Gastrointestinal Virus Testing Update

Audience

Healthcare providers who order gastrointestinal virus testing for their patients.

Overview

This labstract provides clinicians with an update on the introduction of a laboratory-developed multiplex gastrointestinal virus PCR (MGVP) at Public Health Ontario (PHO) Laboratory and testing acceptance criteria.

What has changed?

On November 4, 2019, PHO Laboratory will implement a laboratory-developed MGVP across two testing sites (Hamilton - servicing southwestern Ontario, and Toronto - servicing the rest of Ontario).

The MGVP assay replaces virus culture and/or electron microscopy testing for the detection of select gastrointestinal viruses, as well as the existing norovirus PCR. The new gastrointestinal multiplex assay consists of a quadruplex real-time PCR that detects adenovirus, rotavirus, norovirus GI, and norovirus GII. All specimens submitted for gastrointestinal virus testing that meet the patient setting-based acceptance criteria in the following table will be tested using this assay. Assay validation has documented excellent sensitivity and specificity of all targets.

Enterovirus/poliovirus testing has not changed. Information on specimen collection and testing information for enterovirus and poliovirus can be found at: Enterovirus Test Information Sheet and Poliovirus Test Information Sheet

Testing for sapovirus and torovirus are not currently available at the PHO Laboratory or the National Microbiology Laboratory.
Gastrointestinal Virus Testing Available at PHO Laboratory

<table>
<thead>
<tr>
<th>Patient Setting¹</th>
<th>Testing</th>
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<tbody>
<tr>
<td>In-patient (ICU/CCU² or ward)</td>
<td>Multiplex gastrointestinal virus PCR (MGVP)</td>
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<tr>
<td>Institutions (non-outbreak) e.g. long-term care homes, correctional facilities</td>
<td>MGVP for up to 5 outbreak specimens</td>
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<tr>
<td>Institutional gastrointestinal Infection Outbreaks³</td>
<td>MGVP testing is only available if symptoms have persisted for ≥ 72 hours. MGVP testing will only be performed if date of onset and date of collection are provided on the PHO Laboratory requisition</td>
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<tr>
<td>Emergency Room patients¹</td>
<td>MGVP testing is only available if symptoms have persisted for ≥ 72 hours. MGVP testing will only be performed if date of onset and date of collection are provided on the PHO laboratory requisition</td>
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<tr>
<td>Ambulatory¹</td>
<td>MGVP testing is only available if symptoms have persisted for ≥ 72 hours. MGVP testing will only be performed if date of onset and date of collection are provided on the PHO laboratory requisition</td>
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Table footnotes:

1. Patient setting and duration of symptoms prior to submission must be provided on the requisition to help triaging of specimens. If patient setting and duration of symptoms are not provided the specimen will NOT be tested.
2. ICU - Intensive Care Unit; CCU - Critical Care Units.
3. A limit of 5 specimens are accepted for testing for each outbreak, and sample testing will cease once the same gastrointestinal virus is found in two or more samples from the same outbreak. For outbreaks with special concerns, including requests for additional testing, contact PHO Laboratory’s Customer Service Centre.

Specimen Collection and Handling

Refer to the Virus-Enteric Kit Instruction Sheet for detailed specimen collection instructions. Specimen containers and supplies are provided to submitters for the exclusive purpose of submitting specimens to PHO for testing Virus-Enteric Kit Ordering Instruction

NOTE: To maintain optimum viability, specimens should be stored at 2-8°C following collection and shipped to PHO Laboratory on ice packs as soon as possible. If longer storage/transit time is anticipated, specimens should be frozen at -70°C or lower.
References


For further information

- Specimen collection, submission, testing, and reporting information is available in detail on the Gastroenteritis - Stool Viruses Test Information Sheet (TIS), located on our website at: [Gastroenteritis Stool Viruses TIS](#)

- Contact the PHO Laboratory Customer Service Centre at 416-235-6556 or 1-877-604-4567 (toll-free), or by email at customerservicecentre@oahpp.ca

- For PHO Laboratory specimen collection information and previous Labstracts, refer to [publichealthontario.ca/test directory](#)

- The current version of the PHO Laboratory General Test Requisition and other forms are available at [publichealthontario.ca/Requisitions](#)

- To subscribe to future Labstracts, [register on our website](#)

- To register for Autofax and receive laboratory reports by fax directly from our laboratory information system as soon as they are released, contact the PHO Laboratory Customer Service Centre.
## Document Change History

<table>
<thead>
<tr>
<th>Revision Number</th>
<th>Date of Implementation</th>
<th>Description and Change</th>
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<tbody>
<tr>
<td>000</td>
<td>November 2019</td>
<td>New Document</td>
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