



**MLS Laboratory Update
Powassan Encephalitis and Rocky Mountain
Spotted-Fever Cases Identified in MN
July 29, 2009**



****Please forward** this message to all appropriate personnel within your institution and any CLINIC or PHYSICIAN'S OFFICE with which you are affiliated**

This is an update from the Minnesota Department of Health, Public Health Laboratory (MDH-PHL) and the Minnesota Laboratory System (MLS). This message is being sent to MLS laboratory contacts serving Minnesota residents. You are not required to reply to this message.

Powassan encephalitis diagnosed in Minnesota residents

In June 2008 and July 2009, two Cass County residents, a child and an adult, were diagnosed with encephalitis caused by the tick-borne Powassan (POW) flavivirus; diagnosis was based on molecular and/or serologic testing. These patients likely acquired their infections in Cass County and represent the first two reported cases of disease from POW virus in Minnesota. The 2008 case-patient was infected with a lineage of POW virus transmitted by *Ixodes scapularis* (blacklegged tick or deer tick, also the vector of Lyme disease, anaplasmosis, and babesiosis). In June 2009, the MDH-PHL identified POW virus RNA in *I. scapularis* ticks that were collected from northern and eastern Minnesota. Approximately 50 cases of encephalitis or meningitis due to POW virus have been identified in North America since 1958.

LABORATORY testing for POW virus is not widely available; however, testing may be performed at MDH-PHL on a case-by-case basis after review of the case with MDH epidemiologists.

MEDICAL PROVIDERS should consider POW virus infection in patients with encephalitis or meningitis of unknown etiology that occurs during the tick-borne disease transmission season (May to October). See POW virus link for information for Health Professionals:

<http://www.health.state.mn.us/divs/idepc/diseases/powassan/hcp.html>

Rocky Mountain spotted fever identified in Minnesota resident

Rocky Mountain spotted fever (RMSF) (etiologic agent *Rickettsia rickettsii*) is transmitted by Dermacentor ticks (wood ticks or dog ticks) and is considered rare in Minnesota. In July 2009, a Dakota County child with no history of travel died from Rocky Mountain spotted fever (RMSF), the first reported RMSF fatality in Minnesota. Sporadic cases of RMSF have been reported from various parts of Minnesota in prior years; most, although not all, of these cases had travelled to states where RMSF is more highly endemic. Approximately 2,000 cases are reported annually in other parts of the United States, primarily in southern and east Atlantic states and, to a lesser extent, western states.

LABORATORY testing for RMSF is not widely available; however it can be coordinated through MDH-PHL and is referred to the Center for Disease Control and Prevention (CDC).

MEDICAL PROVIDERS should consider RMSF in patients with the "classic triad" of fever, headache, and a maculopapular or petechial rash (all three may not be present at the same time).

See MDH - RMSF link for more information:

<http://www.health.state.mn.us/divs/idepc/diseases/rockymtnfever/index.html>

Reportable Diseases

Viral encephalitis, viral meningitis, and tick-borne diseases are reportable to MDH, within one working day, by calling 651-201-5414.

Questions

Clinicians and laboratorians who have questions about POW virus, RMSF, or other tick-borne diseases are encouraged to contact Melissa Kemperman or Dave Neitzel at 651-201-5414. For questions about specimen-type or shipping conditions, please call the MDH-PHL Virology Laboratory at 651-201-5248.

Additional Resources – MDH Websites

Tick – Transmitted Diseases:

<http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/index.html>

Preventing Tick-borne Diseases:

<http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/prevention.html>

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