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DHEC Health Info Service

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Updated Zika Testing Guidelines

Summary

In November 2019, the Centers for Disease Control and Prevention (CDC) published additional guidelines specifically for Zika virus testing, which served as an update to those previously published in June 2019. This new guidance further restricts the recommendations for Zika testing based on the changing epidemiology of the virus' transmission.

Healthcare providers considering testing patients for Zika should review the current testing guidelines for both Zika and dengue and consider consultation with a DHEC medical consultant. Links to resources are provided, along with contact information for the regional DHEC health offices.

Background and Overview of Guideline Changes

CDC notes that reports of dengue cases in the U.S. now outnumber Zika by a ratio of about 200:1. As of January 9, 2020, provisional data indicate there were 20 reported Zika cases in U.S. states in 2019 (19 in returning travelers and one laboratory acquired). U.S. territories have reported 60 Zika cases in 2019 of which 57 are presumed to be locally acquired based on serologic testing. The last locally acquired Zika case in the U.S. territories confirmed by nucleic acid amplification testing (NAAT) occurred in May 2018. These numbers represent a persistent annual reduction in the numbers of Zika cases reported annually since 2016, when over 5,000 cases were reported in U.S. states and over 36,000 were reported in U.S. territories.

Under these new guidelines, routine testing for Zika is no longer recommended for any individuals reporting symptoms but who are not pregnant. Dengue and chikungunya testing should be considered instead for symptomatic individuals if appropriate. These new guidelines also eliminate the use of Zika IgM testing and confirmatory plaque reduction neutralization tests (PRNT) except in cases involving fetal ultrasound findings consistent with congenital Zika virus infection or similar findings after birth. Serologic testing with Zika IgM is no longer recommended in any other case as these antibodies have been found to be persistent for months to years and are not reliable indicators of acute infections.

A high level of cross-reactivity with other arboviruses has been described in Zika IgM testing, and a positive Zika IgM may result from infection with one of these other viruses. PRNT

testing can only confirm past exposure to Zika or another arbovirus and does not provide information on the timing of that exposure.

Healthcare providers considering testing patients for Zika should review the current testing guidelines below for both Zika and dengue and consider consultation with a DHEC medical consultant.

Testing Recommendations

Non-pregnant patients: Zika testing for any non-pregnant individual is not routinely recommended regardless of symptoms reported or travel history. Those reporting appropriate symptoms and travel history could be considered for dengue testing based on those testing guidelines. Testing for chikungunya may also be appropriate depending on the travel locations and the associated transmission patterns. Consistent with the previous guidelines, no Zika testing is recommended for non-pregnant individuals who have no symptoms. Preconception screening is not an indication for Zika testing.

Asymptomatic, pregnant patients: For patients who are pregnant and have traveled to an area previously reporting Zika transmission but are not reporting symptoms, Zika testing is no longer recommended. This represents a change from the language in the previous guidance that testing could be considered. In cases where testing is still desired, it should be restricted to NAAT testing done within 12 weeks of exposure (since returning from the travel); and testing for Zika IgM should not be done.

Symptomatic, pregnant patients: For individuals who are pregnant, have travelled to areas with a risk of dengue and Zika transmission, and are reporting symptoms, serum and urine samples should be collected as soon as possible and within 12 weeks since exposure. NAAT for dengue and Zika should be performed on the serum sample, along with IgM testing for dengue. NAAT for Zika only should be performed on the urine sample. No IgM testing for Zika is recommended. If the suspected exposure came from sexual contact, then dengue testing is not necessary and the same procedure for Zika NAAT should be followed.

If NAAT is positive for Zika on only one specimen drawn, an additional NAAT test should be performed on newly extracted RNA from the same specimen to rule out a false positive result. A second positive is evidence of acute Zika infection. A positive NAAT or IgM for dengue is evidence of dengue infection and no further testing is required.

Fetuses with ultrasound findings consistent with congenital Zika virus infection: Pregnant individuals who may have been exposed to Zika virus and have had an ultrasound suggestive of congenital infection with Zika virus should have Zika testing. This includes NAAT of serum and urine specimens and serum IgM. A negative NAAT and positive IgM should be followed by a confirmatory PRNT for Zika and dengue through the CDC. Testing of amniocentesis fluid or placental and fetal tissues may be considered after consultation with the DHEC's Public Health Lab and the CDC.

Neonates with possible congenital Zika virus infection: Recommended testing for neonates with birth defects and maternal history suggestive of Zika virus exposure and congenital infection are unchanged in the new guidance. Testing the infant includes NAAT

testing for Zika virus RNA in serum and urine specimens and Zika IgM testing of serum. Ideally, this testing should occur within the first few days of birth but testing of specimens in the first few weeks to months after birth may still be useful in evaluation.

Patient Evaluation and Diagnosis

No specific changes have been made in the clinical evaluation process for possible Zika disease. This section serves as a reminder of what should be considered prior to pursuing laboratory testing. Consider consultation with a DHEC medical consultant prior to beginning any testing.

Exposure: Providers should review the maps available at the CDC website (links below) to determine the likelihood that their patient could have been exposed to Zika, dengue, or chikungunya. For Zika, the possibility of sexual transmission by a partner who traveled to these areas should also be considered. It should be noted that past transmission of Zika does not indicate current transmission. As of February 2020, no current Zika outbreaks are being reported anywhere in the world, although some local transmission is occurring.

Symptoms: Typical symptoms of Zika infection include acute onset of fever, along with maculopapular rash, arthralgia, and/or conjunctivitis. Other common symptoms include myalgia and headache. Cases of Guillain-Barré linked to Zika infection have also been reported. Although many infected with Zika will not show symptoms, routine testing in asymptomatic individuals is no longer recommended due to the reduced transmission of the virus.

Ultrasound: A variety of abnormal ultrasound findings may be seen related to Zika infection *in utero*. Providers should rule out more common etiologies prior to considering Zika testing. Common complications related to Zika can include fetal loss, congenital microcephaly, intracranial calcifications, other structural brain or eye abnormalities, or limb defects such as clubfoot or joint contractures.

Testing of amniotic fluid for Zika should only be considered if collected as part of the patient's clinical care and should not be collected solely for the purpose of the testing. Providers should consult with DHEC if considering testing of amniotic fluid or fetal tissues.

Resources for Additional Information

- The Centers for Disease Control and Prevention (CDC). *Testing Guidance*. Available at <https://www.cdc.gov/zika/hc-providers/testing-guidance.html>
- CDC. *Zika Clinical Evaluation & Disease*. Available at <https://www.cdc.gov/zika/hc-providers/preparing-for-zika/clinicalevaluationdisease.html>
- CDC. *Zika Travel Information*. Available at <https://wwwnc.cdc.gov/travel/page/zika-information>
- CDC. *Zika and Pregnancy*. Available at <https://www.cdc.gov/pregnancy/zika/testing-follow-up/patient-counseling-pregnant-women.html>
- CDC. *Dengue Around the World*. Available at <https://www.cdc.gov/dengue/areaswithrisk/around-the-world.html>
- CDC. Chikungunya Geographic Distribution. Available at <https://www.cdc.gov/chikungunya/geo/index.html>

- CDC. *Zika 2019 Case Counts in the US*. Available at <https://www.cdc.gov/zika/reporting/2019-case-counts.html>
- CDC. *Dengue Testing Guidance*. Available at <https://www.cdc.gov/dengue/healthcare-providers/testing/testing-guidance.html>
- CDC. *Chikungunya Testing Guidance*. Available at <https://www.cdc.gov/chikungunya/hc/diagnostic.html>

DHEC Contact Information for Reportable Diseases and Reporting Requirements

Reporting of **Zika** is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2020 List of Reportable Conditions available at:

<https://www.scdhec.gov/sites/default/files/Library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2020			
Mail or call reports to the Epidemiology Office in each Public Health Region			
MAIL OR FAX TO:			
<u>Lowcountry</u> Allendale, Bamberg, Beaufort, Berkeley, Calhoun, Charleston, Colleton, Dorchester, Hampton, Jasper, Orangeburg 4050 Bridge View Drive, Suite 600 N. Charleston, SC 29405 Fax: (843) 953-0051	<u>Midlands</u> Aiken, Barnwell, Chester, Edgefield, Fairfield, Kershaw, Lancaster, Lexington, Newberry, Richland, Saluda, York 2000 Hampton Street Columbia, SC 29204 Fax: (803) 576-2993	<u>Pee Dee</u> Clarendon, Chesterfield, Darlington, Dillon, Florence, Georgetown, Horry, Lee, Marion, Marlboro, Sumter, Williamsburg 1931 Industrial Park Road Conway, SC 29526 Fax: (843) 915-6502 Fax2: (843) 915-6506	<u>Upstate</u> Abbeville, Anderson, Cherokee, Greenville, Greenwood, Laurens, McCormick, Oconee, Pickens, Spartanburg, Union 200 University Ridge Greenville, SC 29602 Fax: (864) 282-4373
CALL TO:			
Lowcountry Office: (843) 441-1091 Nights/Weekends: (843) 441-1091	Midlands Office: (888) 801-1046 Nights/Weekends: (888) 801-1046	Pee Dee Office: (843) 915-8886 Nights/Weekends: (843) 915-8845	Upstate Office: (864) 372-3133 Nights/Weekends: (864) 423-6648
For information on reportable conditions, see https://www.scdhec.gov/ReportableConditions		<u>DHEC Bureau of Communicable Disease Prevention & Control</u> Division of Acute Disease Epidemiology 2100 Bull St • Columbia, SC 29201 Phone: (803) 898-0861 • Fax: (803) 898-0897 Nights / Weekends: 1-888-847-0902	

Categories of Health Alert messages:

Health Alert	Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory	Provides important information for a specific incident or situation; may not require immediate action.
Health Update	Provides updated information regarding an incident or situation; unlikely to require immediate action.
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