



Technical Bulletin

Division of Public and Behavioral Health



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Topic: West Nile Virus

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To: Health Care Providers

Current Situation

According to the Nevada Division of Public and Behavioral Health, Nevada has not had any cases of West Nile Virus (WNV) reported in 2014 to date. However, previous years' trends have indicated that Nevada is entering the time of the year historically known for West Nile Virus cases. Typically, WNV is most commonly detected in Nevada around mid-June, with a significant increase in August, and continues through October. As we approach the time of the year in which most WNV cases are reported, both nationally and here in Nevada, it is essential to have prompt identification and reporting, of WNV cases in Nevada.

Transmission

West Nile virus is most commonly transmitted to humans by mosquitoes. Additional routes of human infection have rarely been documented such as: blood transfusions, organ transplants, exposure in a laboratory setting, from mother to baby during pregnancy, delivery, or breastfeeding.

Clinical Signs and Symptoms

The incubation period for WNV infection is thought to range from about 2 to 14 days, and up to 21 days in immunosuppressed persons. Most persons (70-80%) who become infected with WNV develop no clinical illness or symptoms.

Most symptomatic persons experience an acute systemic febrile illness that often includes headache, weakness, myalgia, or arthralgia; gastrointestinal symptoms and a transient maculopapular rash also are commonly reported. Less than 1% of infected persons develop neuroinvasive disease, which typically manifests as meningitis, encephalitis, or acute flaccid paralysis.

Diagnosis

West Nile virus (WNV) disease should be considered in any person with a febrile or acute neurologic illness, including, but not limited to, persons with recent exposure to mosquitoes, blood transfusion, or organ transplantation, especially during the summer; it should also be considered in suspected cases of aseptic meningitis, or in any infant born to a mother infected with WNV during pregnancy or while breastfeeding.

Laboratory specimens should preferably be collected within 8 to 14 days of illness onset or within 8 days of illness for CSF specimens. A person is considered to be infected if any of the following are found:

- Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, using PCR, viral culture, or similar tests, **OR**
- Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, **OR**
- Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
- Virus-specific IgM antibodies in CSF or serum.

Treatment

There is no specific treatment for WNV infection. In cases with milder symptoms such as fever and aches, the symptoms generally go away on their own. In more severe cases, people usually need hospitalization where they can receive supportive treatment including intravenous fluids and nursing care.

Prevention

No WNV vaccines are licensed for use in humans (although there is a vaccine specifically for horses). In the absence of a human vaccine, prevention of WNV disease depends on community-level mosquito control programs, personal protective measures to decrease exposure to infected mosquitoes, e.g. use of DEET and wearing long sleeve shirts, and screening of blood and organ donors.

Reporting

WNV disease is a notifiable condition in Nevada. All cases should be reported to local public health authorities within 24 hours.

To report West Nile Virus cases please call:

Las Vegas area: Southern Nevada Health District, 702.759.1300

Reno/Sparks area: Washoe County Health District, 775.328.2447

Carson City, Douglas, Lyon County area: Carson City Health and Human Services, 775.887.2190

Other counties: Rural Community Health Services, 775.687.5162 (business hours) or 775.434.4358 (after hours)

State of Nevada Epidemiology Duty Officer (24 hours): 775.400.0333

For More Information:

Nevada Division of Public and Behavioral Health: 775.684.5911

Centers for Disease Control and Prevention: <http://www.cdc.gov/westnile/index.html>



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