

Scott Walker
Governor



DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET
P O BOX 2659
MADISON WI 53701-2659

Kitty Rhoades
Secretary

State of Wisconsin
Department of Health Services

Telephone: 608-266-1251
Fax: 608-267-2832
TTY: 711 or 800-947-3529

TO: Wisconsin Health Care Providers and Microbiology Laboratory Managers
FROM: Jeffrey P. Davis MD, Chief Medical Officer and State Epidemiologist for Communicable Diseases
RE: Recommendations on Testing for Zika Virus Infections
DATE: July 14, 2016

Clinicians should be aware that the Centers for Disease Control and Prevention (CDC) has recently issued a Health Alert Update regarding Zika virus testing currently being offered by commercial laboratories (<https://stacks.cdc.gov/view/cdc/39953>). This memo serves to reiterate this health alert.

Testing for Zika virus infection using real-time reverse-transcription polymerase chain reaction (rRT-PCR) molecular assays performed on serum is now commercially available. However, these commercial labs currently do not offer serologic testing for Zika virus infection. **The use of a PCR assay as the sole method of testing for Zika virus infection has serious limitations.**

By way of background, CDC recommends molecular testing using rRT-PCR for serum samples collected < 7 days and urine samples collected < 14 days after symptom onset. A positive PCR test is confirmation of Zika virus infection. However, Zika virus is cleared from the blood of an infected patient relatively quickly after infection occurs. Because of the rapid decline in the level of viremia and possible inaccuracy in reporting of dates of illness onset, **a negative PCR result does not definitively exclude Zika virus infection.** In such cases, CDC recommends serologic testing using ELISA to detect Zika IgM antibody. Serologic tests for IgM antibody typically remain positive during the 2 to 12 week interval after the Zika virus infection begins. Testing for Zika IgM antibody can be performed at the Wisconsin State Laboratory of Hygiene (WSLH).

If your patient has traveled to a Zika endemic area and either has signs and symptoms of Zika virus infection (fever, rash, joint pain or conjunctivitis,) OR is an asymptomatic pregnant woman, please contact the Wisconsin Division of Public Health's Bureau of Communicable Diseases at (608) 267-9003 **before tests are ordered,** because fee-exempt testing at the WSLH may be available for this patient. An epidemiologist will ensure that fee-exempt testing criteria are met and provide instructions for specimen submission.

Providers who request molecular testing for Zika virus infection from a commercial testing laboratory are advised to retain and store (refrigerated at 2-8°C) an aliquot of the patient's serum for subsequent Zika IgM ELISA testing if the PCR result is negative. If this is not possible, collection of an additional serum sample may be necessary. **Serology is the test of choice for specimens collected more than 7 days after symptom onset and for asymptomatic pregnant women who have traveled to Zika endemic areas.**

Thank you for your cooperation in this matter to ensure that optimal testing methods are used. Questions can be addressed to our epidemiologists at (608) 267-9003.