

Appendix A: Disease-Specific Chapters

Chapter: Gastroenteritis, Institutional Outbreaks

Revised August 2015

Gastroenteritis, institutional outbreaks

☒ Communicable

☐ Virulent

Health Protection and Promotion Act:

Ontario Regulation 558/91 – Specification of Communicable Diseases

Health Protection and Promotion Act:

Ontario Regulation 559/91 – Specification of Reportable Diseases

1.0 Aetiologic Agent

Outbreaks of gastrointestinal illness in institutions are most frequently caused by viruses such as noroviruses, rotaviruses, and rarely other viruses. However, bacteria and other pathogens may cause outbreaks as well. Note that *Clostridium difficile* Infection (CDI) outbreaks in public hospitals are covered in separate Appendices under the *Infectious Diseases Protocol, 2008* (or as current), however CDI outbreaks in other institutions are covered by *Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2013* (or as current).¹

2.0 Case Definition

2.1 Surveillance Case Definition

[See Appendix B](#)

2.2 Outbreak Case Definition

The outbreak case definition varies with the outbreak under investigation. Consideration should be given to the following in establishing an outbreak case definition:

- Clinical, laboratory and/or epidemiological criteria;
- The time frame for occurrence;
- The geographic location(s) or place(s) where cases live or became ill/exposed; and
- Special attributes of cases (e.g., age, underlying conditions) and/or aetiologic agent.

Outbreaks should also be classified by levels of probability (e.g., confirmed, probable, or suspect).

3.0 Identification

3.1 Clinical Presentation

The clinical presentation is dependent on aetiology; however, the most common presentation of gastroenteritis is, but is not limited to, abdominal pain, vomiting, diarrhea* that is unusual or different for the patient/resident without other recognized aetiology, along with nausea, headache, chills, fever and/or myalgia.²

*Diarrhea is defined as loose/watery stool that conforms to the shape of its container.

3.2 Diagnosis

[See Appendix B](#)

Laboratory diagnosis depends on the aetiologic agent.

Clinical specimens should be collected from symptomatic cases early in the course of clinical illness to increase the likelihood of detecting a causative agent.¹

For institutions who implement a food retention policy, 200 grams of potentially hazardous food samples from each meal, frozen at or below -18°C, for 10 days can be submitted to the laboratory for testing if a bacterial pathogen is suspected. If the causative agent of the outbreak is suspected or confirmed to be caused by norovirus, laboratory testing of food retention samples is not recommended.¹

For further information about human diagnostic testing, contact the Public Health Ontario Laboratories or refer to the Public Health Ontario Laboratory Services webpage:

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

For more information regarding specimen collection and testing, please refer to the Public Health Inspector's Guide to the Principles and Practices of Environmental Microbiology:

http://www.publichealthontario.ca/en/eRepository/Public_Health_Inspectors_Guide_2013.pdf.

4.0 Epidemiology

4.1 Occurrence

In Ontario, gastroenteritis outbreaks in institutions occur most frequently between November and May, but may occur at any time during the year.

4.2 Reservoir

Varies, depending on the agent; frequently humans.

4.3 Modes of Transmission

Primarily transmitted through fecal-oral route. May also be transmitted from person-to-person, foodborne, waterborne and droplet contact of vomitus (for norovirus). Transmission may also occur through contact with contaminated fomites.

4.4 Incubation Period

Varies, depending on the agent.

4.5 Period of Communicability

Varies, depending on the agent.

4.6 Host Susceptibility and Resistance

All persons are susceptible.³

5.0 Reporting Requirements

5.1 To local Board of Health

All suspect and confirmed gastroenteritis institutional outbreaks shall be reported to the medical officer of health by persons required to do so under the *Health Protection and Promotion Act* R.S.O., 1990 (HPPA).⁴

5.2 To the Ministry of Health and Long-Term Care (the ministry) or Public Health Ontario (PHO), as specified by the ministry

Individual cases of gastroenteritis in institutions are not reportable. Community outbreaks of gastroenteritis are also not reportable.

Outbreaks in institutions that are caused by Reportable Diseases (e.g., salmonellosis, *E. coli*, etc.) shall be reported under their respective Reportable Disease(s) as per the integrated Public Health Information System (iPHIS) requirements.

Report only aggregate case counts for gastrointestinal outbreaks in institutions using iPHIS, or any other method specified by the ministry, **within five (5) business days of receipt of initial notification**, as per iPHIS Bulletin Number 17: Timely Entry of Cases.⁵

The minimum data elements to be reported for each outbreak are specified in the following sources:

- *Ontario Regulation 569* (Reports) under the HPPA;^{6,4}
- The iPHIS User Guides published by PHO; and
- Bulletins and directives issued by PHO.

6.0 Infection Prevention and Control (IPAC) Measures:

6.1 Personal Prevention Measures

For this section refer to:

- *Institutional/Facility Outbreak Prevention and Control Protocol, 2008* (or as current);⁷
- *Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2013* (or as current);¹
- Public Health Ontario's website at www.publichealthontario.ca to search for the most up-to-date Provincial Infectious Diseases Advisory Committee (PIDAC) best practices on IPAC. PIDAC best practice documents can be found at: http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx.

6.2 IPAC Strategies

For this section refer to:

- *Institutional/Facility Outbreak Prevention and Control Protocol, 2008* (or as current);⁷
- *Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2013* (or as current);¹

- Public Health Ontario's website at www.publichealthontario.ca to search for the most up-to-date Provincial Infectious Diseases Advisory Committee (PIDAC) best practices on IPAC. PIDAC best practice documents can be found at: http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx.

6.3 Management of Cases

Cases are managed as part of the outbreak as per this Protocol and the *Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2013* (or as current).¹

If the outbreak is caused by a reportable disease, (e.g., salmonellosis, *E. coli*) refer also to the disease-specific chapter for that disease.

6.4 Management of Contacts

Conduct surveillance of residents/patients and staff for development of symptoms.

Implement control measures for visitors in the institution during an outbreak. For more information on management of contacts, please refer to *Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2013* (or as current).¹

6.5 Management of Outbreaks

Public health units assist in the management of gastroenteritis outbreaks in institutions. However, it is ultimately the responsibility of the institution to manage the outbreak.

As per this Protocol, outbreak management shall comprise of, but not be limited to, the following general steps:

- Confirm diagnosis and verify the outbreak;
- Establish an outbreak team;
- Develop an outbreak case definition;
- Implement IPAC measures;
- Implement and tailor communication and notification plans depending on the scope of the outbreak;
- Conduct epidemiological analysis on data collected;
- Conduct environmental inspections of implicated premises where applicable;
- Coordinate and collect appropriate clinical, environmental and/or food specimens where applicable;
- Prepare a written report; and
- The public health unit declares the outbreak over in consultation with the institution. The medical officer of health of the public health unit retains the final authority to determine if an outbreak is over.

7.0 References

1. Ontario. Ministry of Health and Long-Term Care. Control of gastroenteritis outbreaks in long-term care homes [Internet]. Toronto, ON: Queen's Printer for Ontario; 2013 [cited 2014 Dec 9]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/guidance/gd_control_gastroenteritis_outbreaks.pdf.
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee. Routine practices and additional precautions in all health care settings. 3rd ed., 2012 revision. Toronto, ON: Queen's Printer for Ontario; 2012. Available from: http://www.publichealthontario.ca/en/eRepository/RPAP_All_HealthCare_Settings_Eng2012.pdf.
3. Heymann DL, editor. Control of communicable diseases manual. 19th ed. Washington, DC: American Public Health Association; 2008.
4. Health Protection and Promotion Act, R.S.O. 1990, c. H.7. Available from: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm.
5. Ontario. Ministry of Health and Long-Term Care. Timely entry of cases. iPHIS Bulletin. Toronto, ON: Queen's Printer for Ontario; 2014:17.
6. Reports, R.R.O. 1990, Reg. 569. Available from: <http://www.ontario.ca/laws/regulation/900569>.
7. Ontario. Ministry of Health and Long Term Care. Institutional/facility outbreak prevention and control protocol. Toronto, ON: Queen's Printer for Ontario; 2015. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/institutional_facility_outbreak.pdf.

8.0 Additional Resources

Gregg MB, editor. Field epidemiology. 3rd ed. New York, NY: Oxford University Press; 2008.

Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee.

Annex C – Testing, surveillance and management of clostridium difficile. Annexed to: Routine Practices and additional precautions in all health care settings. 2013 revision. Toronto, ON: Queen's Printer for Ontario; 2013. Available from:

http://www.publichealthontario.ca/en/eRepository/PIDAC-IPC_Annex_C_Testing_SurveillanceManage_C_difficile_2013.pdf.

Ontario. Ministry of Health and Long-Term Care. Infectious Diseases Protocol, 2013. Toronto: Queen's Printer for Ontario; 2013. Available from:

http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/infectious_diseases.pdf.

Ontario. Ministry of Health and Long-Term Care. Roles and responsibilities of hospitals and public health units for *Clostridium difficile* Infection (CDI) reporting and outbreak management. Toronto, ON: Queen's Printer for Ontario; 2014. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/guide_cdi_rr.pdf.

9.0 Document History

Table 1: History of Revisions

Revision Date	Document Section	Description of Revisions
April 2015	General	New template. Section 9.0 Document History added.
April 2015	1.0 Aetiologic Agent	Removal of “astroviruses, enteric adenoviruses, calciviruses and other viruses.” Addition of “and rarely other viruses.” Addition of “Note that <i>Clostridium difficile</i> Infection (CDI) outbreaks in public hospitals are covered in separate Appendices under the <i>Infectious Diseases Protocol, 2008</i> (or as current).”
April 2015	2.2 Outbreak Case Definition	Last sentence: “Cases should also be classified by levels of probability” revised to “Outbreaks should also be classified by levels of probability”.
April 2015	3.1 Clinical Presentation	Entire section revised.
April 2015	3.2 Diagnosis	Entire section revised.
April 2015	4.3 Modes of Transmission	Second sentence: “airborne” replaced with “droplet contact of vomitus (for norovirus).”
April 2015	4.6 Host Susceptibility and Resistance	Section name changed to include “Host”. Removal of “however susceptibility is greater among the elderly.”
April 2015	5.2 To the Ministry of Health and Long-Term Care (the ministry) or Public Health Ontario (PHO), as specified by the ministry	Title of the section changed from “To Public Health Division (PHD)”. Addition of “as per the integrated Public Health Information System (iPHIS) requirements”. “The disease-specific User Guides published by the Ministry, and...” replaced with “The iPHIS User Guides published by PHO; and Bulletins and directives issued by PHO.”

Revision Date	Document Section	Description of Revisions
April 2015	6.0 Infection Prevention and Control (IPAC) Measures	Section title changed from “Prevention and Control Measures”.
April 2015	6.1 Personal Prevention Measures	Entire section revised.
April 2015	6.2 IPAC Strategies	Entire section revised.
April 2015	6.3 Management of Cases	Entire section revised.
April 2015	6.4 Management of Contacts	Entire section revised.
April 2015	6.5 Management of Outbreaks	<p>First paragraph, removed “For gastroenteritis outbreaks in institutions, public health works collaboratively with the staff of the institution, in particular the infection control practitioner, in order to identify the source of illness, stop the outbreak and limit secondary spread.” And replaced with “Public health units assist in the management of gastroenteritis outbreaks in institutions. However, it is ultimately the responsibility of the institution to manage the outbreak.”</p> <p>Fourth bullet, revised “prevention and control measures” to “IPAC measures”.</p>
April 2015	7.0 References	Updated.
April 2015	8.0 Additional Resources	Updated.
August 2015	1.0 Aetiologic Agent	Last sentence, addition of “however CDI outbreaks in other institutions are covered by <i>Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2013</i> (or as current)”.

