

MLS UPDATE: ARBOVIRUS TESTING FOR THE 2019 VECTORBORNE DISEASE RISK SEASON

April 11, 2019

Purpose of this message: To notify clinical laboratory partners of updates to the arboviral testing services at the Minnesota Department of Health-Public Health Laboratory (MDH-PHL).

Action Items: None.

Background: With the arrival of spring, warm temperatures bring Minnesotans outdoors and putting them at risk for exposures to ticks and mosquitoes and the diseases they carry. In 2018, Minnesota continued to see infections due to 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 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. Beginning with the 2019 arbovirus season, MDH-PHL will be accepting urine specimens submitted with paired serum specimens for West Nile Virus (WNV). 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 2019 season.
- **New for 2019:** Urine specimens submitted with paired serum will be tested diagnostically for West Nile Virus (WNV) by RT-PCR.
- 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 and assists in interpretation of test results.

Specimen Requirements:

- 1 ml of serum (preferred) and/or 1ml CSF
- Urine specimens submitted with a paired serum
 - ~10 ml, in a sterile container
 - Testing on urine for WNV only
- 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)
- Urine specimens:
 - WNV only

If travel associated 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 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.

Anna K. Strain, PhD

Virology/Immunology Unit Supervisor

Phone: 651-201-5035

anna.strain@state.mn.us

Minnesota Department of Health

Public Health Laboratory

Minnesota Laboratory System

601 Robert St. N

St. Paul, MN 55164-0899

651-201-5200

health.mnlabsystem@state.mn.us

www.health.state.mn.us/mls

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