



Public Health
HEALTH AND HUMAN SERVICES

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To: North Carolina Health Care Providers and Laboratories

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Subject: **Zika Virus Diagnosis, Management and Reporting**

Summary

Zika is a mosquito-borne virus that is currently causing outbreaks in many countries. Zika virus is transmitted by *Aedes aegypti* and *A. albopictus* mosquitos. Since 2015, endemic transmission has been occurring in the Western hemisphere. Transmission of Zika virus through sex and blood transfusion has also been reported. Zika virus can be detected in saliva and urine. However, exposure to these fluids has not been linked to transmission.

Clinical and Epidemiologic Features

An estimated 80% of persons infected with Zika virus are asymptomatic. Symptoms, when they occur, begin about 3–12 days after exposure, last between 2 and 7 days and include mild fever, rash (mostly maculopapular), headaches, arthralgia, myalgia, and non-purulent conjunctivitis. Patients may remain viremic for up to 7 days after symptom onset. Clinical symptoms are often similar to dengue and chikungunya infections. Zika virus infection during pregnancy is associated with microcephaly and other birth defects. Zika virus infection may also trigger Guillain-Barré syndrome.

Case management

Because of similar geographic distribution and symptoms, patients with suspected Zika virus infections also should be evaluated and managed for possible dengue or chikungunya infection. Similar to dengue and chikungunya infections, no specific antiviral treatment is available for Zika virus infection. Treatment is generally symptomatic and can include rest, fluids, and use of acetaminophen. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), like ibuprofen and naproxen, should be avoided until dengue can be ruled out to reduce the risk of hemorrhage.

Prevention of Sexual Transmission of Zika Virus

The CDC defines potential sexual exposure to Zika virus as having had sex with a person who has traveled to or lives in an area with active Zika virus transmission when the sexual contact did not include a barrier to protect against infection. Such barriers include male or female condoms for vaginal or anal sex and other barriers for oral sex. Sexual exposure includes vaginal sex, anal sex, oral sex, or other activities that might expose a sex partner to genital secretions.

In addition to transmission by semen, Zika virus might be transmitted through exposure to vaginal secretions or menstrual blood. Zika virus RNA has been detected in vaginal fluids 3 days after symptom onset and in cervical mucus up to 11 days after symptom onset. Sexual transmission of infections, including those caused by other viruses, is reduced by consistent and correct use of barriers to protect against infection.

- CDC guidance: https://www.cdc.gov/mmwr/volumes/65/wr/mm6529e2.htm?s_cid=mm6529e2_w

Zika Virus Infection and Pregnancy

Zika virus infection during pregnancy can cause congenital microcephaly and other brain defects in the fetus. Zika virus has also been linked to other adverse pregnancy outcomes, including miscarriage and stillbirth.



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Therefore, CDC has issued the following recommendations:

- All pregnant women in the United States and U.S. territories should be assessed for possible Zika virus exposure at each prenatal care visit.
- Pregnant women should not travel to an area with active Zika virus transmission.
- Symptomatic and asymptomatic pregnant women should be tested in accordance with CDC guidelines: https://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm?s_cid=mm6529e1_w.
- Prenatal and postnatal management of pregnant women with laboratory evidence of confirmed or possible Zika virus infection should be managed in accordance with CDC guidelines: https://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm?s_cid=mm6529e1_w.

Recommendations for additional assessment and laboratory testing for infants with possible congenital Zika virus infection are available at <http://www.cdc.gov/zika/hc-providers/qa-pediatrician.html>.

Zika Virus Infection in Persons who are not Pregnant

Nonpregnant persons should be tested in accordance with the appropriate CDC algorithm, depending on whether specimens were collected greater than or less than 14 days after symptom onset:

<http://www.cdc.gov/zika/laboratories/lab-guidance.html>.

Testing for Zika Virus to Identify Local Transmission

Individuals who did not travel to a Zika affected area but have had 3 or more symptoms of Zika virus infection (fever, rash, arthralgia, or conjunctivitis) in the past 14 days not explained by another etiology AND have a history of mosquito bite(s) within 2 weeks of symptom onset may be considered for Zika virus testing.

Laboratory Testing for Zika Virus

Several commercial laboratories are now offering testing for Zika virus. Testing is also available at the NC State Laboratory of Public Health (NC SLPH). Testing at the SLPH can only be accomplished with pre-approval to ensure compliance with the Zika emergency use authorization. Please call 919-733-3419 for testing approval. Information from the NC SLPH is available here:

<http://slph.ncpublichealth.com/zika/default.asp>. An algorithm to help determine if Zika testing is indicated is attached.

Contact the NC SLPH at 919-807-8821 prior to shipment to the SLPH or if you have questions. Specimen transport using the statewide courier can be coordinated with your local health department or specimens can be directly shipped using a professional courier service. All specimens should be packaged and shipped as a Category B infectious substance. Address all specimen shipments to the attention of:

Virology/Serology Unit
North Carolina State Laboratory of Public Health
4312 District Drive
Raleigh, NC 27607-5490

Educate Your Patients About Mosquito Bite Prevention

Mosquitoes serve as arboviral vectors whether at home or abroad. Educate patients about mosquito bite prevention. <http://www.cdc.gov/features/stopmosquitoes/> and <http://www.cdc.gov/zika/fs-posters/index.html>.

Surveillance and Reporting:

Physicians and laboratories are required to report suspected or confirmed Zika virus infections. Please contact the Communicable Disease Branch at 919-733-3419 or your local health department if Zika virus infection is suspected. This is an evolving situation and recommendations are likely to change as new information becomes available.

WHEN TO TEST FOR ZIKA VIRUS

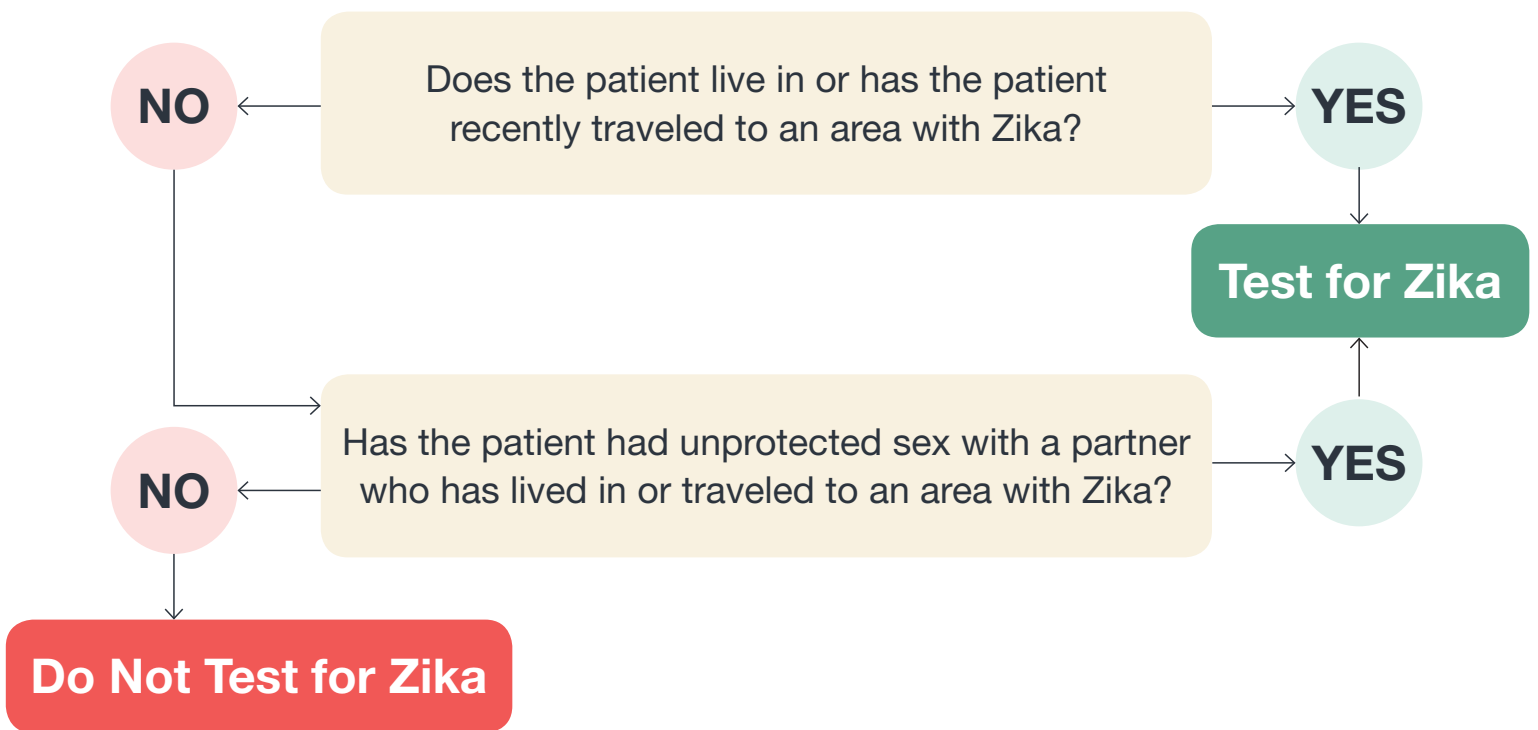


As a healthcare provider, you decide if a patient should be tested for Zika virus infection. The algorithm below will help you determine whether or not to test your patient for Zika virus infection. For information on which test to use, see [CDC's interim guidance](#).

If your patient is

- Experiencing or has recently experienced symptoms of Zika*
- An asymptomatic pregnant woman

Ask the following questions



*Healthcare providers should review their local and state health jurisdiction guidelines regarding testing of patients with clinically compatible illness without known travel or sexual exposures.

CDC does not recommend Zika virus testing for asymptomatic

- Men
- Children
- Women who are not pregnant



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