

Public Health Advisory

October 22, 2018

Acute Flaccid Myelitis (AFM)

Important information for health care professionals

Summary

- There has been an increase in AFM in children under 18 years of age in the United States with no known cause, but some cases have tested positive for non-polio enteroviruses, particularly enterovirus-A71 (EV-A71).
- Subsequently, recent cases of AFM have been reported in Ontario both through existing provincial surveillance in Ontario and other notifications. Testing for enteroviruses, including EV-D68 and EV-A71, is available on request at the laboratory at Public Health Ontario (PHO).
- We are aware of one case in a child in the Southwestern Public Health area that has tested positive for enterovirus-D68 (EV-D68).

Increase in Acute Flaccid Myelitis in the United States

The [Centers for Disease Control and Prevention \(CDC\)](#) has been working with state and local health departments and health care providers to investigate an increase in reports of suspected and confirmed cases of AFM in children under 18 years of age in the United States. As of October 16, 2018, there have been 62 confirmed cases this year in 22 states. In a [ProMed](#) posting on an investigation of 14 cases of AFM in Colorado, 11 people tested positive for EV-A71, one tested positive for EV-D68, and two people tested negative for any type of enterovirus.

In 2014 in the US, an increase in AFM occurred at the same time as a national outbreak of EV-D68-associated respiratory infections and EV-D68 was found in respiratory specimens of some patients with AFM. From the initiation of their AFM surveillance in August 2014 through September 2018, 386 confirmed cases of AFM were reported, mostly in children.

Context in Ontario

Acute flaccid paralysis: AFP is a reportable disease of public health significance in Ontario for children less than 15 years of age. AFP reporting is intended to ensure Ontario is monitoring for paralytic poliomyelitis infections in order for Canada to maintain its polio-free status.

Laboratory Testing and Reporting

- Enterovirus infection is more common during late summer into fall, with variation each year.
- **Enterovirus testing** can be requested from PHOL for those with severe respiratory illness or acute neurologic conditions such as AFP (see chart below).
- EV-D68 testing will take place at the PHO laboratory using a real-time polymerase chain reaction (PCR) assay for EV-D68. A link to the EV-D68 real-time PCR protocol in use at PHO is available [here](#).

Testing for persons presenting with respiratory illness	Testing for persons of any age presenting with acute neurological symptoms/signs:
Collect nasopharyngeal (NP) swab or throat swab (NP swab preferred) in universal transport media (UTM), or bronchoalveolar lavage in a sterile dry container.	Stool: Collect two sets of stool samples - each stool sample is divided into a sterile container for viral testing and a bacterial (Cary-Blair) transport media container.
	Respiratory specimens: Collect nasopharyngeal (NP) swab or throat swab (NP swab preferred) in universal transport media (UTM), or bronchoalveolar lavage in a sterile dry container. Always submit a throat swab from children under 15 years of age with acute flaccid paralysis.
	Cerebrospinal Fluid (CSF): Collect CSF as appropriate for the investigation.
	Neurologic investigations: Neurologic tests, such as electromyography, nerve conduction studies, Magnetic Resonance Imaging (MRI) and computerized axial tomography (CT) scans should be conducted as appropriate.
Write "EV-D68 Testing" in the "Test(s) Requested" field. Include dates of onset and sample collection, list of symptoms, travel history if appropriate, patient setting and note any co-morbidities such as asthma.	
Important: Clinicians requesting EV-D68 testing are also asked to submit an Enterovirus D68 (EV-D68) Patient Clinical Summary Form to assist in understanding the epidemiology and clinical features of EV-D68. This form can be submitted to the laboratory along with the requisition and specimen or sent by confidential fax to 416-596-1799.	

Reporting

Report suspected and confirmed cases, in those less than 15 years of age, to Southwestern Public Health at:

- St. Thomas by calling 519-631-9900 ext. 1232 or faxing to 519-631-1682
- Woodstock by calling 519-421-9901 ext. 3500 or faxing to 519-539-6206

Important Website Links

Canadian Paediatric Surveillance Program:

- Acute Flaccid Paralysis
 - www.cpsp.cps.ca/surveillance/study-etude/acute-flaccid-paralysis

Centers for Disease Control and Prevention:

- AFP Surveillance
 - www.cdc.gov/acute-flaccid-myelitis/afm-surveillance.html

Ministry of Health and Long-Term Care Infectious Disease Protocol:

- Disease Information
 - www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/afp_chapter.pdf
- Case Definitions
 - www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/afp_cd.pdf

Promed:

- Acute Flaccid Myelitis in North America, Oct 2018
 - <http://promedmail.org/post/20181010.6081500>

Public Health Ontario:

- Enterovirus D68 webpage
 - www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Enterovirus-D68.aspx#
- Lab Testing Information
 - www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Enterovirus-D68.aspx
 - <https://jcm.asm.org/content/53/8/2641.long>
- Patient Clinical Summary Form
 - www.publichealthontario.ca/en/eRepository/PHO_EVD68_Patient_Clinical_Summary_Form.pdf

Contact for more information:

Infectious Disease Program
Southwestern Public Health
1-800-922-0096

Reference: Public Health Ontario: www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Enterovirus-D68.aspx#