Regional Medical Laboratory
4142 South Mingo Road
Tulsa, OK. 74146-3632

MEMORANDUM

To: Regional Medical Laboratory Clients
From: Gerald C. Miller, PhD, Chief of Immunology & Microbiology
Nikki Garner, Manager of Reference Laboratory
Shelli Lamb, MLT, Reference Laboratory Specialist
Date: February 19, 2016
Subject: Zika Virus Testing for Oklahoma Clients

There is no commercially available test for Zika Virus and thus **all testing for Zika virus must be coordinated between the physician and the Epidemiologist-on-Call at the Acute Disease Service (405)271-4060** of the Oklahoma State Department of Health (OSDH) prior to specimen collection. Specimens for testing will be sent by the OSDH to CDC. The epidemiologist must gather required clinical and travel information from the clinician to determine if the patient meets the criteria for testing. It is suggested to **print out the 2-page required form** (form can be found at: http://www.rmlonline.com; click on "Zika information page" link, then click on the file entitled "Zika forms and information"), and **complete the 2-page form in its entirety before calling the epidemiologist.** For patients who meet the established criteria, the epidemiologist will work with the physician and the local laboratory to direct the specimen collection, forms completion, and shipping to the OSDH. All specimens must be approved by the epidemiologists prior to shipping to the OSDH.

A patient will be considered for testing if they meet the following symptom criteria and travel history. **Required travel criterion is that the patient has traveled to a country with Zika virus transmission within the 2 weeks prior to symptom onset or travel within the last 2-12 weeks for asymptomatic pregnant women.** Countries at risk for Zika transmission can be found on the following website: http://wwwnc.cdc.gov/travel/page/zika-travel-information**. Non-pregnant patients must have at least TWO (2) of the following symptoms: Acute Fever, Rash, Arthralgia, or Conjunctivitis.**

To confirm evidence of Zika virus infection, reverse transcription-polymerase chain reaction (RT-PCR) will be performed on serum specimens collected within the first week of illness.

Virus-specific IgM antibodies may be detectable as early as 3 days after onset of illness. However, serum collected within 7 days of illness onset may not as yet have detectable virus-specific IgM antibodies and IgM testing should be repeated on a convalescent-phase sample to rule out infection in patients with a compatible clinical syndrome. IgM antibodies against Zika virus, dengue viruses, yellow fever, West Nile and other flaviviruses have strong cross-reactivity possibly generating false positive results in serological tests. Plaque-reduction neutralization tests may be performed to measure virus-specific neutralizing antibodies and may be able to discriminate between cross-reacting antibodies in primary flavivirus infections.

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Summary for physician:

1.) Print and complete 2-page required form (http://www.rmlonline.com).
2.) Call the OSDH Epidemiologist-on-Call (405)271-4060.
3.) Provide all the clinical and travel information from the 2-page form to the epidemiologist.
4.) If patient meets established criteria, the epidemiologist will work with the physician and RML to have testing ordered, specimen collected, processed, and sent to OSDH who will forward it onto CDC for testing.
5.) If specimen is to be collected in a private office or offsite, please separate serum and store at 4C or frozen if there is more than a 24-hour delay in it arriving at RML.
6.) Results will be returned to the ordering physician in 3-5 weeks.

For questions, please contact Gerald C. Miller, PhD, at (800)722-8077 or (918)744-2555, ext 15543 or RML Client Services at (918)744-2150.