

Surveillance and Laboratory Testing for Enterovirus D68 (EV-D68) and Acute Flaccid Paralysis (AFP)

Attention: Physicians, Emergency Departments, Nurse Practitioners, Walk-In Clinics/Urgent Care Clinics, Family Health Teams, Infection Control Practitioners, Occupational Health Professionals, NSM LHIN, Central LHIN, County of Simcoe Paramedic Services, Medavie EMS Ontario – Muskoka, Rama Mnjikaning EMS, Midwives

Date: October 15, 2014

Further to the HealthFax issued on October 7, 2014 titled *Enterovirus D68 (EV-D68) and Acute Flaccid Paralysis (AFP)*, Public Health Ontario, in collaboration with the Ministry of Health and Long-Term Care, is continuing to monitor the evolving EV-D68 situation and have provided further guidance regarding surveillance and laboratory testing.

In order to investigate the epidemiology and clinical features of EV-D68 in Ontario, PHO Laboratories (PHOL) are conducting enhanced surveillance on a subset of patients based on recent respiratory specimens submitted for testing from a range of clinical settings including physicians' offices, clinics, hospitals and outbreak settings. **In addition to PHOL's General Test Requisition Form, clinicians are asked to submit an Enterovirus D68 (EV-D68) Patient Clinical Summary Form when submitting samples for EV-D68 testing; submission of the Enterovirus D68 (EV-D68) Patient Clinical Summary Form is voluntary.**

The following recommendations outline the public health surveillance and laboratory testing for EV-D68 and AFP. Table 1 (page 3) summarizes the laboratory testing and public health surveillance for AFP and EV-D68. **The forms and testing information referenced in this document can be accessed here:**

PHOL General Test Requisition Form:

http://www.publichealthontario.ca/en/eRepository/General_test_fillable_requisition.pdf

Enterovirus D68 (EV-D68) Patient Clinical Summary Form:

http://www.publichealthontario.ca/en/eRepository/PHO_EVD68_Patient_Clinical_Summary_Form.pdf

Acute Flaccid Paralysis Report Form:

http://www.publichealthontario.ca/en/eRepository/PHO_AFP_Case_Report_Form.doc

Polio Testing:

<http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Poliovirus.aspx>

Campylobacter Testing:

http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Campylobacter_Enteric_Culture.aspx

Any suspect or confirmed cases of Acute Flaccid Paralysis must be immediately reported to the Simcoe Muskoka District Health Unit (SMDHU), Communicable Disease (CD) Team at (705)721-7520 or 1-877-721-7520 extension 8809 or 1-888-225-7851 after hours.

Background:

Enterovirus D68 (EV-D68) has been circulating widely in North America since August 2014. It has been associated with acute severe respiratory illness, particularly in children with a previous history of asthma. Information on EV-D68 is available on the Public Health Ontario website at www.publichealthontario.ca/EV-D68.

Recently, cases of AFP were recognized in the US and Canada. Some of the children with AFP were found to have the EV-D68 virus present in testing of specimens from their respiratory tract. The relationship between EV-D68 infection and AFP is not known and is currently under investigation. It should be noted that other forms of enterovirus, including poliovirus and Enterovirus 71, are known to cause AFP.

Public health reporting:

Acute Flaccid Paralysis: AFP is a reportable condition in Ontario. Since December 2013, AFP in children less than 15 years of age has been reportable for the purposes of documenting polio elimination in Canada. Because of the possible association of EV-D68 and AFP, AFP is currently reportable in individuals of all ages. For patients presenting with AFP, please complete the [AFP Report Form](#) and fax it to the SMDHU – CD Team at 705-733-7738. Please do not send the report form to Public Health Ontario.

Enterovirus D68: While EV-D68 is not a reportable disease in Ontario, in order to investigate the epidemiology and clinical features of EV-D68 in Ontario, PHOL are conducting enhanced surveillance on a subset of patients based on recent respiratory specimens submitted for testing from a range of clinical settings. In addition to [PHOL General Test Requisition Form](#), clinicians are asked to submit an [Enterovirus D68 \(EV-D68\) Patient Clinical Summary Form](#) when submitting samples for EV-D68 testing. This form contains basic risk factor and clinical information and should only take a few minutes to complete. Please note submission of this form is voluntary and will not affect your request for laboratory testing. This form can be submitted to the laboratory along with the requisition and specimen, or can be sent by confidential fax to 416-649-4512.

Laboratory testing:

Acute flaccid paralysis:

1) Stools:

All children less than 15 years of age presenting with AFP should have two sets of stool samples - each stool sample is divided into a sterile container for viral testing (including [Polio testing](#)) and a bacterial (Cary-Blair) transport media container for [Campylobacter testing](#). Please write “**Polio Testing**” in the “**Test(s) Requested**” field of one requisition, and “**Campylobacter Testing**” in the “**Test(s) Requested**” field of another requisition.

2) Respiratory specimens:

For children less than 15 years of age, collect a throat swab in universal transport medium (UTM) for both EV-D68 and polio testing. Please write “**EV-D68 Testing and Polio Testing**” in the “**Test(s) Requested**” field of the requisition. The clinician is also requested to complete the [Enterovirus D68 \(EV-D68\) Patient Clinical Summary Form](#).

For those 15 years of age and over, collect a nasopharyngeal (NP) swab or throat swab (NP swab preferred) in universal transport media (UTM), or bronchoalveolar lavage in a sterile dry container for EV-D68 testing. Please write “**EV-D68 Testing**” in the “**Test(s) Requested**” field of the requisition. The clinician is also requested to complete the [Enterovirus D68 \(EV-D68\) Patient Clinical Summary Form](#).

3) CSF:

For all ages, collect CSF as appropriate for the investigation.

4) Neurologic investigations:

For all ages, neurologic tests, such as electromyography, nerve conduction studies, MRI and CT, should be conducted as appropriate.

Note: Serology testing is not recommended for diagnosis of polio or non-polio enterovirus infection.

Enterovirus D68:

Submit a nasopharyngeal (NP) swab or throat swab (NP swab preferred) in universal transport media, or bronchoalveolar lavage in a sterile dry container for EV-D68 with a completed [PHOL General Test Requisition Form](#). Please write “**EV-D68 Testing**” in the “**Test(s) Requested**” field. Include dates of onset and sample collection, symptoms, travel history, patient setting and note any co-morbidities such as asthma. Clinicians requesting EV-D68 testing are also asked to submit the [Enterovirus D68 \(EV-D68\) Patient Clinical Summary Form](#).

Table 1: Public Health Surveillance and Laboratory Testing for AFP and EV-D68

	AFP in children less than 15 years of age	AFP in those 15 years of age and over	Possible EV-D68 associated respiratory symptoms
Reporting to public health	Reportable on an ongoing basis to assist with documenting polio elimination in Canada. Fax AFP report forms to the SMDHU – CD Team at 705-733-7738.	Currently reportable to assist with understanding if there is an association between AFP and EV-D68. Fax AFP report forms to the SMDHU – CD Team at 705-733-7738.	Not reportable
Laboratory testing (see “Laboratory Testing Guidelines for AFP” section for additional details)	<ol style="list-style-type: none"> 1) Stools: Two sets of stool samples - each stool sample is divided into a sterile container for viral testing (including polio testing) and a bacterial (Cary-Blair) transport media container for Campylobacter testing 2) Throat swab: Throat swab in universal transport medium (UTM) for both EV-D68 and polio testing 3) CSF: CSF as appropriate for the investigation 4) Neurologic investigations: Neurologic tests, such as electromyography, nerve conduction studies, MRI, CT, should be conducted as appropriate 	<ol style="list-style-type: none"> 1) Respiratory specimens: A nasopharyngeal swab (NP) or throat swab (NP swab preferred) in universal transport media (UTM), or bronchoalveolar lavage in a sterile dry container for EV-D68 testing 2) CSF: CSF as appropriate for the investigation 3) Neurologic investigations: Neurologic tests, such as electromyography, nerve conduction studies, MRI, CT, should be conducted as appropriate 	<ol style="list-style-type: none"> 1) Respiratory specimens: A nasopharyngeal (NP) swab or throat swab (NP swab preferred) in universal transport media (UTM), or bronchoalveolar lavage in a sterile dry container for EV-D68 testing
Forms to complete	<ol style="list-style-type: none"> 1) Acute Flaccid Paralysis Case Report Form sent to local public health unit 2) Enterovirus D68 (EV-D68) Patient Clinical Summary Form requested to be sent to laboratory with specimen and requisition, or faxed to 416-649-4512 	<ol style="list-style-type: none"> 1) Acute Flaccid Paralysis Case Report Form sent to local public health unit 2) Enterovirus D68 (EV-D68) Patient Clinical Summary Form requested to be sent to laboratory with specimen and requisition, or faxed to 416-649-4512 	<ol style="list-style-type: none"> 1) Enterovirus D68 (EV-D68) Patient Clinical Summary Form requested to be sent to laboratory with specimen and requisition, or faxed to 416-649-4512