Zika virus guidance](#)

(<http://access.tarrantcounty.com/content/main/en/public-health/disease-control---prevention/zika.html?linklocation=departmentcarousel&linkname=Public%20Health:Zika%20Virus>).

ⁱ CDC MMWR. Interim Guidelines for Pregnant Women During a Zika Virus Outbreak — United States, 2016. Accessed 2/3/2016. <http://www.cdc.gov/mmwr/volumes/65/wr/mm6502e1.htm>

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>

ⁱⁱ CDC MMWR. Interim Guidelines for the Evaluation and Testing of Infants with Possible Congenital Zika Virus Infection — United States, 2016. Accessed 2/3/2016. <http://www.cdc.gov/mmwr/volumes/65/wr/mm6503e3.htm>

ⁱⁱⁱ CDC COCA Conference Call. Zika Virus — What Clinicians Need to Know.

http://emergency.cdc.gov/coca/calls/2016/callinfo_012616.asp

^{iv} CDC, Updated diagnostic testing for Zika, chikungunya, and dengue viruses in US Public Health Laboratories. Accessed 2/3/2016. <http://www.cdc.gov/zika/pdfs/denvchikvzikv-testing-algorithm.pdf>