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Enteric Outbreak Resource Manual

Health Protection & Investigation
Region of Waterloo Public Health & Emergency
Services



Region of Waterloo
PUBLIC HEALTH AND
EMERGENCY SERVICES

Enteric Outbreak Resource Manual

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Purpose of the Manual

This Enteric Outbreak Resource Manual was created by Region of Waterloo Public Health. The purpose of this manual is to provide supplemental information to complement the Ministry of Health and Long Term Care document [Control of Gastroenteritis Outbreaks in Long-Term Care Homes, 2018](#) and consolidate best practice information from other provincial agencies. This manual, when used in combination with the Control of Gastroenteritis Outbreaks in Long-Term Care Homes guide, will facilitate the prevention, identification and management of gastroenteritis illness and outbreaks in hospitals, long-term care homes, retirement homes and other residential facilities located within the Region of Waterloo.

The information contained in this document has been derived from several resources including:

[MOHLTC, Ontario Public Health Standards \(OPHS\)](#)
[Public Health Ontario, Provincial Infectious Diseases Advisory Committee \(PIDAC\)](#)

Acronyms

DOC/ADOC – Director/Associate Director of Care

HCW – Health Care Worker

HPI – Health Protection and Investigation

ICP – Infection Control Professional

IPAC – Infection Prevention and Control

MOH – Medical Officer of Health

MOHLTC – Ministry of Health and Long Term Care

OMT – Outbreak Management Team

PHO – Public Health Ontario

PPE – Personal Protective Equipment

PIDAC – Provincial Infectious Disease Advisory Committee

ROWPH – Region of Waterloo Public Health

SHEA – Society for Healthcare Epidemiology of America

WWICN – Waterloo-Wellington Infection Control Network

Contact Information

For more information and consultation with Region of Waterloo Public Health (ROWPH):

Phone numbers:

Monday to Friday 8:30 a.m. to 4:30 p.m. and after hours
Service First Call Centre 519-575-4400 (TTY 519-575-4608)

Fax numbers (for Outbreak Line List):

Waterloo Office: 519-883-2226
Cambridge Office: 519-622-1235

Website

www.regionofwaterloo.ca/ph

1. Doing Business (drop down menu)
2. Health Standards for Business (drop down menu)
3. Long Term Care Facilities
4. See Additional Resources for Enteric Outbreak Manual, tools, links, and forms

The screenshot shows the top navigation bar of the Region of Waterloo website. The 'Doing Business' dropdown menu is open, showing 'Health Standards for Business' and 'Long-Term Care Facilities' as sub-items. A red circle highlights 'Additional resources' at the bottom of the page, with an arrow pointing to it from the 'Long-Term Care Facilities' menu item. Below this, a list of links is provided:

- [Enteric Outbreak Resource Manual](#)
- [Gastroenteritis, Institutional Outbreaks, Appendix A](#)
- [Gastroenteritis, Institutional Outbreaks, Appendix B](#)
- [How to wash your hands](#)
- [Handwashing sign](#)
- [Norovirus Facts](#)
- [Provincial Infectious Diseases Advisory Committee \(PIDAC\) Best Practice Documents](#)

Outbreak Preparedness

Policy review, staff education, disease surveillance and outbreak prevention and control measures require planning and preparation before enteric outbreaks occur. The following Enteric Outbreak Preparedness Checklist will assist facilities in organizing outbreak prevention and control activities in preparation for an enteric outbreak.

Enteric Outbreak Preparedness Checklist

Intervention	Facility Checklist	Date/Initial
SPRING March to June		
Ensure healthy workplace policies and procedures are up-to-date	Review enteric outbreak policy and procedures including: <ul style="list-style-type: none"> o Staff exclusion policies (i.e. health care, food service, recreation, housekeeping, and laundry workers including volunteers) o Environmental cleaning and sanitation o Additional precautions (contact and droplet precautions) o Collection of stool specimens o Collection of food samples o Routine practices and hand hygiene o Enteric disease surveillance 	
Education	Attend annual Public Health Spring IPAC Forum	
Surveillance	Continue routine surveillance for enteric symptoms	
SUMMER June to September		
Communication	Plan communication strategy to inform staff, patients/residents, visitors and community leaders in case an enteric outbreak should occur	
Equipment and Signage	Ensure equipment is accessible, available and checked for expiry date: <ul style="list-style-type: none"> o Enteric lab kits o PPE (gloves, gowns, masks, eye protection) o Alcohol based rub (verify 70-90% alcohol content) o Disinfectants (verify efficacy against Norovirus) 	
	<ul style="list-style-type: none"> o Ensure that proper signage is available (See PHO website for sample signage) o Outbreak notification sign o Contact precaution sign o Droplet contact precaution sign 	
	Communicate to staff the location of PPE and lab kits	
Education	Perform/arrange IPAC education sessions/in-service workshops for staff, residents and volunteers	
Surveillance	Continue routine surveillance for enteric symptoms	
FALL September to December		
Education	Attend annual Public Health Fall IPAC Forum	
Equipment	Ensure that adequate quantities of PPE and enteric stool kits are available	
Surveillance	Consider outbreak status of other facilities if staff and residents are attending other facilities Conduct targeted active surveillance for enteric symptoms of residents and staff	
Auditing	Conduct hand hygiene, donning and doffing PPE and environmental cleaning audits	
WINTER		
Surveillance	Consider outbreak status of other facilities if staff and residents are attending other facilities Conduct targeted active surveillance for enteric symptoms of residents and staff	
Auditing	Conduct hand hygiene, donning and doffing PPE and environmental cleaning audits	

Surveillance, Identification and Reporting

Surveillance systems are the key to early recognition of disease and outbreak detection. ROWPH recommends the following components as a part of an effective enteric disease surveillance program:

1. Routinely monitor staff and residents for the following symptoms of disease:
 - Nausea, vomiting, abdominal pain, loose/watery bowel movement that conforms to the shape of the container and cannot be attributed to another cause (e.g., laxative use, known medication side effects, diet or prior medical conditions).

Different pathogens may cause similar acute enteric symptoms. Refer to [Appendix A: Common Pathogens of Enteric Outbreaks](#) to understand common viral, bacterial, and parasitic causes of enteric outbreaks.

Note: Legionella bacteria (Legionnaire's Disease or Pontiac Fever) may cause an outbreak that is similar to both an enteric and respiratory outbreak.

2. Record disease surveillance data (electronic or paper). See [Appendix B: Sample surveillance sheet](#).
3. Review surveillance data on a continuous basis to identify disease clusters and outbreaks (i.e., increases above baseline levels) in staff and/or residents.
4. Report any potential illness identified to the facility infection control lead.
5. Initiate an outbreak line list when illness is identified.
6. Contact ROWPH whenever there is an unexplained increase in enteric staff/resident illness.

Reporting to Region of Waterloo Public Health (519-575-4400)

Whenever there are **two** suspected cases of infectious gastroenteritis in a specific area within 48 hours, contact Region of Waterloo Public Health at 519-575-4400. An outbreak should be suspected and specimen collection initiated to determine the causative pathogens.

Early reporting of suspected outbreaks and prompt implementation of outbreak control measures are important to prevent further disease transmission in the facility.

Note: All gastroenteritis outbreaks in institutions are reportable regardless of whether they are caused by:

- A reportable agent*
- A non-reportable agent or
- An unknown cause

*Reportable disease agents are specified in [Ontario Regulation 135/18, Designation of Diseases](#) and are outlined in [Appendix C: Reportable Disease List](#).

For reporting requirements for selected pathogens or conditions associated with gastroenteritis outbreaks, see [MOHLTC, Control of Gastroenteritis Outbreaks in Long-Term Care Homes – Appendix 2](#).

Case and Outbreak Definitions

Infectious Gastroenteritis Case:

To be defined as a case of infectious gastroenteritis, **at least one** of the following must be met:

- Two or more episodes of diarrhea or watery stool (takes the form of its container) within a 24-hour period, or two or more episodes of vomiting within a 24-hour period

OR

- One episode of diarrhea or watery stool (takes the form of its container) and one episode of vomiting within a 24-hour period

OR

- Laboratory confirmation of a known gastrointestinal pathogen and at least one symptom compatible with gastrointestinal infection (e.g., nausea, vomiting, diarrhea, abdominal pain or tenderness)

Gastroenteritis Outbreak (Confirmed):

- **Two or more cases** meeting the case definition with a common epidemiological link (e.g., specific unit or floor, same caregiver) with initial onset within a 48-hour period.

Gastroenteritis Outbreak (Suspected):

- If an outbreak is suspected, notify the local board of health to support with the investigation and management.

The Outbreak Prevention and Management Team

Successful prevention and management of an enteric outbreak requires a team effort and the following table outlines the suggested roles and responsibilities of your staff and the Public Health department.

Outbreak Prevention and Management Roles and Responsibilities Action Table

Action	Responsibility
Ensures that enteric outbreak prevention measures are in place such as routine practices and additional precautions. Identifies suspected outbreaks. Communicates with Public Health and reviews appropriate resources when an outbreak is suspected.	Infection Control Practitioner (ICP), Facility Administrator, Charge Nurse/Registered Nurse
Confirms that cases meet case definition for infectious gastroenteritis outbreak detection. Initiates a separate line listing for residents and staff presenting with enteric symptoms. Declares the outbreak and verifies nature and extent. Forms a hypothesis as to the source and mode of transmission.	ICP, Facility Administrator (DOC), Charge Nurse/RN, Public Health department
Assembles an Outbreak Prevention and Management Team (OMT) with representatives from Public Health and each department. Makes decisions and oversees all aspects of the outbreak to prevent outbreak from spreading. Verifies what outbreak measures have been implemented and on what date. Provides additional recommendations, as appropriate, for infection control measures.	OPMT: DOC, ICP, RN/ Nursing Representative, Maintenance/Environmental Manager, Dietary Manager, Activity Coordinator, Facility Administrator, Public Health department
Reports outbreak to appropriate external agencies.	ICP, RN, Facility Administrator/ DOC
Implements all outbreak control measures. Ensures enough supplies are available for health care providers use and environmental cleaning (e.g. gloves, gowns, cleaning agents and disinfectant). Provides advice on activity restrictions, admissions, and transfer limitations.	ICP, DOC, Health Care Professionals, Personal Support Worker (PSW), RN, Maintenance/Environmental Services Managers and staff, Public Health department
Maintains up-to-date line listings for all active cases. Communicates pertinent events and faxes the line listing daily to the Public Health department. If necessary, provides media with information which can be used for public announcements.	ICP, DOC, Facility Administrator, Media Communications Coordinator, Public Health department

Action	Responsibility
Coordinates, collects and sends appropriate specimens to public health laboratory.	ICP, PSW, RN, Dietary Manager (if food borne), Public Health department
Coordinates on-going surveillance during outbreak e.g. audits on hand hygiene, PPE use and environmental cleaning.	ICP, OMT
Educates patients/residents/clients, visitors, staff, and volunteers on hand hygiene, use of PPE, and promotes outbreak control strategies.	ICP, Charge Nurse
Schedules a final Outbreak Management Team debrief meeting to evaluate the response to the outbreak that has been declared over. Completes an outbreak report for internal and external reporting. Makes recommendations to prevent future outbreaks and/or shorten their duration.	OMT, Public Health department

In addition to the assigned roles and responsibilities provided in the action table, the following checklists outline the responsibilities of your facility and those of ROWPH:

Facility Responsibilities

- ✓ Assign a designated ROWPH contact and a back up.
 - Weekend/holiday outbreak coverage – notify ROWPH as to who the designate is and ensure consistent coverage, accurate info needed (i.e. Up-to-date line listings).
- ✓ Ensure communication between internal departments, including HCW's, food service, housekeeping and maintenance workers.
- ✓ Collect stool or other samples as directed by ROWPH.
 - Fill vials in this order: white cap/empty vial first, then green cap/pink fixative vial. Mix contents and stool well.
- ✓ Communicate any new cases or other pertinent events to ROWPH.
- ✓ Maintain an up to date line listings of active cases (separate lists for staff and residents).
- ✓ Fax the line listing daily to the attention of the Public Health Inspector.

Region of Waterloo Public Health Responsibilities

- ✓ Ensure transport of specimens to Public Health Ontario Lab and supply stool collection kits to the facility.
- ✓ Provide recommendations on outbreak management.
- ✓ Provide information on outbreak pathogens as necessary to staff, families, visitors, volunteers, etc.

- ✓ Report results from Public Health Ontario Lab.
- ✓ Conduct an inspection.

Enteric Outbreak Management Measures

Enteric pathogens are shed in the feces and spread person-to-person, through contact with contaminated surfaces or consumption of contaminated food/water. Norovirus may also spread via vomitus droplets that enter the oral mucosa or eye mucosa of a person if they are within two meters of an infected person during an active symptom episode.

Many enteric pathogens (bacterial and viral) remain viable (alive and able to produce infection) when the droplets settle on an object or surface. Viruses such as Norovirus, Rotavirus, Hepatitis A and others survive for extended periods of time on surfaces, and can be picked up on the hands of other residents or staff. The virus can then be ingested by a person if they touch their mouth or they touch a food/beverage that is then consumed (also known as fecal-oral route).

When an outbreak is declared, or if an outbreak is suspected, the following generic enteric control measures are recommended, as a minimum:

Personal Protective Equipment (PPE) and Hand Hygiene

Personal protective equipment is to be used correctly by staff and visitors where appropriate based on a risk assessment. For information about the risk assessment, see [PIDAC, Routine Practices and Additional Precautions in All Health Care Settings](#) and [PHO, Risk Algorithm to Guide PPE Use](#).

- ✓ Routine practices to be followed for all interactions with patients/residents. Sample routine practices fact sheet for all health care settings is available at [Public Health Ontario, Routine Practices Fact Sheet for All Health Care Settings](#).
 - Hand Hygiene: Supplement hand washing with the use of alcohol-based hand rub. Provide HCW's working on outbreak units with pocket-size alcohol-based hand rub (70% to 90% alcohol content). For more information about hand hygiene and hand hygiene products, see [PIDAC, Best Practices for Hand Hygiene for All Health Care Settings](#).
- ✓ Contact precautions (and droplet precautions if exposure to vomitus is anticipated) to be followed when contact with environment or an ill person. Signage to be posted at the entrance to the room for all outbreak cases. Sample precaution signage for acute care and non-acute care settings are available at [Public Health Ontario, Infection Prevention and Control – Additional Precautions Signage and Lanyard Cards](#).
 - Masking: Use when at risk of exposure to vomitus.

- Gowning: Use when providing direct care to a symptomatic/unresolved patient/resident or when having contact with their environment.
 - Gloving: Use when providing direct care to a symptomatic/unresolved patient/resident or when having contact with their environment.
 - All PPE must be removed and hand hygiene performed prior to leaving the patient/resident room or bed space.
- ✓ For Routine Practices and Additional Precautions for selected pathogens or conditions associated with gastroenteritis outbreaks, see [MOHLTC Recommendations for the Control of Gastroenteritis Outbreaks in Long-Term Care Homes – Appendix 2](#).

Active Surveillance

- ✓ Verify health status of all patients/residents on a daily basis (as a minimum) to determine if they are experiencing signs or symptoms of the outbreak illness.
 - If a patient/resident is away from the facility even for part of the day, verify their health status upon return to the facility.
- ✓ For all staff who call in sick/miss work/leave work early, verify if they are/have experienced symptoms of the outbreak illness.
- ✓ Record all outbreak-related cases on [Appendix D: ROWPH Line List Form](#). Use a separate form for staff, patient and resident cases.

Placement of Ill Patient/Resident

- ✓ Patient/Acute care
 - Single room with dedicated toilet and patient sink (preferred).
 - Cohort with other cases, and separate from roommate via solid barrier (e.g. curtain).
- ✓ Resident/Long-term care/Retirement/Other Residential facilities
 - Resident to remain in room or bed space and provided with a dedicated toilet/commode.
 - If shared room, separate from roommate via a solid barrier (e.g. curtain).

Isolation of Ill Patient/Resident

- ✓ Cases should remain in their room until 48 hours symptom free.
- ✓ For cases of Cryptosporidiosis or Giardiasis, cases should not use recreational water (e.g. pool, hot tub) until 14 days symptom free.

Exclusion of Ill Staff (including Volunteers)

- ✓ Establish an enteric illness reporting policy for staff and ensure all staff report symptoms.

- ✓ Cases are to be excluded until 48 hours symptom free, unless otherwise specified in the following:
 - Residential facility workers – see [OPHS, Infectious Diseases Protocols](#) or [Appendix A: Common Pathogens of Enteric Outbreaks](#).
 - Hospital workers – see [Enteric Diseases Surveillance Protocol For Ontario Hospitals](#).
- ✓ Stool specimen submission is encouraged. See specimen collection section for details.

New Admissions and Transfers

- ✓ Restrict new admissions. Consult with Region of Waterloo Public Health on a case-by-case basis.
- ✓ Restrict transfers to other facilities. Informed transfer to hospital.
- ✓ For transfer from hospitals to other facilities, refer to Hospital Transfer Process Guidelines:

<p>Patient seen in ER - not admitted</p>	<ul style="list-style-type: none"> • Patient is medically stable and appropriate for transfer • Patient can be returned to previous care setting. • Public Health consult is NOT required for transfer • Hospital to arrange transfer with care setting
<p>Patient to go to a new care setting with an outbreak in progress</p>	<ul style="list-style-type: none"> • Patient is medically stable and appropriate for discharge • Consult with Public Health required: Waterloo Public Health - 519-575-4400 <ul style="list-style-type: none"> • Wellington Public Health: 1 800-265-7293 ext.4752 or 519-846-2715 ext 4752 after hours 1-877-884-8653 • If discharge to the new care setting is not appropriate, a daily call to Public Health is required for reassessment • If discharge to new care setting is appropriate: <ul style="list-style-type: none"> • Speak with patient/SDM. Ensure informed consent is obtained • Hospital to arrange discharge with new care setting
<p>Patient from a care setting in outbreak returning to the care setting</p>	<ul style="list-style-type: none"> • Patient is medically stable and appropriate for discharge. • Consult with Public Health to determine if patient is part of the outbreak. Waterloo Public Health - 519-575-4400 Wellington Public Health : 1800-265-7293 ext.4752 or 519-846-2715 ext 4752, after hours 1-877-884-8653 • If patient is part of the outbreak patient can be transferred back to care setting (note: may require prophylactic treatment prior to transfer). • Hospital to arrange transfer with previous care setting • If not part of outbreak and transfer is appropriate: <ul style="list-style-type: none"> • Speak with patient/SDM ensure informed consent is obtained • Hospital to arrange transfer to previous care setting (Note: may require prophylactic treatment prior to transfer) • If transfer to the previous care setting not appropriate, a daily call is required to Public Health for reassessment

Cohorting

- ✓ Patients/Residents
 - Well and ill patients/residents living in the outbreak area should remain in the outbreak area. Patients/residents should not visit common areas open to persons from the non-outbreak areas, such as recreation areas and the hair salon.
 - Patients/residents from the non-outbreak area should not enter the outbreak area, including common areas such as dining rooms and kitchenettes.
- ✓ Staff (full time, part time, volunteers)
 - Staff who have worked with patients/residents in the outbreak area should remain in the outbreak area during their shift.
 - Assign some staff members to look after ill patients/residents and others to look after well patients/residents.
 - Visit outbreak units last, this includes nursing and housekeeping staff.
 - Visit ill patients/residents last, this includes nursing and housekeeping staff.
 - Breaks and lunches should be taken in a staff area located within the outbreak area or another area designated for these staff.
 - Staff who have worked in the outbreak area should not work in any other healthcare, childcare or food service facility within 48 hours after the end of their last shift.
- ✓ External health care service providers
 - Non-medically necessary appointments for patients/residents in the outbreak area should be rescheduled after the outbreak.
 - Medically necessary appointments with therapists may continue (i.e. physiotherapists, foot care, etc.).
 - Therapists should consult with staff at the facility, postpone the visit to the end of the day/shift if possible, see well patients/residents first, and wear PPE when visiting ill patients/residents. If the visit cannot be postponed to the end of the day, change uniforms between patient/resident visits, and change/wash uniforms after the shift ends.
- ✓ External workers, non-healthcare related (e.g. construction workers, hair dresser)
 - Non-essential work or activities in the outbreak area should be rescheduled after the outbreak.
 - Essential work or activities may continue. Workers should be informed about the outbreak, visit the outbreak area last / at the end of the day. Workers to practice good hand hygiene and wear PPE when working in the room of an ill patient/resident.

Restrictions within the Outbreak Area(s)

- Eating and Food
 - Encourage/assist with hand hygiene for all patients/residents prior to meals.
 - Remove all common touch items from the shared areas (e.g. salt and pepper shakers, sugar bowls, table cloths).
 - Remove and discard food in refrigerators found in common areas and clean these appliances (e.g. dining room refrigerators, self-serve café).
 - HCWs should also avoid sharing meals or leaving food items open. No food items (e.g. bowl of candy, tray of cookies) should be left open in or near patients/residents (e.g. nursing station).

- Activities
 - Communal activities should be discontinued (i.e. Fitness classes, pub night, religious services, craft classes).
 - Day programs should be cancelled.
 - If, upon consultation with the MOH or delegate, it is decided that some activities may continue, these should be restricted to individuals who are symptom free.
 - Encourage hand hygiene for all patients/residents prior to meals.
 - Remove all common touch items from the shared areas (e.g. books, puzzles).
 - Remove and discard food in refrigerators found in common areas and clean these appliances.

- ✓ Animals and Pets
 - Suspend visitation of animals to the outbreak area. This includes
 - Pet Therapy Programs
 - Pets living within the facility
 - Visiting family pets
 - Farm and zoo animals should be prohibited from healthcare facilities. For more information about best practices for animals in healthcare facilities, see [SHEA Expert Guidance, Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks \(2015\)](#).

Environmental Controls – Cleaning, Disinfection and Sterilization

- ✓ Enhance environmental cleaning.
 - See [Appendix E: Environmental Services and Enteric Outbreak Management Fact Sheet](#)
 - See [Appendix F: Disinfectants Commonly Used in GI Outbreaks](#)

- Damp dusting, damp mopping and if required, carpet vacuuming with HEPA filter only to prevent dispersal of pathogens from surfaces, such as carpet dust.
- ✓ Blood and Body Fluids.
 - See [Appendix G: Cleaning Up Vomitus and Feces](#)
- ✓ Ensure adequate supply of:
 - Hand hygiene supplies (soap, paper towels, alcohol-based hand rub)
 - PPE (gloves, gowns, mask).
 - Incontinence products: Dispose of incontinence product using infection prevention and control best practices.
- ✓ Use dedicated cleaning equipment for outbreak floors/units.
- ✓ Medical equipment
 - Whenever possible, dedicate equipment to one patient/resident, particularly if they are symptomatic.
 - In the event that equipment must be shared, thoroughly clean and disinfect equipment between patients/residents as outlined in [PIDAC, Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices](#).
 - Consider using disposable equipment when available (e.g. Blood Pressure cuff).

Auditing

- ✓ Perform audits to ensure staff are following best practices for IPAC and provide education when appropriate. Auditing is recommended for the following:
 - Hand hygiene. See audit tools and training videos from Public Health Ontario, [JCYH Education, Training and Tools for Long-Term Care Homes](#).
 - Routine Practices protocols, including wearing of personal protective equipment appropriately and correctly.
 - Environmental cleaning and disinfection. See [PHO Environmental cleaning toolkit: Module six: Audit](#). As well, a sample environmental cleaning checklist and audit tools can be found in [PIDAC Ontario Best Practice Manual: Environmental Cleaning for Prevention and Control of Infections in All Health Care, Appendix 22](#).

Visitors

- ✓ Notify visitors of outbreak by posting signs that list the symptoms and floors/units in outbreak. Post signage at the entrance to the facility and at the entrance to the outbreak floor/unit.
- ✓ Advise visitors about proper hand hygiene and the use of personal protective equipment (PPE) when visiting a symptomatic patient/resident.
- ✓ Advise visitors not to mingle in the facility after visiting a symptomatic patient/resident.
- ✓ For factsheets that can be provided to visitors, see
 - [Appendix H: Information for Families and Visitors about Enteric Outbreaks](#)
 - [MOHLTC, Noroviruses Facts](#)

Specimen Collection and Results

Based on the epidemiology and clinical presentation of the outbreak, develop a hypothesis as to the outbreak source (e.g. one common meal, person-to-person transmission) and the suspected agent (e.g. virus, bacteria, parasite). Determine if there are specimens that can be collected to support the hypothesis, such as stool specimens for cases, food samples, water samples or environmental samples.

Clinical Specimen Collection

Specimen collection from suspected cases is critical to determine the causative agent in each enteric outbreak. Clinical specimens (e.g. stool) should be collected within the first 48 hours after onset of signs and symptoms, when possible. Formed stools are of no diagnostic value.

Stool specimens should be collected in the following priority:

- A. Symptomatic patients/residents.
 - B. Symptomatic staff (particularly dietary, housekeeping, and patient/resident care staff).
- Arrangements for stool container drop off and pick up by ROWPH will be made if staff contact information is provided.
 - Confidentiality of staff specimen results will be maintained. Results will be conveyed directly to the submitting staff and will remain confidential. Results will not be conveyed to the employer without express consent from the staff, as specified in the [Personal Health Information Protection Act, 2004](#).
 - ROWPH will deliver enteric outbreak stool kits to the facility on the initial visit during an outbreak in anticipation of collecting specimens. The Public Health Ontario Laboratory (PHOL) enteric outbreak kit is a clear plastic bag which contains three vials and should be filled in the following order:
 - A white-capped vial which is empty is for **virus and bacterial toxin tests**
 - A green-capped vial containing red medium is for **bacteria tests**
 - A yellow-capped vial containing clear liquid is for **parasite tests (only fill when directed by ROWPH)**
 - For detailed instructions on stool collection and storage, see [Appendix I: Instructions for the Collection and Storage of Clinical Specimens for Faeces Cultures](#).
 - A maximum of five positive stool specimens per outbreak can be submitted to the PHOL.
 - Place stool specimen in a designated specimen refrigerator. Do not freeze specimens.
 - Call ROWPH for transport of stool specimens to the laboratory.

Common problems to avoid:

- Expired stool container. Discard all expired containers.
- Staff unable to locate a stool kit. Ensure staff know where to find stool kits. Keep stool kits in a readily accessible location (at room temperature).
- Incorrect container labelling. Label specimen container with at least two patient identifiers (e.g. name, date of birth, health card number).
- Leaking container. Tightly secure specimen container lid before placing specimen in refrigerator.

Food Sampling Guidelines

Food samples can be submitted for laboratory analyses (bacterial analyses only).

- Sample of food from the suspect meal:
 - Retain food in the original container and refrigerate until picked up, or dropped off at ROWPH office for laboratory submission.
- Control sample from a food sample retention program:
 - Use appropriate aseptic technique (e.g. gloves, clean utensils), place a minimum of 200 grams of each food sample, in separate, labelled, sterile plastic bag with round wire closure (preferred by laboratory) or another leak-proof container. Store in freezer at -18°C or colder. Samples may be stored in the refrigerator at 2-4°C for up to two days, as storage for longer periods may impact the quality of laboratory results.
 - Keep a copy of the menu that includes all foods kept as part of the food sample retention program.

Common problems to avoid:

- Insufficient sample collected. Ensure 200 grams are collected so that all testing can be completed by the laboratory.
- Leaking sample container. Tightly secure specimen bag or container lid before placing specimen in freezer/refrigerator.

Water Sampling Guidelines

Water samples can be submitted for laboratory analyses (bacterial analyses only). **Do not** freeze the sample.

- Sample of drinking water:
 - ROWPH will collect drinking water samples when the epidemiological evidence suggests the water is the potential source of illness.
 - All drinking water must be tested within 48 hours of collection.

- Sample of recreational water:
 - ROWPH will collect water samples from hydrotherapy pools and recreational water facilities (e.g. public swimming pools and public hot tubs) when the epidemiological evidence suggests the water is the potential source of illness.
 - Samples must be received in the laboratory within one calendar day of collection.

Environmental Sampling Guidelines

- Environmental samples from a physical environment (e.g. cutting board, meat slicer etc.) can be submitted for outbreaks and foodborne illnesses investigation only (bacterial analyses only).
- Swabs ideally are tested within 24 hours of collection.

Specimen Results

ROWPH will call the facility when patient/resident specimen and other sample results are received from PHOL.

The average turn-around time for test results is as follows:

- Stool specimens: 24 hours – 15 days, depending on tests ordered.
- Food samples: 24 hours – 14 days, depending on tests ordered.
- Drinking water samples: 2 – 4 days.
- Recreational water and hydrotherapy pools: 2 – 4 days.
- Environmental swabs: 24 hours – 15 days, depending on pathogen suspected.

A summary letter will also be provided for any food, water or environmental sample results.

For more information about laboratory testing, see [PHO, Laboratory Services](#).

Communication

Daily communication throughout the outbreak is critical to the successful management of the outbreak. Both verbal and faxed communication needs to occur between the designated outbreak contact (e.g. DOC, ADOC, ICP) and ROWPH Public Health Inspector as follows:

Verbal Communication:

- Daily (as a minimum) updates are to be discussed over the phone or in person. Updates are to include:
 - Changes to the line lists (e.g. patient, resident and staff)
 - Any significant health events (e.g. hospitalizations, complications, deaths)
 - IPAC measures (e.g. new, changed, discontinued)
- As needed, ROWPH will provide recommendations related to case and outbreak management.

Faxed Communication:

- Daily, the updated line list (e.g. patient, resident and staff) is to be faxed to the ROWPH Public Health Inspector. Updates are to include:
 - New cases
 - Date patient/resident isolation ends/date staff exclusion ends
 - Date of specimen collection
- When a significant health event occurs, complete the [Appendix J: Hospitalizations, Complications and Death Form](#) and fax it to the ROWPH Public Health Inspector.

Fax Numbers

Waterloo Office: 519-883-2226

Cambridge Office: 519-622-1235

Weekend and Holiday Coverage:

- On weekends and holidays, daily verbal communication is still needed. If the designated outbreak contact is not at the facility, daily communication with ROWPH should be arranged as follows:
 - **Option A (preferred):** The assigned weekend staff collects the line listing information and provides this information to the designated outbreak contact. The designated outbreak contact then provides the daily update to the ROWPH Public Health Inspector. The updated line list is to be faxed each day of the weekend.
 - **Option B:** A temporary outbreak contact is assigned for the weekend to provide daily updates to the ROWPH Public Health Inspector. ROWPH is to be notified **no later than Friday at 4 p.m.** with the name

of the temporary contact, job title and their phone number. The updated line list is to be faxed each day of the weekend.

Enteric and Respiratory Outbreak Status Report

ROWPH will fax an outbreak status report to all healthcare stakeholders (to the designated contact) at the end of the weekday if there are changes to the enteric or respiratory outbreak status in a hospital, long-term care home or retirement home within the Region of Waterloo. Changes that occur on the weekend/holidays are faxed on the next business day.

The outbreak summary includes:

- New outbreaks reported in a facility or an area within a facility
- Outbreak status (i.e. active, controlled, over)
- Admission status (i.e. consultation needed, suspended, readmit only, informed admits)
- Public health contact name
- Additional comments (e.g. agents identified, staff restrictions).

Media Releases

If a media release is planned, forward a copy of the media release to the ROWPH Infection Control Manager for comment **prior** to release. This can be faxed to the Waterloo office at: 519-883-2226.

Declaring the Outbreak Over

An outbreak is declared over when the facility has identified no new cases of infection (patient, resident or staff) for a period of time determined by ROWPH.

- Typically, the outbreak is declared over when there are no new cases for one incubation period plus one communicability period after the onset of the last case.

Note: Relapsed cases are not considered 'new' cases and do not extend the length of a gastrointestinal outbreak.

- For a Norovirus-related outbreak, the outbreak is declared over when there are no new cases after five 24-hour periods (five days) after the onset of the last case.

Another time period may be used depending on the situation as determined by ROWPH. For example, the last staff case onset did not occur while they were present at the facility.

- When microbiological confirmation of a suspected Norovirus outbreak is not possible, the Kaplan Criteria may be applied to determine the likelihood that the outbreak is of viral origin. When all four of the following criteria are met, the outbreak can be defined as a viral gastroenteritis outbreak:
 1. A mean (or median) illness duration of 12 – 60 hours;
 2. A mean (or median) incubation period of 24 – 48 hours;
 3. More than 50 per cent of people with vomiting, and
 4. No bacterial agent is found.

A viral gastroenteritis outbreak is declared over when there are no new cases after five 24-hour periods (five days) after the onset of the last case.

After the outbreak is declared over by ROWPH, an "Outbreak Summary Letter" is provided to the facility that summarizes the case details of the outbreak including:

- Outbreak number
- Number of cases
- Outbreak agent identified
- Sample results

Outbreak Debrief

An OMT debrief meeting is recommended shortly after the outbreak is declared over. The purpose of the meeting is to evaluate the control measures used during the outbreak and recommend any necessary modifications.

Resources

- Association for Professional in Infection Control and Epidemiology (APIC), [SHEA/APIC Guideline: Infection prevention and control in the long-term care facility, 2008](#)
- CDC, [Norovirus in Healthcare Settings in Healthcare Settings](#)
- IPAC Canada (formerly known as CHICA), [Evidence-Based Guidelines](#)
- MOHLTC, [Control of Gastroenteritis Outbreaks in Long Term Care Homes, 2018](#)
- MOHLTC, [Infectious Diseases Protocol, Appendix A: Disease-Specific Chapters, Gastroenteritis, institutional outbreaks](#)
- MOHLTC, [Infectious Diseases Protocol, Appendix B: Provincial Case Definitions for Reportable Diseases, Disease: Gastroenteritis, institutional outbreaks](#)
- OHA/OMA/MOHLTC, [Enteric Disease Surveillance Protocol for Ontario Hospitals](#)
- Public Health Ontario Laboratory, [Specimen Collection Guide](#)
- Provincial Infectious Diseases Advisory Committee (PIDAC), [Best Practices for Environmental Cleaning for Prevention and Control of Infections](#)
- Provincial Infectious Diseases Advisory Committee (PIDAC), [Best Practices for Hand Hygiene in All Health Care Settings](#)
- Provincial Infectious Diseases Advisory Committee (PIDAC), [Routine Practices and Additional Precautions in All Health Care Settings](#)
- Provincial Infectious Diseases Advisory Committee (PIDAC), [Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices](#)

Appendices

Appendix A: [Common Pathogens of Enteric Outbreaks](#)

Appendix B: [Sample Daily Surveillance Tool](#)

Appendix C: [Reportable Diseases List](#)

Appendix D: [ROWPH Line List Form](#)

Appendix E: [Environmental Services and Enteric Outbreak Management Fact Sheet](#)

Appendix F: [Disinfectants Commonly Used in GI Outbreaks](#)

Appendix G: **Cleaning Up Vomitus and Feces**

1. Clean and disinfect vomit and feces spillages promptly.
2. Isolate the area, if possible, and place a wet floor sign/flag to prevent slipping.
3. Put on disposable gloves and gown (and mask if splashing anticipated).
4. Soak up excess liquid using paper towels, and put the paper towels and any solid matter directly into a plastic garbage bag. Avoid creating splashes or aerosols during clean up.
5. Clean the soiled area with soap and hot water. The same cleaning cloth or sponge should not be used to clean other areas as this may spread the virus.
6. Remove all organic matter before disinfecting the area. Then disinfect the area using a freshly prepared hypochlorite solution (1 part bleach to 9 parts water), or accelerated hydrogen peroxide or hospital grade disinfectant. Household cleaners other than bleach do not work for most of the viruses that cause vomiting and diarrhea.
7. Allow the appropriate contact time.
8. Wipe the area dry.
9. Remove personal protective equipment.
10. Put all cleaning cloths and disposable gloves into a plastic garbage bag.
11. Wash hands well using soap and warm water for a minimum of 15 seconds.

For carpet and soft furnishing: Clean with hot water and detergent, or steam clean. Vacuum cleaning is not recommended.

Appendix H: Information for Families and Visitors about Enteric Outbreaks

An outbreak of gastroenteritis or enteric disease in a long-term care home can be very stressful for residents, staff, visitors and family members. Everyone has an important role to play in preventing the spread of enteric diseases, including you and your family. When visiting the facility, we ask that you review this information and take steps to help prevent the spread of enteric diseases during an outbreak.

What is an enteric outbreak?

- Public Health Ontario defines an enteric outbreak as an increase in the number of people with gastroenteritis (i.e. a vomiting and/or diarrheal illness) beyond what is normally expected within a specific area over a period of time (e.g. two or more residents in the same home area who become ill within 48 hours).
- An enteric outbreak can last from five days to several weeks.

What is expected of me if I visit a facility during an outbreak?

- Do not visit if you are experiencing symptoms such as diarrhea, upset stomach, vomiting or nausea.
- At the facility entrance, use the hand sanitizer provided so that you do not bring germs into the facility.
- Look for outbreak signage posted at the front entrance, inside elevators, and at the entrance to a home area, unit, or floor. If an outbreak sign is posted, speak to staff at the nursing station before visiting a resident.
- If the resident is ill, you may need to wear gloves, gown and eye protection (i.e. PPE). Only visit the resident in their room. Before leaving the room, remove and discard PPE inside room. Use the hand sanitizer provided so you do not bring germs out of the room.
- If the resident is not ill, but they live on an outbreak unit, do not escort them out of the outbreak unit. All residents and staff are asked to stay within the outbreak unit
- Only visit one resident, and after visiting them, avoid common areas and leave the facility immediately.
- At the exit, use the hand sanitizer provided so that you do not bring germs out of the facility.

What additional measures are used to control outbreaks?

- To prevent disease transmission to others, ill residents are asked to remain in their room while they are symptomatic and until 48 hours after all their symptoms have ended as they may still be contagious during this time period.
- Meal service is provided on tray for ill residents in their room.
- Education is provided to staff/residents/family members/visitors.
- Group activities are cancelled. Non-urgent appointments are rescheduled. One-on-one activities may be made available to residents to minimize the effects of isolation.
- It is not recommended for children 12 years old and younger to visit a facility during an outbreak because they are not always good at hand hygiene. Good hand hygiene

is essential to prevent spread of germs within the room of an ill resident and the facility

- Housekeeping staff increase cleaning of frequently touched surfaces (e.g. handrails, light switches, etc.)

For more information, contact Region of Waterloo Public Health at
519-575-4400 (TTY 519-575-4608)

Appendix I: Instructions for the Collection and Storage of Clinical Specimens for Faeces Cultures

Obtain supplies, complete the lab requisition and label specimen vials:

1. Remove the appropriate specimen collection vial(s) from the biohazard bag. **Do not use expired kits.**
2. Complete the public health laboratory "[General Test Requisition](#)". Include the outbreak number which is assigned by ROWPH.
3. On the main kit label located on the biohazard bag, fill in the required information with a ballpoint pen (press firmly). Peel this label off of the bag and place it on the completed submission form in the area marked.
 - "Label" of the "Enteric Disease Investigation Multiple Specimen Submission Form".
 - or**
 - If a public health laboratory General Test Requisition is used, fill in the required information with a ballpoint pen (press firmly).
4. Record the patient/resident name on each of the vials used. Peel off one of the four corresponding kit numbered labels located on the biohazard bag. Place one label on each vial used.

Note: The specimen container is required to have the patient's full name and date of collection or two unique identifiers. The information on the specimen must be the same as the name and other identifier on the test requisition. Unmatched or mismatched specimens will not be processed.

Specimen collection:

5. Faeces specimens that have been in contact with water in toilet are unacceptable. Collect faeces sample (bowel movement) from:
 - Soiled incontinent pad
 - Directly from commode or bed pan or
 - If patient/resident is capable, instruct them to defecate into a clean container
6. Place specimen in appropriate container by using the spoon from each vial, select different sites of the faeces specimen, preferably blood, mucus or pus, and transfer to the vials as follows:

- Virology/Toxin - WHITE-capped vial which is empty with a plastic spoon. Add faeces up to the line indicated. Replace and tighten cap.
- Bacteriology - GREEN-capped vial with red-coloured transport medium. A collecting device (plastic spoon) is fitted inside the cap. Add 2-3 spoonful of faeces. Mix into transport medium. Replace and tighten cap.
- Parasitology (only fill when directed by ROWPH) – YELLOW-capped vial with clear liquid preservative and plastic spoon. Add faeces up to the line indicated. Mix into transport medium. Replace and tighten cap.

Specimen storage:

7. Place all vials in the biohazard bag. Place the completed test requisition in the outside pocket. Do not place the test requisition inside the biohazard bag containing the specimens.
8. Refrigerate specimens immediately. Do not freeze specimens.
9. Call ROWPH for specimen transportation to laboratory as soon as possible.

Kit Storage: Kits can be stored at room temperature until use. **Do not use expired kits.**

Appendix J: [Hospitalizations, Complications and Death Form](#)