

**Date:** November 9, 2016  
**To:** Neurologists, Critical Care Physicians, Infectious Diseases Physicians, Medical Officers of Health, Emergency Departments and Laboratory Managers  
**From:** Provincial Laboratory for Public Health (ProvLab)  
**Re:** Update on Enterovirus EV-D68, Acute Flaccid Paralysis and Severe Respiratory Infection

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**Key Message:**

- Enterovirus (EV)-D68 (species D, type 68), which circulated in 2014, has again been detected circulating during the Summer/Fall of 2016 in Alberta.
- Infection with EV-D68 should be considered in cases of severe acute respiratory illness (SRI) and in cases of acute flaccid paralysis/myelitis (AFP/AFM).
- The sample of choice to detect EV-D68 is an upper respiratory tract sample (e.g. nasopharyngeal swab or aspirate).
- The ProvLab respiratory panel detects but does not discriminate between different types of enteroviruses and rhinoviruses. Contact the ProvLab Virologist-on-Call (VOC) for enterovirus typing.

**Background**

EV-D68 infects the respiratory tract and infection can be asymptomatic. EV-D68 can cause a spectrum of illness ranging from mild disease to severe respiratory infection with a trend to severe disease in patients with asthma. In 2014, EV-D68 surged during the Summer/Fall and was associated with cases of SRI and AFP. During the Summer of 2016, EV-D68 reappeared in Alberta, other Canadian provinces and other countries and is again associated with cases of SRI and AFP. Both SRI and AFP are syndromes that should be reported to the Medical Officer of Health.

**Laboratory testing**

- SRI: Consider other causes of SRI and continue to undertake appropriate sampling and testing for other pathogens. Contact your local MOH before the collection of specimens if travel history or animal exposure suggests pathogens such as MERS-Cov or avian influenza. An NP swab is appropriate for EV-D68 detection. The routine respiratory virus panel at ProvLab detects enteroviruses/ rhinoviruses but does not discriminate between enterovirus types. Contact your local ProvLab Virologist-on-Call (VOC) if enterovirus typing is required.
- AFP: NP swabs are also the samples of choice for EV-D68; the VOC must be contacted. In almost all cases of EV-D68 associated AFP, the virus is not detected in the CSF. Investigation of cases of AFP must also include other samples and search for other causative agents, and should at a minimum include CSF for standard viral PCR, and a stool sample to detect other enteroviruses that can cause AFP. Recent travel history may also prompt looking for other unusual agents such as arboviruses.

**Inquiries and feedback:**

The VOC can be contacted using the following numbers:

Edmonton Site – 780-407-7121 (ask for Virologist-on-Call)  
Calgary Site – 403-944-1200 (ask for Virologist-on-Call)

For question related to laboratory testing in SRI cases contact:  
Dr. Steven Drews, Program Leader for Respiratory Viruses.  
[Steven.Drews@albertahealthservices.ca](mailto:Steven.Drews@albertahealthservices.ca) or 780-407-3068

For questions related to laboratory testing in AFP cases contact:  
Dr. Raymond Tellier, Program Leader for CNS Diseases.  
[Raymond.Tellier@albertahealthservices.ca](mailto:Raymond.Tellier@albertahealthservices.ca) or 403-944-2724

**This bulletin has been reviewed and approved by:**

Dr. Graham Tipples, Medical / Scientific Director, Provincial Laboratory for Public Health (ProvLab)