This is an official Oklahoma Health Alert Network Health Update

May 16, 2016
OKHAN-238-2016-05-16-UPD-N

Zika Virus: Revised Clinician Screening Form and Laboratory Guidance

Summary

This HAN Advisory includes the revised screening tool that clinicians are encouraged to use during patient evaluation to determine if the clinical and exposure criteria are met to access diagnostic testing for Zika virus infection. Clinicians are advised to complete the attached Zika and Other Travel-Associated Arboviral Diseases Screening Form to collect information required by the Oklahoma State Department of Health (OSDH) Acute Disease Service (ADS) to confirm the patient meets the testing criteria.

Recommendations

The attached documents provide information for healthcare providers and laboratories when requesting testing for Zika virus and other travel-associated arboviral diseases. This OK-HAN replaces documents that were distributed on February 22, 2016. Currently, there is no commercially available test for Zika virus; testing is available through the OSDH Public Health Laboratory (PHL) and/or the Centers for Disease Control and Prevention (CDC). An ADS Epidemiologist is responsible for gathering clinical and exposure information from the healthcare provider to determine if an individual meets the criteria for testing. For each individual that meets testing criteria, the ADS Epidemiologist will work with the healthcare provider to provide information regarding specimen collection and shipping and the necessary supporting documentation. All specimens must be approved for testing by the OSDH ADS prior to shipping to the OSDH PHL.

Patients must meet the following criteria, and serological specimens must be collected within 12 weeks of returning from travel:

1. Symptomatic and travel history:
   - Two or more of the following symptoms: acute fever, rash, arthralgia, conjunctivitis
     AND
   - Travel to a Zika-affected area within 2 weeks prior to symptom onset
     AND
   - Specimen can be collected within 12 weeks of returning from travel

OR

2. Pregnant woman with travel history:
   - Symptomatic or asymptomatic pregnant woman
     AND
   - Travel to a Zika-affected area while pregnant (specimen must be collected within 2 to 12 weeks after returning from travel in order to be eligible for testing).

OR

3. Pregnant woman with no travel history (concern for sexual transmission):
   - Symptomatic pregnant woman
     AND
   - No travel to a Zika-affected area while pregnant
     AND
   - Reports unprotected sex with male partner who traveled to a Zika-affected area (specimen must be collected within 12 weeks after male partner's departure from a Zika-affected country in order to be eligible for testing).

Other criteria may be used to define the need for laboratory testing as part of a public health response to Zika virus. **Health care providers should contact the ADS Epidemiologist-On-Call at (405) 271-4060 for questions or clarification regarding this guidance or Zika Virus testing.**

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Categories of Health Alert messages

Health Alert highest level of notification that the Oklahoma State Department of Health will send out. This usually refers to an immediate threat to the OSDH community and requires immediate action.

Health Advisory advises medical providers of a condition in the area. These are usually not medical emergencies. These may not require immediate action.

Health Update provides updates on previous alerts or advisories. These are unlikely to require immediate action.

This advisory has been distributed to Primary Care and Obstetrics & Gynecology Physicians, Emergency Departments, Infection Preventionists, Advance Practice Nurses, and State and Local Health Officials

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You have received this message based upon the information contained within our emergency notification database. If you have a different or additional e-mail or fax address that you would like us to use please contact the OSDH Acute Disease Service at (405) 271-4060.

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ZIKA AND OTHER TRAVEL- ASSOCIATED ARBOVIRAL DISEASE SCREENING AND EVALUATION GUIDANCE

These documents outline the criteria and steps for testing patients for Zika Virus in Oklahoma. Clinicians are advised to complete the attached *Zika and Other Travel-Associated Arboviral Diseases Screening Form* to collect information required by the Acute Disease Service (ADS) of the Oklahoma State Department of Health (OSDH) to confirm the patient meets the following testing criteria.

1. Symptomatic and travel history:
   - Two or more of the following symptoms: acute fever, rash, arthralgia, conjunctivitis
     AND
   - Travel to a Zika-affected area within 2 weeks prior to symptom onset. Countries at risk for Zika transmission can be determined by accessing the following website: http://wwwnc.cdc.gov/travel/page/zika-travel-information
     AND
   - Specimen can be collected within 12 weeks of travel

OR

2. Pregnant woman with travel history:
   - Symptomatic or asymptomatic pregnant woman
     AND
   - Travel to a Zika-affected area while pregnant (specimen must be collected within 2 to 12 weeks after returning from travel in order to be eligible for testing).

OR

3. Pregnant woman with no travel history (concern for sexual transmission):
   - Symptomatic pregnant woman
     AND
   - No travel to a Zika-affected area while pregnant
     AND
   - Reports unprotected sex with male partner who traveled to a Zika-affected area (specimen must be collected within 12 weeks after male partner's departure from a Zika-affected country in order to be eligible for testing).

Clinicians should also consider testing for other arboviral diseases such as chikungunya and dengue, in conjunction with Zika virus based upon the area of travel. These tests (aside from Zika) can be ordered through your normal reference laboratory.

If the completed screening process indicates the patient is at risk for Zika virus infection, notify the ADS Epidemiologist-on-Call at (405) 271-4060 for consultation, to confirm all criteria for testing are met, and to coordinate specimen collection and submission. Once the patient has been approved for testing, clinicians should follow the attached specimen collection guidance to submit the required specimen(s) to the OSDH Public Health Laboratory (PHL). The Epidemiologist-on-Call will work with clinicians to coordinate specimen transport to the PHL.

Health care providers should contact the ADS Epidemiologist-On-Call at (405) 271-4060 for questions or clarification regarding this guidance or Zika Virus testing.

Zika and Other Travel-Associated Arboviral Diseases Laboratory Testing Guidance

Oklahoma State Department of Health
Acute Disease Service

Testing for Zika virus must be coordinated between the clinician and the Oklahoma State Department of Health (OSDH) Acute Disease Service (ADS) prior to specimen collection. ADS Epidemiologists must gather required clinical and travel information from the clinician to determine if a patient meets the criteria for testing. For each patient that meets the established criteria, the ADS Epidemiologist will work with the clinician and local laboratory regarding specimen collection, forms, and shipping to the OSDH Public Health Laboratory (PHL). All specimens must be approved by the ADS prior to shipping to the OSDH PHL. You can contact the OSDH ADS Epidemiologist-on-Call at 405-271-4060.

- The following laboratory test assays can be performed for Zika Virus depending on time from illness onset or last date of exposure (for asymptomatic pregnant women):
  - RT-PCR
    - Preferred test method for acute phase of infection.
    - Urine is the preferred specimen for RT-PCR detection of Zika virus.
      - Urine can be collected up to 14 days after illness onset; must be accompanied by a patient-matched serum if specimens can be collected within 7 days of onset.
    - Serum can be tested by PCR if collected within the first 7 days of illness only.
  - IgM Serology
    - Preferred test method in non-acute phase specimens or for asymptomatic pregnant women.
    - Applicable ≥8 days after illness onset or to detect infection among asymptomatic persons.
    - IgM antibodies may be detectable 4 days after illness onset, and typically persist up to 12 weeks post-onset of symptoms.
    - Specimens collected within 7 days after illness onset may not have detectable Zika virus-specific IgM antibodies; a convalescent specimen should be collected 2-3 weeks after acute specimen for testing.
    - IgM antibodies against Zika virus, dengue viruses, and other flaviviruses (e.g., yellow fever and West Nile virus) have strong cross-reactivity possibly generating false positive results in serological tests; therefore, all specimens with positive test results will be reflexed for plaque reduction neutralization testing which is only performed at CDC; therefore, delays in testing and issuing of results should be anticipated.

- Specimen Collection, Storage, and Shipping:
  - Whole blood in serum separator tube (SST) (a.k.a., tiger-top tube)
    - Following collection, gently invert SST no more than 8 times then allow blood to clot in upright position for at least 30 mins and no more than 60 mins then centrifuge at 3000 rpm for 10 mins.
    - ≥ 1.0 mL serum minimum required.
    - Store refrigerated (2-8 °C) and ship using ice packs.
  - CSF, urine, amniotic fluid in sterile container with screw-cap tube
    - ≥ 1.0 mL (minimum) required; must be submitted together with a patient-matched serum specimen.
    - Prefer specimen frozen (-20°C or colder), then shipped on dry ice, if possible.
    - Acceptable to store/ship refrigerated (2-8 °C) using ice-packs.

- For other specimens types (amniotic fluid, placenta tissue, or umbilical cord), coordinate with the OSDH ADS Epidemiologist-on-Call at (405) 271-4060.
- An OSDH PHL Requisition Form (see OSDH PHL website, "Forms") must be completed and submitted with each specimen.
  - Include patient's name or unique patient identifier (e.g., MR#), DOB or age, sex, specimen type, date of specimen collection, name and address of submitter, and test requested.
  - Contact the OSDH ADS Epidemiologist-on-Call at (405) 271-4060.

❖ Shipping to OSDH Public Health Laboratory (PHL)

- Ship to the OSDH PHL Monday – Thursday using the following address:

  OSDH Public Health Laboratory
  1000 NE 10th Street
  Oklahoma City, OK 73117-1299

- Submitting laboratories must submit an updated PHL laboratory requisition form, which specifies Zika testing request, for every Zika specimen. Under Virology section, please mark 'Zika virus' along with specimen type.
- Serum should be shipped in an insulated container with ice packs.
- Specimens must be packaged and shipped in accordance with category B agent guidelines.
- Courier service to the OSDH PHL may be available through your local hospital.
- Specimens will be shipped from OSDH PHL to CDC only Monday – Wednesday to avoid weekend deliveries (PHL is closed weekends).

ZIKA AND OTHER TRAVEL-ASSOCIATED ARBOVIRAL DISEASES SCREENING FORM

***ACTIONS REQUESTED OF CLINICIANS**:* If patient meets one of the three criteria below, please: 1. Fill out the screening form 2. Fax it to ADS (F: 405-271-6680) 3. Always call the Epidemiologist-On-Call (P: 405-271-4060) to consult and obtain the required pre-approval for testing.

Patients must meet the following criteria, and serological specimens must be collected within 12 weeks of returning from travel:

1. Symptomatic and travel history:
- Two or more of the following symptoms: acute fever, rash, arthralgia, conjunctivitis
  AND
- Travel to a Zika-affected area within 2 weeks prior to symptom onset
  AND
- Specimen can be collected within 12 weeks of returning from travel

OR

2. Pregnant woman with travel history:
- Symptomatic or asymptomatic pregnant woman
  AND
- Travel to a Zika-affected area while pregnant (specimen must be collected within 2 to 12 weeks after returning from travel in order to be eligible for testing).

OR

3. Pregnant woman with no travel history (concern for sexual transmission):
- Symptomatic pregnant woman
  AND
- No travel to a Zika-affected area while pregnant
  AND
- Reports unprotected sex with male partner who traveled to a Zika-affected area (specimen must be collected within 12 weeks of the male partner's departure from a Zika-affected country in order to be eligible for testing)

Please complete all sections of the form, fax to ADS, and then call the ADS Epidemiologist-on-Call at 405-271-4060. *If testing criteria are met, the ADS Epi-on-Call will coordinate specimen collection and testing for Zika. Specimens collected within seven days of symptom onset will also be tested for Chikungunya and Dengue Fever at the OSDH PHL. For any specimens collected after seven days from symptom onset and with suspicion for Chikungunya or Dengue (or other commonly acquired travel-related diseases such as malaria) based on travel history and symptom presentation, please order these tests through your local reference laboratory.*

Patient Information

Last Name: _____ First Name: _____ MI:_____
Date of Birth: ___/___/____ Sex: □ Male □ Female
Address: _____ City: _____ County: _____ State: ___ Zip: _____
Primary contact number: _____ Secondary contact number: _____
Race: □ White □ Black □ Native America □ Asian □ Native Hawaiian/Pacific Islander □ Asian
□ Unknown □ Other _____
Ethnicity: □ Hispanic □ Non-Hispanic □ Unknown Preferred Language: _____ □ Interpreter needed

Healthcare Provider Information

Name of Reporting Person: _____
Work Phone: _____ Fax Number: _____ Organization: _____
Address: _____
City: _____ State: _____ Zip Code: _____

Acute Disease Service
Oklahoma State Department of Health
Phone: (405) 271-4060
Fax: (405) 271-6680
Website: http://ads.health.ok.gov

ZIKA AND OTHER TRAVEL-ASSOCIATED ARBOVIRAL DISEASES SCREENING FORM

Symptom Information

- Did patient have symptoms of illness? □ Yes □ No *(If yes, complete symptom information below.)*
  - *If no, was the patient an asymptomatic pregnant female?* □ Yes □ No *(If yes, skip to exposure assessment. If no, testing not indicated.)*

Symptom Onset date: ___/___/_____

Fever (subjective OR measured)	□ Yes □ No □ Unknown	*If yes*, max temp: _____	
Rash	□ Yes □ No □ Unknown	Rash description: □ Petechial □ Macular □ Vesicular	
Conjunctivitis	□ Yes □ No □ Unknown		
Arthralgia	□ Yes □ No □ Unknown	Mucous membrane ulcerations	□ Yes □ No □ Unknown
Myalgia	□ Yes □ No □ Unknown	Retro-orbital pain	□ Yes □ No □ Unknown
Asthenia	□ Yes □ No □ Unknown	Headache	□ Yes □ No □ Unknown
Nausea	□ Yes □ No □ Unknown	Abdominal pain	□ Yes □ No □ Unknown
Diarrhea	□ Yes □ No □ Unknown	Pruritus	□ Yes □ No □ Unknown

Other symptoms: _____

- Was the patient hospitalized? □ Yes □ No Hospital name: _____ Admit Date: ___/___/_____ Discharge Date: __/___/____

Exposure Assessment

- *If symptomatic:* Within 14 days before symptom onset, did the patient travel in an area in which Zika virus is present?
  ☐ Yes ☐ No {If yes, please list patient's travel details below.}
  - If no, did the patient report unprotected sex with their sexual partner following his return from a Zika-affected country?
    ☐ Yes ☐ No {If yes, please list male partner's travel details below.}
- *If asymptomatic and pregnant:* Did the patient travel in an area in which Zika virus is present during the previous two to 12 weeks while pregnant? ☐ Yes ☐ No

Refer to CDC Zika Travelers Advisory page for list of countries: http://wwwnc.cdc.gov/travel/page/zika-travel-information

If yes, list which countries and regions/areas/cities visited, and dates of travel*:*

1) Country: _____ Date Arrived in Country: ____/____/____
   Date Departed Country: ____/____/___
   Regions/areas/cities visited: _____
   Does the patient remember being bitten by mosquitos? ☐ Yes ☐ No ☐ Unknown
2) Country: _____ Date Arrived in Country: ____/____/____
   Date Department Country: ____/____/___
   Regions/areas/cities visited: _____
   Does the patient remember being bitten by mosquitos? ☐ Yes ☐ No ☐ Unknown

- Was the patient pregnant at the time of travel? ☐ Yes ☐ No
  If yes, number of gestational weeks at the time of travel: _____ weeks
  If yes, is the patient still pregnant? ☐ Yes ☐ No
  If the patient is no longer pregnant, indicate date of delivery and facility of delivery: _____
  _____
- Did the patient become pregnant within approx. 2 weeks after returning from a Zika affected country or region? ☐ Yes ☐ No
- Has the patient ever been vaccinated for Yellow Fever or Japanese encephalitis? ☐ Yes ☐ No ☐ Unknown
- Has the patient previously been diagnosed with Dengue, Chikungunya, Yellow Fever, or West Nile virus? ☐ Yes ☐ No ☐ Unknown **If yes**, specify disease and year: _____
- Has the patient been tested for other etiologies for the current illness? ☐ Yes ☐ No ☐ Unknown

☐ Chikungunya	Lab name: _____	Date of test ___/___/___	Result:_____
☐ Dengue	Lab name: _____	Date of test ___/___/___	Result:_____
☐ West Nile Virus	Lab name: _____	Date of test ___/___/___	Result:_____
☐ Other	Lab name: _____	Date of test ___/___/___	Result:_____

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