

IN THIS ISSUE: Zika Virus Series #1: Zika Laboratory Testing Guidance

Zika Laboratory Testing Guidance - Whom To Be Tested and How?

INTRODUCTION

Between January 1, 2015 and February 10, 2016, there were 52 travel-associated cases of Zika Virus Disease (ZVD) reported in 17 states in the US and one travel-associated and nine locally acquired cases were reported in the US territories, i.e., Puerto Rico and US Virgin Islands. No cases have been reported in Nevada to date. On February 5, 2016, CDC released updated guidelines for health care providers (HCPs) caring for pregnant women and women of reproductive age with possible Zika virus exposure. Since then, Washoe County Health District (WCHD) has received quite a few phone calls from local HCPs to inquire about Zika virus testing related issues. Due to the length limit of Epi-News articles and an overwhelming amount of information on Zika virus, this issue will only focus on laboratory testing related issues.

ALL COUNTRIES AND TERRITORIES WITH ACTIVE ZIKA VIRUS TRANSMISSION

As of February 5, 2016, countries and territories with active Zika virus transmission are:

AMERICAS (Barbados, Bolivia, Brazil, Colombia, Commonwealth of Puerto Rico, US territory, Costa Rica, Curacao, Dominican Republic, Ecuador, El Salvador, French Guiana, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Nicaragua, Panama, Paraguay, Saint Martin, Suriname, U.S. Virgin Islands, Venezuela)

OCEANIA/PACIFIC ISLANDS (American Samoa, Samoa, Tonga)

AFRICA (Cape Verde).

It is highly recommended that you check the CDC's website <http://www.cdc.gov/zika/geo/active-countries.html> to obtain the most current list of affected countries and territories.

SYMPTOMS

About 1 in 5 people infected with Zika virus become symptomatic, which obviously means that 80% of cases are asymptomatic. Characteristic clinical findings are acute onset of fever with maculopapular rash, arthralgia, or conjunctivitis. Other commonly reported symptoms include myalgia and headache. Clinical illness is usually mild with symptoms lasting for several days to a week. There does not appear to be chronic infection, and immunity is most likely life-long.

WHO SHOULD BE TESTED?

- Asymptomatic pregnant woman with a history of travel to an area with ongoing Zika virus transmission
- Pregnant woman residing in an area with ongoing Zika virus transmission
- Individuals with Zika compatible symptoms AND a history of travel to a Zika-affected area within 2 weeks prior to the illness onset.
- Infants born to mothers with positive or inconclusive test results for Zika virus infection.

- Children with microcephaly whose mothers were in an affected area during their pregnancy since the outbreak began in March 2015.

HOW?

There are no commercially available diagnostic tests for Zika virus. Currently, Zika virus testing is performed by CDC and some state or local health departments. Nevada State Public Health Laboratory (NSPHL) cannot perform testing at this time. However, all specimens should be submitted to the NSPHL with required information completed in order to ship to CDC for testing. For the time being, serology and RT-PCR are the two tests for Zika virus.

RT-PCR testing is performed on symptomatic cases only. Within 7 days of illness onset, collect at least 2 ml of serum (5-10 ml of blood in a red top or serum separator tube).

Serology: IgM and PRNT testing is performed for asymptomatic pregnant women and symptomatic cases. For asymptomatic pregnant women, a blood sample should be collected between 2 and 12 weeks after return from travel to a Zika-affected area. It is important to note that a negative serology result obtained 2-12 weeks after travel cannot definitively rule out Zika virus infection. For symptomatic cases, optimal collection of acute blood is >3 days after illness onset. Serum collected within 7 days of illness onset may be falsely negative. If initial IgM testing is negative and Zika is strongly suspected, a second convalescent serum should be collected. IgM antibodies against Zika virus, dengue viruses, chikungunya virus, and other flaviviruses (e.g., yellow fever virus, West Nile virus) have cross-reactivity possibly generating false positive results in serological tests; therefore, all IgM positive samples will be reflexed to PRNT to discriminate among these viruses.

Healthcare providers wishing to arrange testing for Zika virus must contact WCHD at 775-328-2447 for a consultation and approval. Specimens should be shipped to the following address. Should you have any questions associated with specimen collection and shipment, please call NSPHL directly at 775-688-1335 (business hour) or 775-823-1150 (after-hours).

Nevada State Public Health Laboratory
1660 North Virginia Street, MS 0385
Reno, Nevada 89557

To Report a Suspect Case

Zika Virus Disease is considered to be an extraordinary occurrence of illness. Therefore, it is a reportable disease in Nevada (NAC 441A) and in the nation. To report a suspected Zika virus infection, please call **Washoe County health District at 775-328-2447 or fax to 775-328-3764.**