Gastrointestinal (GI) Infection Outbreak Guidelines for Health Care Facilities

Reviewed and Updated: August 2015, October 2014, 2013

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INTRODUCTION

Gastrointestinal (GI) infection is generally caused by viruses and bacteria, and occasionally from the toxins created by bacteria. GI infection can cause a variety of symptoms from diarrhea, nausea, and vomiting to abdominal cramps, fever, headaches, and rashes; and is spread from person to person through direct or indirect contact via the fecal/oral route.

Common sources of infection in healthcare environments are contaminated hands that are not cleaned between patients, contaminated equipment that is not cleaned between patient use, and/or contact with environmental surfaces that have been contaminated with vomit or feces. Less common sources include consumption of contaminated food or beverages.

It is expected that residential and acute care facilities will more commonly be affected episodically by viral GI infection outbreaks that are also affecting the greater local community. Other possible pathogen causes should be considered if the clinical presentation and onset/incubation appears different than a routine viral GI infection outbreak.

These guidelines provide direction for Health Care Facilities in the event multiple cases of GI infection are identified.

This document is organized into sections:
1. General Principles and Pre-Outbreak Preparation
2. Outbreak Detection, Declaration and Investigation
3. Outbreak Management
I. GENERAL PRINCIPLES AND PRE-OUTBREAK PREPARATION

A. Pre-Outbreak Preparation

- Provide yearly and/or ongoing gastrointestinal infection outbreak education and/or training for staff and volunteers.

- Ensure specimen collection containers are on-hand at all times. A process should be in place to ensure containers are not expired. Specimen collection containers are obtained through PHSA Laboratories.

- Ensure appropriate cleaning products are in stock.

- Ensure staff has easy access to the appropriate personal protective equipment.

- Keep all records and procedures together in a binder/folder at the nurse's station for easy access during an outbreak.

  - IH – Gastrointestinal Infection Outbreak Guidelines
  - Gastrointestinal Illness Outbreak Surveillance Tool
  - RI and GI Outbreak Report Form

B. Surveillance

All residential and acute care facilities should have an individual who is identified as responsible for infection control activities. That person, assisted by other staff in the facility, should be responsible for ongoing surveillance and implementation of control measures in the event of a gastrointestinal outbreak.

C. Routine Practices

Routine Practices should be used to prevent the transmission of infections in health care settings. Routine practices should be used with all clients at all times. Close attention to Routine practices is fundamental to preventing transmission of microorganisms among residents and health care providers in all health care settings.


Interior Health Infection Control Guidelines on Routine Practices can be found here: http://www.interiorhealth.ca/AboutUs/QualityCare/Documents/InfectionControlManual.pdf
II. OUTBREAK DETECTION, DECLARATION AND INVESTIGATION

A. Recognition

Facility staff must watch for GI illness in their residents. GI illness may present with: nausea, vomiting, bloody or non-bloody diarrhea, abdominal pain, muscle aches, headache, low-grade fever or a combination of these symptoms. See Appendix 4

B. Definitions

**Gastrointestinal (GI) Outbreak Definition:**

Three or more cases of gastrointestinal illness within the same setting (e.g. unit, ward, wing, facility) in a four-day period.

* This outbreak definition may be restricted by time and place (i.e. “Since Jan 01, on East Wing”) and expanded, or otherwise modified as the investigation proceeds.

**Gastrointestinal (GI) Infection Case Definition:**

A case of gastrointestinal infection is defined as any one of the following conditions that cannot be attributed to another cause:

- Two or more episodes of diarrhea in a 24 hour period (above what is considered normal for that individual)
- Two or more episodes of vomiting in a 24 hour period
- One episode each of vomiting and diarrhea in a 24 hour period
- Positive culture for a known enteric pathogen with a symptom of GI infection (e.g. vomiting, abdominal pain, diarrhea)
- One episode of bloody diarrhea

*Source: PICNET GI Infection Outbreak Guidelines for Health Care Facilities

C. Declaring an Outbreak
If three or more cases of gastrointestinal infection occur in the facility within a four day period, then the outbreak definition has been met and the outbreak must be declared. The residential/acute care facility is responsible for declaring a GI outbreak and immediately implementing the control measures as per this guideline.

Note: If there are one or two cases of GI illness within a 4 day period, but the outbreak definition has not yet been met, it is recommended that the facility:

- Initiate control measures to segregate residents with GI illness and continue to use Routine Practices plus Contact Precautions for ill residents when providing direct care
- Ensure implementation of thorough hand hygiene
- Increase monitoring and recording of GI symptoms on remainder of residents
- Record self-reported GI symptoms among health care providers.

D. Reporting an Outbreak

Report an initial outbreak of gastrointestinal illness to:

**IH Communicable Disease (CD) Unit**
Call 1-866-778-7736

Complete the top portion and Section A of the [IH RI and GI Outbreak Report Form](http://www.interiorhealth.ca/YourEnvironment/CommunicableDiseaseControl/Outbreaks/Pages/default.aspx)
Fax to CD Unit at (250) 549-6310 or email to cdunit@interiorhealth.ca

Notify the **Infection Control Practitioner** (if your facility has one assigned)

Note: If there are reasons to believe the GI outbreak is related to food or caused by something other than a common viral GI illness, then the Infection Control Practitioner, Communicable Disease Unit, and/or Health Protection will be more actively involved in investigating and determining the outbreak source and management. In such cases, the CD Unit will facilitate a teleconference to determine roles, responsibilities, and an outbreak plan.

**Ongoing Daily Reporting to the CD Unit is Required.**
Review of new and ongoing cases within residents and staff must occur to understand the progress of the outbreak.

Complete Section B of the [IH RI and GI Outbreak Report Form](http://www.interiorhealth.ca/YourEnvironment/CommunicableDiseaseControl/Outbreaks/Pages/default.aspx) daily
and fax to the CD Unit at 250-549-6310 or email to cdunit@interiorhealth.ca

A list of all facility outbreaks within Interior Health can be viewed at:
http://www.interiorhealth.ca/YourEnvironment/CommunicableDiseaseControl/Outbreaks/Pages/default.aspx
E. Notification of Partners

The designated Most Responsible Person, the person with the highest level of administrative authority at the time an outbreak is suspected, begins the notification process.

The Most Responsible Person may be the following:

- Administrator on call
- Manager of Residential Care
- Clinical Resource Nurse
- Patient Care Coordinator
- Clinical Manager
- Director of Care
- Assistant Director of Care

Partners to notify are:

- The CIHS Administrator on Call
- Communicable Disease Unit at 1-866-778-7736 or cdunit@interiorhealth.ca.
- Infection Control
- Others as appropriate, for example:
  - Notify service providers such as HandyDART, oxygen services, laboratory services, BC Ambulance, hemodialysis units, etc. of outbreak and control measures required
  - PHSA Laboratory must be notified (via the PHSA Gastrointestinal Disease Outbreak Notification Form) if specimens will be processed as part of the outbreak investigation.
  - Staffing office must be notified if there are ill staff, so they may arrange for adequate relief staff.
  - Medical Director of the facility and physicians of the residents
  - Facility Licensing Officer

F. Roles and Responsibilities

DIRECTOR OF CARE OR MOST RESPONSIBLE PERSON

- Ensure that outbreak control measures have been put into place and the GI Illness Outbreak Guidelines for Healthcare Facilities are being followed.
- Ensure the outbreak is reported to the Communicable Disease Unit
- Notify partners (as above)
- Notify other facilities where staff work, and hospitals to which residents/patients have been transferred within the last 72 hrs.
MEDICAL HEALTH OFFICER

- The MHO has legislative authority and responsibility, according to the Public Health Act, to control the outbreak. The MHO has delegated this responsibility to the CD Unit Monday to Friday from 0830 to 1630.

COMMUNICABLE DISEASE UNIT

- Receive report of facility GI outbreak.
- Follow-up initially with facility to review situation e.g. outbreak definition being met, clinical pattern is consistent with suspect viral cause, collection of lab specimens has been initiated, outbreak control measures are in place, and PHSA labs has been notified.
- Notify MHO and IH Health Protection (Licensing and Environmental Health)

INFECTION CONTROL PRACTITIONERS (ICP)

- Provides support to facility to ensure appropriate precautions in place
- Provides outbreak education

NURSING STAFF

- Put immediate early infection control measures into place, these measures should be maintained until the outbreak is over.
- Maintain daily surveillance for new GI illness cases for both residents and staff.

ALL EMPLOYEES

- Report any symptoms of GI illness to their supervisor.

G. Collection and Transportation of Specimens

Stool and/or vomitus specimens should be obtained from residents/patients who meet case definition as soon as possible (within 3 days of onset of symptoms). PHSA labs will test specimens related to the GI outbreak until they have two confirmed viral samples (e.g. norovirus). If the outbreak is not related to a viral GI then PHSA labs will continue to test specimens as determined on a case by case basis.

COLLECTION OF SPECIMENS:

Specimens for a GI Outbreak are to be sent to the PHSA Laboratory for analysis.

- Use specimen vials ordered from PHSA Laboratory using the Sample Container Order Form.
- Ensure that a supply of specimen containers is kept on hand as delivery of kits takes approximately two weeks.
- Instructions for specimen collection are located on the bottom of the Gastrointestinal Disease Outbreak Requisition.
- Follow instructions on page 2 of the PHSA Gastrointestinal Disease Outbreak Notification Form to create outbreak identification number for your facility.
- Collect specimens (maximum of six).
• Contact your local lab regarding shipping or courier specimens direct to BCCDC.

Ensure:

• Each container is labeled with resident’s name
• A completed lab requisition form is included for each sample
• The Facility Outbreak Identification Number* is written on each lab requisition form.  
  *Facilities determine their own outbreak identification number.
• A copy of the completed PHSA Gastrointestinal Disease Outbreak Notification Form is sent with the specimens
• IH CD Unit is entered in the Copy Report to Field on the requisition form.

It is more likely that a viral organism will be identified if the:

• Sample is taken early in symptom onset
• Sample is delivered to lab the same day as collection (or next morning if collected late in the day).  PHSA lab should receive the sample within 3 days of collection.

Note:  If clinical picture does not fit with viral GI illness, samples may be collected for Ova & Parasite investigation.  A RED capped bottle with clear SAF fixative* is required for Ova & Parasite testing.

  *These are no longer provided in outbreak kits and must be ordered separately.

Transport of Specimens:

1. Prior to sending specimens, complete PHSA Gastrointestinal Disease Outbreak Notification Form and fax to (604) 707-2607.
2. Review the PHSA Laboratory Transport of specimens flow chart (p.24)
3. Make sure specimen containers are closed tightly and properly labeled.
4. Place the specimen in a biohazard bag and seal the bag.
5. Complete all sections of the PHSA Gastrointestinal Disease Outbreak Requisition for each specimen and place in the outside pocket of the plastic bag.  If samples are to be stored overnight, keep refrigerated at 4°C.  Do not freeze.
   
   Note:  Some bacteria are more fragile and thus it is appropriate to keep feces samples at 15-18°C.  Viruses are not as temperature sensitive so can be refrigerated.  If a bacterial organism is suspected keep samples at 15-18°C.  Samples should be delivered within 3 days of collection.
6. Ship specimens and requisitions via local lab (if agreement in place) or direct by courier to:
   
   BCCDC Shipping & Receiving
   655 West 12th Avenue
   Vancouver, BC
   V5Z 4R4
III. OUTBREAK MANAGEMENT

A. Implement Precautions

1. Risk Assessment

   - Must be done for any interaction between the healthcare worker and patients/residents and the environment.
   - Assess the patient/resident’s symptoms and cognitive ability, type of interaction that will occur, PPE required, and the potential for contamination of equipment of the environment.
   - A risk assessment would include:
     - Potential exposure to body fluids (i.e. active vomiting, explosive diarrhea)
     - Exposure to large deposits of body fluids (vomit, feces) on environmental surfaces
     - Patient/resident’s continence level and ability to comply with instructions

2. Routine Practices

   - Hand hygiene is the most effective way to prevent transmission of micro-organisms. Use soap and warm water for hand hygiene. Alcohol based hand rub (ABHR) can be used if hands are not visibly soiled.
   - Assist patients with hand hygiene, particularly after toileting, before meals, and before handling food.
   - Remind visitors to do hand hygiene upon arrival to facility and when leaving resident’s room.

3. Additional Precautions

   - Use Droplet/Contact precautions. Transmission through aerosolization of infectious material has been suggested, so persons who clean areas grossly contaminated by feces or vomitus should wear a surgical mask.
   - Patients/residents and their visitors should be educated on additional precautions being used.
   - Healthcare workers should have quick and easy access to the personal protective equipment (PPE) and cleaning products required when providing care.

4. Personal Protective Equipment

   - **Gloves**: wear to provide direct care and when in contact with the ill patient’s environment and contaminated equipment. Gloves must be changed between contact with different residents and hands should be washed before and after gloves are used.
   - **Gowns**: Must be worn when providing direct care and when in contact with the ill patient’s environment and contaminated equipment. Gowns must be changed between residents or if wet, soiled or contaminated with vomit/feces.
   - **Masks/Eye Protection**: Surgical mask with eye protection/face shield to protect mucus membranes from exposure to viral particles when assisting someone who is actively...
vomiting, has explosive uncontained diarrhea, or when cleaning an area grossly contaminated with vomitus or feces.

**Note:** PPE must be removed upon completion of task and hand hygiene must be done.

5. **Placement of Resident/Patient**

**Acute Care:**

- Place patient in a single room with a toilet and sink. When single rooms are not available, cohort patients with similar symptoms and dedicate toileting facilities e.g. patient specific commodes kept at the patient's bedside. Avoid placing a patient with GI symptoms in the same room as a patient who is at high risk for complications (e.g. immune compromised, recent surgery, etc…)
- Limit movements of symptomatic patients. Patients are to stay in their rooms unless required to leave for medically necessary procedures.
- Patient must remain on Droplet/Contact precautions until they have been asymptomatic for 48 hours.

**Residential Care:**

- Ill residents should stay in their rooms as much as possible until asymptomatic for 48 hours. Serve the resident their meals in their room.
  - Confinement of residents even for a few days could have adverse effects on their well-being. It is important not to socially isolate residents and to keep the period of confinement to a minimum.
- Consider decreasing or discontinuing group activities. Limiting activities to restrict movement of residents between units and floors may be an option.
- Residents who are not ill may attend other facilities for medically necessary appointments. Notify the receiving facility and transportation services that an outbreak is in progress.
- If residents require hospitalization, notify the receiving facility and transportation services that an outbreak is in progress.
- Keep well residents away from affected floors/wings/areas where the outbreak is occurring.

6. **Restriction of Units**

- In multi-bed rooms, transfer of well residents into an ill resident's room should not occur.
- In multi-wing units, no transfer of residents/patients should occur between wings with ill residents/patients and wings with well residents/patients.
- If wings/units can be separated/closed from one other by doors and staffing is separate, then wings/units with ill patients should be closed to admissions and transfers, and wings with no illness can remain open.
- Transfers of patients/residents from acute care to residential care sites should be evaluated on an individual basis by the Medical Health Officer.
7. Staff

- Any staff with symptoms that suggest infection should be excluded from work while ill and **until at least 48 hours after resolution of symptoms** regardless if they feel well enough to work. Staff should be vigilant in self-assessment of symptoms, particularly those working in multiple sites.
- Managers should report staff illness to the CD Unit using the [IH RI and GI Outbreak Report Form](#).
- When possible it is advisable to have the same staff person caring for those who are ill to limit staff exposure. Since some individuals acquire short term immunity following illness, staff members who return to work after becoming ill with GI symptoms should also be assigned to ill patients whenever possible.
- Staff (including casuals) from an affected facility may work at another facility if they are well and maintain strict personal hygiene at all times.
- Staff must maintain strict adherence to hand hygiene practices and appropriate use of PPE.

8. Visitors and Volunteers

- In the event of an outbreak, it is recommended that a sign be posted to notify persons entering the building. A sample sign is included in [Appendix 3](#).
- It is strongly recommended that visiting should be restricted during the outbreak. Visitors should limit their visiting to their family member/friend.
- Anyone visiting the facility should be notified to wash their hands upon arrival and leaving the facility. Hand hygiene stations should be available at entrances where possible.
- Advise visitors and volunteers to not visit the facility if they are feeling ill.

9. Food Services

- Wash all dishes, utensils and trays in hot water and detergent (minimum of 74°C for 10 seconds). Be careful not to cross-contaminate dirty and clean dishes.
- See below for recommendations on cleaning vomit and fecal accidents in food prep areas and dining rooms.

10. Cleaning

Note: If outbreak is related to a bacterial GI illness these recommendations may change. Please refer to your facility’s disinfectant policy.

- Areas contaminated with vomit or feces must be cleaned and disinfected immediately to minimize the risk of infection.
- Increase cleaning frequency of high touch areas including bed rails, call bell cords, phones, bathroom surfaces (taps, toilet handle), door knobs, light switches, hand rails,
elevator buttons, tables, counter tops, nourishment areas (fridges, ice machines, cupboard handles), and nurse’s station.

- Change general disinfectant to solution that is effective against norovirus such as a 0.5% Accelerated Hydrogen Peroxide product or a 1000 ppm bleach solution. See below for solution preparation.

**Recommended Disinfectants:**

**Hypochlorite (Bleach) Solution**
1000 ppm bleach solution is made by adding:
- 1 part of household bleach (5.25% hypochlorite) to 50 parts water
  [i.e. 4 tsp (20 ml) household (5.25%) bleach to 4 cups (1000 ml) water]

*Note:* Hypochlorite at higher concentrations is corrosive and may bleach fabrics. This concentration of bleach is the minimum recommended level known to be effective against viral gastrointestinal illness agents.

**0.5% Accelerated Hydrogen Peroxide Solution**
A 0.5% accelerated hydrogen peroxide solution is effective against the feline calicivirus. This virus is used as a surrogate for Norovirus as these viruses cannot currently be cultured in the laboratory. The 0.5% accelerated hydrogen peroxide solution should be used as recommended in the product use and safety information. A minimum contact time of 5 minutes is necessary for effectiveness against gastrointestinal viruses.

**Cleaning Vomit and Feces**

When cleaning vomit and feces:
- Wear appropriate personal protective equipment including disposable vinyl gloves, a procedure mask and a plastic disposable apron or water-resistant gown.
- Use paper towels or equivalent to soak up excess liquid. Transfer these and any solid matter directly into a plastic garbage bag.
- Clean the soiled area with detergent and water, using a “single-use” cloth. Do not dip cleaning cloth into cleaning solution more than once.
- Prepare the recommended disinfectant solution. Follow the manufacturer’s instructions regarding preparation, dilution and contact time required to be effective.
- After cleaning, disinfect the area to a radius of 2 metres.
  *Note: Ensure the area is very well ventilated.*
- Deposit used disposable gloves, masks and aprons into a garbage bag and re-usable aprons/gowns into laundry bag after cleaning the area of the vomit and/or fecal incident.
- Wash hands thoroughly using soap and warm running water for at least 30 seconds.

**Cleaning up vomit in food preparation areas and dining rooms:**
- Follow process above for cleaning vomit and feces. Disinfect the area to a radius of 2 metres.
- Dispose of any food that has been handled by the ill person since symptom onset, or been present within 2 meters of a vomiting incident.
Wash all dishes, utensils and trays in a commercial dishwasher – with hot water rinse of at least 82°C or a chemical sanitizer rinse. Be careful not to cross-contaminate dirty and clean dishes.

**Treatment of Specific Materials**

- Soft furnishings or cloth-covered mattresses should be thoroughly cleaned with detergent and hot water. For disinfection they can be placed outdoors in the sun for several hours if conditions permit or if this is not feasible, they should be steam cleaned at a minimum temperature of 60°C (which is strongly recommended) or disinfected with 1:50 bleach (if bleach-resistant) or 0.5% accelerated hydrogen peroxide (in accordance with product information).

- Contaminated carpets should be cleaned with detergent and hot water then disinfected with bleach (if bleach-resistant), or 0.5% accelerated hydrogen peroxide (in accordance with product information), or steam cleaned using water at a minimum of 60°C.

**B. Declaring Outbreak Over**

1. Outbreak control measures can be lifted after 96 hours (two incubation periods) have passed without any new cases occurring in the facility. (For staff cases, this would include only those cases where the staff member was ill at work.)

2. Confirm resident/patient and staff case numbers then complete Section C of the [IH RI and GI Outbreak Report Form](#) and fax to the CD Unit at 1-250-549-6310 or email to CDUnit@interiorhealth.ca

3. Infection Control Practitioners will facilitate a debriefing for Interior Health facilities following the conclusion of an outbreak to evaluate the outbreak management process, identify interventions that worked well and opportunities for improvement.
IV. REFERENCES

BC Centre for Disease Control. (2002). BCCDC Laboratory Services, A guide to the laboratory investigation of gastrointestinal disease outbreaks.


Interior Health GI Outbreak Quick Reference Worksheet
APPENDIX 1- GI Surveillance Tool

Gastrointestinal Illness (GI) Surveillance Tool

<table>
<thead>
<tr>
<th>Facility:</th>
<th>Facility phone #:</th>
<th>Facility fax #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outbreak location:</td>
<td># of beds in outbreak location:</td>
<td>Total # of staff in outbreak location:</td>
</tr>
<tr>
<td>Reporting Contact:</td>
<td>Contact phone #:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of Illness Onset (d/m/yyyy)</th>
<th>Date of Illness Recovery (d/m/yyyy)</th>
<th>Name (Last, First)</th>
<th>Room/Location</th>
<th>Specimen obtained (d/m/yyyy)</th>
<th>Specimen Results</th>
<th>Diarrhea</th>
<th>Vomiting</th>
<th>Nausea</th>
<th>Headache</th>
<th>Fever</th>
<th>Abdominal Pain</th>
<th>Case Y/N</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-Mar-14</td>
<td></td>
<td>illness, Gastro</td>
<td>63</td>
<td>27-Mar-14</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>37.5</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 2 – RI and GI Outbreak Report Form

The fillable RI and GI Outbreak Report Form can be accessed here.

<table>
<thead>
<tr>
<th>Type of Outbreak</th>
<th>GI (Gastrointestinal Infection)</th>
<th>RI (Respiratory Infection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Name of Person Reporting</td>
<td>Contact Phone</td>
</tr>
<tr>
<td>Facility name</td>
<td>City/Town</td>
<td></td>
</tr>
<tr>
<td>Facility Phone</td>
<td>Facility Fax</td>
<td>Total Number of beds in Outbreak Facility</td>
</tr>
</tbody>
</table>

**If the outbreak can be contained or limited to a ward, community or cottage, please complete the Outbreak Location information below.**

<table>
<thead>
<tr>
<th>Outbreak Location</th>
<th>Number of Beds in Outbreak Location</th>
</tr>
</thead>
</table>

* If completing the form electronically, save a copy of the form so that the information does not have to be entered each time.
** If not completing the form electronically, make copies of the initial documents submitted so the information does not have to be entered each time.

Please complete and email to edunit@interiorhealth.ca or fax to 250-549-6310

Send a copy to the Infection Control Practitioner for your site (if one is assigned)

Section A: Initial Reporting Information (To be completed only the FIRST time the outbreak is reported)

<table>
<thead>
<tr>
<th>Onset Date of First Case (dd/mm/yyyy)</th>
<th>Date Outbreak Declared (dd/mm/yyyy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number (n) of cases on the day the outbreak is declared</td>
<td></td>
</tr>
<tr>
<td>Total number (n) of people living or working in outbreak location</td>
<td></td>
</tr>
</tbody>
</table>

Typical Symptoms (check all that apply):

GI Symptoms:  
- diarrhea  
- vomiting  
- abdominal pain  
- nausea  
- headache  
- fever > 38°C or abnormal temperature

RI Symptoms:  
- new or worsening cough  
- fever > 38°C or abnormal temperature  
- runny nose  
- sore throat  
- headache  
- fatigue  
- muscle or joint pain

Section B: Daily Outbreak Report (To be submitted DAILY during the outbreak)

<table>
<thead>
<tr>
<th>Date of onset for most recent case (dd/mm/yyyy)</th>
<th>Patients/Residents</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number (n) of new cases in the last 24 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number (n) of cases previously identified as a case, but were misidentified and REMOVED from the total in the last 24 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number (n) of cases previously ill that were NOT identified and have been ADDED to the total in the last 24 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL NUMBER (n) OF CASES TO DATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL NUMBER (n) OF VACANT BEDS (Vacant and unable to admit due to outbreak measures)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section C: Outbreak Declared Over (To be completed ONLY on the day the outbreak is declared over)

Only the MHO or CD Unit can declare an RI outbreak over when criteria is met as outlined by the RI Outbreak Guidelines.

The facility/ICP declares a GI outbreak over when 96 hours have passed without any new cases.

<table>
<thead>
<tr>
<th>Date of Onset for Most Recent Case in Facility (dd/mm/yyyy)</th>
<th>Date Outbreak Declared Over: (dd/mm/yyyy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number (n) of Cases</td>
<td>Patients/Residents</td>
</tr>
</tbody>
</table>

Number (n) of cases hospitalized > 3 days due to symptoms | Number (n) of deaths directly attributed to the outbreak |
Definitions

Respiratory Infection (RI) Outbreak
Two or more cases of Respiratory Infection occurring in a unit/facility area within a seven-day period amongst staff and/or residents.

Case of Respiratory Infection
New or worsening cough and fever greater than 38°C, or a temperature that is abnormal for that individual.
(Temperature of < 35.6°C, or > 37.4°C in the elderly may be an indication of infection)
Additional symptoms may include myalgia / arthralgia, extreme fatigue, runny nose, sore throat, headache

Gastrointestinal (GI) Infection Outbreak
Three or more cases of GI infection within the same setting (e.g. unit, ward, wing, facility) in a four-day period.

Case of Gastrointestinal (GI) Infection
Any one of the following conditions that cannot be attributed to another cause:
(e.g. laxative use, medication side effect, change in diet, or prior medical condition)
- Two or more episodes of diarrhea in a 24-hour period (above what is considered normal for that individual)
  - Two or more episodes of vomiting in a 24-hour period
  - One episode of vomiting and diarrhea in a 24-hour period
  - Positive culture for a known enteric pathogen with a symptom of GI infection
    (e.g. vomiting, abdominal pain, diarrhea)
  - One episode of bloody diarrhea

Instructions for completing the RI and GI Outbreak Report Form

- Include the Date, Type of Outbreak, Facility Name & City, Name of Person Reporting and contact information at the top of the form each day the form is sent to the CD Unit.
  (If not completing this form electronically, make copies of the initial document submitted so the information does not have to be re-entered each time.)
- Complete Outbreak Location and Number of Beds in Outbreak Location. If the outbreak is limited to a ward, unit or cottage please indicate the number of beds affected in the ward, unit or cottage.
- Send the form to the CD Unit (email the form to cdunit@interiorhealth.ca or fax to 250-549-6310). Forward a copy to the Infection Control Practitioner for your site (if one is assigned).

Section A: Reporting Information (to be completed ONLY on the day Outbreak is declared)
- Complete Onset Date of First Case (Date first case developed symptoms)
- Complete Date Outbreak Declared
- Complete Total Number of cases on the day Outbreak declared for both patients/residents and staff
- Complete Total Number of people living / working in Outbreak Location for both patients/residents and staff. (This may be different than the ‘number of beds’ due to empty beds. This information is useful in tracking numbers of bed closures due to outbreaks)
- Complete Typical Symptoms. Select either GI or RI symptoms – identify symptoms of cases

Section B: Daily Outbreak Update (to be completed DAILY)
- Complete this section daily during the outbreak and forward to the CD Unit and your ICP (if facility is assigned one)
- Complete Date of Onset of Most Recent Case, Number of New Cases in last 24 hours, and Total Number of Cases to Date. If there are no new cases, please write “0”.
- If you have removed or added cases to the Total Number of Cases To Date that were not new in the last 24 hours, please complete the sections for Number of Cases Removed in last 24 hours and Number of Cases Added in last 24 hours.
- Indicate the number of vacant beds in the outbreak location that are unfilled and unable to take admissions due to outbreak measures

Section C: Outbreak Declared Over (to be completed ONLY on the day the Outbreak is declared over)
The MHO or CDU is responsible for declaring an RI outbreak over when criteria are met as outlined by the RI Outbreak Guidelines for Scenarios A and B. For Scenario C outbreaks, the facility can self-declare over 4 days after last case onset. The facility declares a GI outbreak over when 96 hours have passed without any new cases.
- Provide the date of onset for the most recent case of illness
- Provide the date that the Outbreak is being declared over
- Provide the total number of cases for patients/residents and staff
- Provide the number of cases hospitalized (> 12 hours due to symptoms) and the number of deaths directly attributed to the outbreak
APPENDIX 3 - Sample Notification of Signage

STOP

We are experiencing an outbreak
You may wish to reconsider visiting at this time

**Visitors**
Please **Do Not** Visit
If You Are Ill
### APPENDIX 4 - Gastrointestinal Illness Common Agents

<table>
<thead>
<tr>
<th>Agent</th>
<th>Reservoir</th>
<th>Incubation Period</th>
<th>Symptoms</th>
<th>Duration of Symptoms</th>
<th>Period of Communicability</th>
<th>Transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcivirus such as Norwalk Agent (NLV), Norovirus and Small Round Structured Virus</td>
<td>Humans are the only known reservoir</td>
<td>12-48 hours</td>
<td>Self limited mild to moderate disease, vomiting and diarrhea</td>
<td>24-48 hours</td>
<td>During acute symptoms and up to 48 hours after symptoms resolve</td>
<td>Fecal/oral vomitus/oral, possible droplet or fomite</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>Probably humans</td>
<td>24-48 hours</td>
<td>Abrupt onset of vomiting and diarrhea and rapid dehydration, low grade fever</td>
<td>4-6 days</td>
<td>During acute symptoms, not usually after 8 days post infection</td>
<td>Fecal/oral vomitus/oral, possible droplet or fomite</td>
</tr>
<tr>
<td>Adenovirus</td>
<td>Humans</td>
<td>5-8 days</td>
<td>Abrupt onset of vomiting and diarrhea and rapid dehydration, low grade fever</td>
<td>4-6 days</td>
<td>During acute symptoms and up to 14 days after onset</td>
<td>Fecal/oral vomitus/oral, possible droplet or fomite</td>
</tr>
<tr>
<td>Campylobacter species</td>
<td>Animals, mostly raw poultry; pets</td>
<td>2-5 days</td>
<td>Diarrhea, abdominal pain, malaise, fever, nausea and vomiting</td>
<td>2-5 days</td>
<td>Throughout infection, from several days to weeks if not treated</td>
<td>Mainly undercooked chicken; contact with infected pets</td>
</tr>
<tr>
<td>C. perfringens</td>
<td>Soil; Int tract of healthy people and animals</td>
<td>10-12 hours</td>
<td>Mild disease of short duration; sudden onset abdominal cramping and diarrhea; vomiting and fever usually absent</td>
<td>1 day or less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agent</td>
<td>Reservoir</td>
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</tr>
<tr>
<td><em>E. coli</em> 0157:H7</td>
<td>Cattle and humans</td>
<td>2-8 days</td>
<td>Range from mild non-bloody diarrhea to stools that are virtually all blood. Haemolytic uremic syndrome in 2-7% of cases</td>
<td>Typically less than a week</td>
<td>Throughout course of infection; a carrier state can occur for months</td>
<td>Ingestion of contaminated food</td>
</tr>
<tr>
<td>Salmonella</td>
<td>Domestic and wild animals and humans</td>
<td>6-72 hours S. typhi 5-28 days</td>
<td>Sudden onset headache, abdominal pain, diarrhea, nausea and sometimes vomiting. Usually fever</td>
<td>Several days to several weeks</td>
<td>Throughout course of infection; a carrier state can occur for months</td>
<td>Ingestion of contaminated food</td>
</tr>
<tr>
<td>Shigella Species</td>
<td>Humans</td>
<td>1-3 days</td>
<td>Diarrhea accompanied by fever, vomiting and cramps. Usually self limiting</td>
<td>4-7 days</td>
<td>During acute symptoms and up to 4 weeks after illness</td>
<td>Direct or indirect fecal/oral transmission</td>
</tr>
<tr>
<td><em>S. Aureus</em> (enterotoxigenic)</td>
<td>Humans</td>
<td>Usually 1-7 hours</td>
<td>Abrupt onset nausea, cramps, vomiting and sometimes diarrhea</td>
<td>1-2 days</td>
<td>N/A</td>
<td>Ingestion of food containing staphylococcal enterotoxin; usually foods handled without subsequent cooking</td>
</tr>
<tr>
<td><em>C. difficle</em></td>
<td>humans</td>
<td>maybe days or weeks following antibiotic treatment</td>
<td>abrupt onset, nausea, watery diarrhea that contains mucous, fever, abdominal pain</td>
<td>varies</td>
<td>until diarrhea subsides</td>
<td>via hands of health care personnel in contact with contaminated feces or surfaces</td>
</tr>
</tbody>
</table>