

MLS Update: Arbovirus Testing for the 2018 Vectorborne Disease Risk Season

May 31, 2018

Purpose of this message: To remind lab partners about arboviral testing at the Minnesota Department of Health-Public Health Laboratory (MDH-PHL).

Action Items: None

Background: Despite the late spring, warm temperatures now are bringing Minnesotans outdoors, and putting them at risk for exposures to ticks and mosquitoes and the diseases they carry. In 2017, Minnesota saw near record numbers of infections due to some emerging arboviral pathogens, like Powassan virus (transmitted by the blacklegged tick or deer tick) and Jamestown Canyon virus (transmitted by various species of mosquitoes). Both of these viruses are rare, but can be serious, especially in older patients, or those with compromised immune systems. Health care providers should be suspicious of arboviral disease throughout the warmer months in patients presenting with fever, headaches, and muscle aches after spending time outdoors, particularly if symptoms progress to encephalitis, meningitis, or other neurologic disease.

MDH is working hard to learn more about how these diseases affect Minnesotans, and encourages providers to submit serum and spinal fluid specimens to MDH-PHL for arbovirus testing, especially in patients presenting with neurologic symptoms after outdoor exposures. Testing for more common bacterial and parasitic tickborne diseases (i.e., the agents of Lyme disease, anaplasmosis, and babesiosis) is not available at MDH and should be ordered through commercial laboratories.

Key Points:

- MDH-PHL continues to offer Arboviral Testing for the 2018 season.
- Healthcare providers and clinical laboratories are required to report all suspect and confirmed arboviral disease cases to MDH within one working day.
- PLEASE INDICATE THE DATE OF SYMPTOM ONSET ON THE SUBMISSION FORM. This helps in our understanding of these diseases.

Specimen Requirements:

- 1 ml of serum (preferred) and/or 1ml CSF
- If available, please submit a urine specimen; results will not be sent on urine
 - (~10 ml, in a sterile container)
- Please ship at refrigeration temperature

Testing Done at MDH-PHL: Any specimen submitted for arboviral testing will be tested for our entire endemic arboviral panel for the presence of IgM antibodies through an EIA, IFA or RT-PCR (WNV only). Our endemic arboviral panel currently includes:

- Serum and/or CSF specimens:
 - Powassan (POW)
 - Jamestown Canyon Virus (JCV)
 - West Nile Virus (WNV)
- Serum specimens only:
 - California Group Encephalitis Viruses (CAL)
 - St. Louis Encephalitis Virus (SLE)
 - Western equine Encephalitis Virus (WEE)
 - Eastern Equine Encephalitis Virus (EEE)

If a specimen tests positive for antibodies to any virus above, the specimen will be forwarded to CDC for confirmation.

- Urine specimens are currently requested for surveillance purposes only. Results will not be reported on urine specimens.

If other arboviral infections are suspected, such as Zika, dengue, or chikungunya, or if you have additional questions about arboviral disease, please contact our Epidemiology department at 651-201-5414.

For more information about Powassan Virus, Jamestown Canyon Virus, West Nile Virus, or other arboviruses, please see our [website](#).

MDH Contact Information

Anna Strain, PhD, Virology Laboratory Supervisor at 651-201-5035 (specimens, assay information) OR Vectorborne Disease Epidemiology at 651-201-5414 (case reporting, arbovirus information).

Thank you for your partnership and continued arboviral disease surveillance efforts in Minnesota.

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