



Public Health Advisory
Outbreak of West Nile virus and St Louis encephalitis virus in Local Mosquitos Amid Increasing Human WNV Disease Cases
July 29, 2019

Situation

The Southern Nevada Health District (SNHD) is reporting the sixth case of West Nile Virus (WNV) in Clark County residents. Four individuals have had the neuroinvasive form of illness, one individual had the non-neuroinvasive form, and one person was an asymptomatic blood donor. West Nile virus is endemic in Clark County, and human disease cases are expected to continue to increase. SNHD is alerting healthcare providers to be vigilant for the symptoms described below and order appropriate testing when suspected.

St. Louis encephalitis virus (SLEV) and West Nile virus (WNV) are closely related mosquito-borne flaviviruses that can cause outbreaks of acute febrile illness and neurologic disease. The Health District’s Mosquito Surveillance Program continues to identify West Nile and St. Louis encephalitis virus-positive mosquitoes throughout Southern Nevada. West Nile virus-positive mosquitoes have been found in 25 unique ZIP codes, and mosquitoes testing positive for the St. Louis encephalitis virus have been found in ten unique ZIP codes so far this season. More than 33,000 mosquitoes have been submitted for testing this year. Of those mosquitoes, 4,987 have tested positive for West Nile virus, and 433 have tested positive for St. Louis encephalitis.

Symptoms

The clinical presentation for WNV and SLEV disease cases is similar. Most people infected do not develop symptoms. About 1 in 5 develop a fever with other symptoms such as headache, body aches, joint pain, vomiting, diarrhea, or rash. This is the non-neuroinvasive form of illness, and people with this type of infection recover completely, but fatigue and weakness can last for weeks or months. About 1 in 150 people who are infected develop a severe illness affecting the central nervous system causing encephalitis (inflammation of the brain) or meningitis (inflammation of the membranes that surround the brain and spinal cord).

- Symptoms of severe illness include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, muscle weakness, and possibly paralysis.
- Recovery might take several weeks or months; some effects might be permanent.
- About 1 out of 10 people who develop severe illness affecting the central nervous system die.

Recommendations for Healthcare Providers

Currently, there are commercially available laboratory tests for diagnosis of acute WNV infection, but there is no commercially available SLEV test, and all SLEV testing must be performed at public health laboratories. In addition, there is cross reactivity between WNV and SLEV antibodies. Healthcare providers should be aware of the possible syndromes of WNV and SLEV infections in patients and order WNV testing when suspected. There is no specific treatment for these viruses, and patients with severe illness should be hospitalized for supportive care such as intravenous fluids, pain medication and monitoring.

Testing Options

Laboratory	Specimen	Test Name	Test code
Quest	Serum	WNV Antibodies, IgM, IgG	36596
Quest	CSF	WNV Antibodies, IgM, IgG	36597
Quest	Serum	WNV RNA, Real-Time PCR	10992
Quest	CSF/Serum	WNV RNA, QL PCR	17563 or 11190
LabCorp	Serum	WNV IgM	138842
LabCorp	CSF	WNV IgM	138966
LabCorp	Serum/CSF	WNV RT PCR	140005
CPL	Serum	WNV IgM	3824
CPL	CSF	Arbovirus AB, IgM, IgG	451800

CPL	CSF	WNV AB, IgM, IgG	400600
CPL	Serum or Plasma	WNV by PCR	3995

Please report cases to SNHD's Office of Epidemiology and Disease Surveillance by fax at 702-759-1414 or by phone at 702-759-1300 option 2.



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Health Alert: conveys the highest level of importance; warrants immediate action or attention

Health Advisory: provides important information for a specific incident or situation; may not require immediate action

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action

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