



Region of Waterloo
PUBLIC HEALTH AND
EMERGENCY SERVICES

Safe and Healthy Children: A Public Health Resource Manual for Child Care Providers





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EMERGENCY SERVICES

Managing Illness and Outbreaks



Chapter 3: Managing illness and outbreaks

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Glossary

Alcohol-Based Hand Rub (ABHR): A liquid, gel or foam formulation of alcohol (e.g., ethanol, isopropanol) used to reduce the number of microorganisms on hands when the hands are not visibly soiled.

Blood-borne Infections: Blood borne infections spread by way of blood to blood contact with an infected person. These infections are not spread by water or food, or by casual daily contact at home or elsewhere. The most common blood borne infections are:

- Hepatitis B
- Hepatitis C
- HIV (human immunodeficiency virus)

Body fluid: Liquids originating from inside the human body and can be excreted or secreted (e.g., feces, nasal secretions, saliva, sputum, urine and vomit)

Cleaning: The physical removal of foreign material (e.g., dust, soil) and/or organic material (e.g., blood, secretions, excretions, microorganisms). Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents and mechanical action.

Cohorting: Keeping children and staff that have been exposed to illness or ill people separate from staff and children who are not ill and have not been knowingly exposed to ill people.

Danger Zone: The temperature range (4C/40F and 60C/140F), where disease causing microorganisms (bacteria) can grow rapidly.

Disinfectant: A product that is used on surfaces which results in disinfection of the surface or equipment. Disinfectants are applied only to inanimate objects. Some products combine a cleaner with a disinfectant.

Disinfection: The inactivation of disease-producing microorganisms. Disinfection does not destroy bacterial spores. Items must be cleaned thoroughly before effective disinfection can take place. See also, *Disinfectant*.

Droplets: Large particles of liquid expelled from the upper respiratory tract through sneezing or coughing. Droplets can also be expelled from gastrointestinal tract through vomiting. Droplets do not remain suspended in the air and usually travel less than 2 meters. Microorganisms contained in these droplets are then deposited on surfaces.

Droplet Precautions: Used in addition to routine practices. This involves wearing a mask and either protective eyewear or face shield when within two meters of a person who has an infection that can be transmitted to others by droplets (e.g., influenza, norovirus).

Enteric Illness: Enteric illnesses are illnesses that cause diarrhea, nausea, vomiting, abdominal cramps, fever, and other symptoms. They can be transmitted by ingesting contaminated food or water, exposure to infected vomit or feces, direct or indirect contact with an infected person or animal, or through contact with contaminated objects.

Exclusion: Children and staff that are required to stay away from the child care center for a prescribed period of time while they have the potential to transmit disease.

Hazardous Food: Any food that can support the growth of disease-causing microorganisms and cause food poisoning or a foodborne illness. Hazardous foods contain milk or milk products, eggs, meat, poultry, fish, shellfish, or other products that are high in protein, high in moisture and have a neutral pH. Hamburgers, hot dogs, dairy products, chicken and cooked rice are some examples of hazardous foods

Humidex: The humidex is an index that describes how hot weather feels. It takes both temperature and humidity into consideration to derive a perceived temperature and comfort level.

Humidity: Humidity refers to the amount of water present in air.

Immune-Suppressed: Someone whose ability to fight an infection is decreased. Usually this is due to immune-suppressing medical conditions (i.e., HIV) or treatments that suppress the immune system (i.e., cancer treatments)

Infection Prevention and Control (IPAC): Evidence-based practices and procedures that, when applied consistently, can prevent or reduce the risk of transmission of microorganisms to staff, children and visitors.

Infectious agent: Microorganism capable of invading body tissue and multiplying (e.g., bacteria, fungus, parasite, virus).

Outbreak: An outbreak is when a greater than expected number of children and/or child care providers have similar symptoms in a short period of time.

Respiratory infection: An infection that affects the respiratory system, including the lungs, nose and throat.

Routine Practices: Certain protective behaviours, such as performing hand hygiene and wearing gloves, recommended when there is the possibility of being exposed to body fluids or other infectious materials.

Sanitize: To reduce the number of harmful micro-organisms on a surface to safe levels by using a chemical sanitizing solution.

Sharps: Any object that could break, cut or puncture the skin can be considered a "sharp".

Transmission: The passing of a disease from an infected person or group to another person or group. This may or may not involve intermediate hosts or objects that carry the disease from one person to another.

Source for definitions:

[Infection Prevention and Control Public Health Ontario](#)

Managing illness and outbreaks

The goal at every child care centre is to keep children healthy. Despite best efforts, illnesses do occur in the child care centre or at home. The first line of defense in managing illnesses involves working with parents and Public Health. If an illness is serious or there is an outbreak, proper management will include following policies and procedures for exclusion, reporting and communicating information about illnesses and outbreaks, enhanced hand washing and thorough cleaning and disinfecting.

Legal Requirements

Under the Health Protection and Promotion Act (R.S.O. 1990), child care providers are legally required to report to the local public health department if a "person has or may have a reportable disease or is or may be infected with an agent of a communicable disease."

It is not necessary to obtain a confirmation or diagnosis from a physician prior to reporting a communicable disease. Reports to Public Health may be made based on information obtained from the person or family involved or based on the observations and impressions of the caregiver.

The following information will assist in dealing with these infections and reporting them when necessary. These guidelines provide minimal information only. For cases of suspected food or water-borne illnesses or enteric/diarrheal illnesses or detailed information from the Infectious Diseases Program call Public Health at 519-575-4400.

Confidentiality

When dealing with health information, everyone has a right to privacy. Personal information can only be gathered and used in a restricted way. The identity of pupils or staff will not be released to the community or to other individuals at the school.

The Medical Officer of Health (MOH) is the Health Information Custodian for Region of Waterloo Public Health. The MOH and all persons who act as agents of the MOH (all public health staff) have a responsibility to ensure that personal health information is collected, used, stored and shared with full regard for the protection of privacy and the confidentiality of personal health information.

Region of Waterloo Public Health phone number

Call 519-575-4400
(TTY 519-575-4608)

Please contact:

- **Infectious diseases**
 - For reporting diseases designated in the guidelines or to obtain general information.
- **Health protection and investigation**
 - For reporting high absentee rates due to respiratory illness, diseases designated in the guidelines, enteric outbreaks, or to obtain information on cleaning/sanitizing, water quality and safe food handling or to report an animal biting incident.
 - High absentee rates can also be reported using the [Child Care Absenteeism Reporting eform](#).

Emergency after-hours or weekend reporting:

After 4:30 p.m. weekdays, all weekends and holidays for urgent issues requiring notification of Public Health.

All reportable diseases should be reported by telephone to Public Health.

Telephone reporting allows a consistent and timely response to any questions or disease outbreaks in schools and assists in preventing further spread of the disease within both the school and the surrounding community

Surveillance and reporting

Child care providers play an important role in identifying early signs and symptoms of illness in children and staff. You should observe every child for signs or symptoms of illness at the start of every day and throughout the day.

Child care providers need to document all symptoms and signs of illness. Keep an Illness Tracking Form for each room to record all symptoms accurately. Use this form to keep track of trends, to determine if there is an unusual increase in the number of children with the same symptoms or if there are any unusual symptoms that are occurring.

The form should include:

- The date
- Child's name
- The date symptoms first appeared
- The symptom(s) the child experienced
- The outcome of the situation (child absent, child sent home, etc.)
- Staff initials

At the end of each day, week and month, child care staff will be able to determine the number of sick children and their symptoms. These numbers can be compared to previous months and years. If the numbers are higher than usual, child care providers will be able to determine if an outbreak is starting and take steps to prevent the spread of illness.

For the [Region of Waterloo Public Health Diseases of Public Health Significance List \(Reportable\)](#) and the [Managing Infections and Exclusion Guidelines for Child Care Providers and Schools](#)

For a list of other childhood illnesses such as pinworm and Fifth Disease and factsheets see the [Caring for Kids website, Canadian Pediatric Society](#).

If you suspect that a child has an infectious disease refer to [Region of Waterloo Public Health Diseases of Public Health Significance List \(Reportable\)](#) or if you are suspicious of an enteric outbreak, report it immediately to Public Health. It is easier to prevent the spread of illness than deal with a missed opportunity.

Parents can help

Child care staff and parents, working in partnership, can help prevent illness and outbreaks. Child care staff should communicate with parents to obtain information on the child's health and well-being.

For the [Information for Parents/Guardians about Gastrointestinal Outbreaks factsheet](#)

Parents need to:

- Inform the centre when the child is sick.
- Describe the symptoms the child is experiencing.
- Keep the child away from the centre when they are sick.

Seven signs and symptoms of illness to look for:

1. Unusual behaviour
2. Runny nose, cough or difficulty breathing
3. Vomiting
4. Diarrhea
5. Change in skin color
6. Rash
7. Fever

If the child is not well enough to participate comfortably in all activities, the child should likely not be at the centre.

Report a communicable disease or an unusual increase in symptoms to Public Health at 519-575-4400.

Exclusion guidelines during non-outbreak periods

Seven steps for exclusion

1. Separate sick children from well children. Place symptomatic children in the designated isolation area (e.g., sick room).
2. Keep sick children comfortable by providing separate cots and toys. Clean and disinfect cots and toys after use. Do not allow sick children to participate in group activities.
3. If possible, designate specific staff to care for sick children. Ideally, child care staff should not care for sick and well children at the same time.
4. Contact parents to pick up sick children and remind them of the exclusion policy.
5. Follow policies and procedures for exclusion periods.
6. Update an illness tracking form.
7. If necessary, depending on the illness, post a notification at the front entrance of the childcare centre to inform parents and visitors of the symptoms of illness.

To keep children and staff safe, Public Health recommends the following:

Children with the following symptoms should stay home until you do not have a fever and your symptoms have been improving for at least **24 hours unless the symptoms are related to a known cause or condition.**

- Fever/Chills
- Cough
- Shortness of breath
- Decrease or loss of taste or smell
- Muscle aches or joint pain
- Extreme tiredness
- Sore throat
- Runny or stuffy/congested nose
- Headache
- Abdominal Pain
- Pink eye
- Decreased or no appetite

Children with the following symptoms should stay home until you do not have a fever and your symptoms have been improving for at least **48 hours unless the symptoms are related to a known cause or condition.**

- Nausea
- Vomiting
- Diarrhea (2 or more liquid stools or a change in normal pattern of bowel movement)

Other symptoms that children have that would warrant exclusion until symptoms have resolved for **24 hours include:**

- Eye discharge – yellow or white
- Yellowish skin or eyes or jaundice
- Irritability, continuous crying or requires more attention that can be provided

Do not exclude a child who has the following illnesses or conditions:

- Cold Sores
- Diaper rash/Thrush (Candidiasis)
- Ear infections
- Hand, Foot and Mouth disease
- Pinworm
- Chickenpox, with some exceptions

Chickenpox exclusion

Children with mild chickenpox may return to child care as soon as they feel well enough to participate in normal activities, regardless of the stage of the rash.

They **do not** need to stay home for the previously recommended five days after onset of rash, or until the rash has dried. Children with more severe cases or those who are not completely well (who continue to run a fever or have infected lesions) must stay home. This is a province-wide change in policy adopted by the Ontario Ministry of Health, and follows the recommendations from the Canadian Pediatric Society. Research shows that by the time the rash appears, it is too late to stop the spread of the disease. Chickenpox is most infectious one to two days before the rash and when children feel most ill. If there are any concerns or questions, please feel free to contact or refer parents to the Public Health Infectious Diseases Line at 519-575-4400.

- For specific illnesses or infections, refer to [Managing Infections and Exclusion Guidelines for Child Care Providers and Schools](#)

Chickenpox reporting and surveillance

Chickenpox reporting

Important information about reporting cases of chickenpox

Reporting aggregate number of cases:

The Ministry of Health requests that the total number (aggregate number) of chickenpox cases by age group be reported each month when cases of this disease occur in a school. This information is valuable in establishing rates of infection in different age groups and will be especially important with the increased use of the chickenpox vaccine.

Monthly aggregate reports may be made by fax or by phone to Public Health.

Reporting an individual case:

An individual case of chickenpox must be reported in the following circumstances:

- A client was hospitalized due to chickenpox.
- A client develops serious complications due to chickenpox (encephalitis, pneumonia etc.).
- A client passed away due to complications of chickenpox.

An individual case report may be made by calling the Infectious Diseases Program at 519-575-4400.

Children who are immune-suppressed

Parents of children with immune-suppressing medical conditions or who are receiving treatments affecting their ability to fight infection should speak with their child care provider about exposure to infectious diseases.

Child care centre staff needs to inform parents of children who are immune-suppressed when there is chickenpox activity in the child care centre. Children who are immune-suppressed include, but are not limited to, those with leukemia or other cancers, or those who have had organ transplants such as a liver or a kidney transplant.

Child care centre staff who are pregnant and who may have been exposed, to chickenpox, should be referred to their primary health care providers for assessment. Pregnant staff members can refer to; [Chickenpox and Pregnancy Fact Sheet](#)

What to do if a child is sick, but does not need to be excluded:

If a child has an illness, but is well enough to stay in the child care centre or does not have symptoms or an illness that requires exclusion, child care staff must ensure that the:

- Child washes hands more frequently.
- Child care staff wash hands more frequently.
- Child does not participate in water play.
- Child care providers clean and disinfect play areas and toys more often.

Sick child care providers

Sick child care providers should not be at work. In fact, exclusion guidelines for sick child care staff are the same as those for sick children. The child care centre should provide staff with a policy for sick employees, including expectations for when to stay home. As well, staff absences and exclusions should be recorded according to the centre's policy. Follow these tips to ensure illnesses do not spread.

- Staff experiencing one or more enteric symptoms (i.e., nausea, vomiting, diarrhea, stomach cramps and chills) should be encouraged to see doctor and must not work or attend the centre until they have been symptom free for at least 48 hours.
- Take this [self-assessment](#) if you have any symptoms of illness. Report any suspect foodborne or enteric illness that is unusual for children and staff to Public Health as soon as possible.
- Staff preparing food at the child care centre should not change diapers or assist with toileting.

When staff is well enough to work during an illness, they:

- Must wash hands more frequently.
- Should be assigned duties that require less contact with children or food preparation.

Enteric outbreak management

What is an outbreak?

An outbreak is when a greater than expected number of children and/or child care providers have similar symptoms in a short period of time. Signs and symptoms of enteric illness include a person having two or more episodes of diarrhea and/or vomiting within a 24 hour period, or one episode of diarrhea and one episode of vomiting within a 24 hour period. This person would then meet the “case definition” for enteric illness. An outbreak would be declared when there are two or more cases in a 48 hour period.

Symptoms of an enteric illness include diarrhea, vomiting, nausea, stomach cramps, headache or weakness. Germs that can cause enteric illness include Salmonella, norovirus, rotavirus and E. coli O157. It is important to determine whether the diarrhea may be a reaction to medication, change in diet or other reasons that may not be linked to an enteric illness

Case definition: A person having two or more episodes of diarrhea and/or vomiting within a 24 hour period, or one episode of diarrhea and one episode of vomiting within a 24 hour period

Suspected enteric outbreak: If an outbreak is suspected, notify Region of Waterloo Public Health at 519-575-4400.

Enteric outbreak definition: Two or more cases meeting the case definition with a common epidemiological link (e.g. same caregiver, same classroom) with initial onset within a 48-hour period.

Roles and responsibilities

Public Health has three major roles related to the investigation of an enteric outbreak in licensed child care centres.

Legislated role

In order to protect the public’s health, the Medical Officer of Health and Public Health Inspectors have the authority to require:

- The exclusion of ill children/staff from the centre.
- Policies to support outbreak reporting and management.
- Children/staff to submit samples.
- The child care centre to follow specific outbreak control measures.

Consulting role

Public health will provide advice to the child care centre regarding:

- Signs and symptoms of enteric and respiratory illnesses including case definitions.
- Information about infectious diseases capable of causing illness in the centre and information to reduce the spread of germs in a centre.

- Collection and storage of specimen samples.

Supporting Role

Public Health will help support the necessary steps to bring the outbreak under control by:

- Identifying the type and number of specimen samples needed.
- Providing enteric outbreak kits to the centre.
- Ensuring specimen samples collected are appropriately transported to the Ontario Public Health Laboratory in a timely manner.
- Recommending the implementation of specific outbreak infection control measures and monitoring their effectiveness.
- Conducting a kitchen inspection at the centre if an outbreak of foodborne illness is suspected.

Child care centre steps to managing an outbreak:

1. **Isolate ill children and arrange for prompt pick up.**
2. **Notify public health.** Call Public Health at 519-575-4400 if you think you have an outbreak or suspect an outbreak and ask to speak to a Public Health Inspector. The inspector will support you by recommending infection prevention and control best practices to bring the outbreak under control.
3. **Begin a line listing.** Complete a line list and include all children and staff who meet the case definition (a person having two or more episodes of diarrhea and/or vomiting within a 24 hour period, or one episode of diarrhea and one episode of vomiting within a 24 hour period that cannot otherwise be explained).

The line list should include:

- The date
- The child's name
- The date symptoms first appeared
- The symptoms the child experienced
- The outcome of the situation (child sent home, child absent, etc.)
- The child's classroom

4. Establish control measures

- Review hand hygiene with staff and children. Supplement hand washing with the use of alcohol-based hand rubs (ABHRs), particularly for staff.
- Ensure that gloves and other personal protection are available for staff to use.
- There should be no new registrations during the outbreak period.
- Stop communal activities including sensory play activities such as water tables, sand tables, etc.
- Discourage sharing of toys and personal items.
- Use disposable diapers and discard into a covered container.
- Cancel day programs and outings including field trips for the duration of the outbreak period.
- Exclude ill children and staff from child care **until 48 hours** after symptoms have stopped. This recommendation may change during an outbreak upon consultation with Public Health, depending on the cause of illness.
- Cohort infected or exposed children with staff who are caring for infected and exposed children. Staff should be dedicated to assigned rooms and not move between rooms.
- Request all staff not to work at other facilities during the outbreak.

5. Disinfecting during an outbreak

When an outbreak has been declared, disinfection in the child care centre needs to be increased. Staff should focus on disinfecting high touch surfaces such as door knobs, handles, crib rails and toys more frequently. Use a disinfectant such as accelerated hydrogen peroxide or chlorine bleach. These are effective against common outbreak pathogens such as norovirus and rotavirus. Ensure that the manufacturer's instructions for concentration and contact time for the disinfectant are followed. If using household chlorine bleach, the required concentration and contact times are outlined in the Surface Disinfection with Chlorine (Bleach) chart.

For the [Surface Disinfection with Chlorine \(Bleach\) chart](#).

6. Collecting stool specimens

The collection of stool is very important in helping to determine the cause of the outbreak. Specimen collection should begin immediately upon identification of an outbreak.

Follow these steps to ensure proper stool specimen collection:

- a) Use an enteric outbreak kit provided to you by your public health inspector. Check the expiry dates on the containers. The laboratory will not test the samples if the containers are past their expiry date.
- b) Remove the containers from the plastic bag.
- c) Fill in the following information on the label of the bag (do not remove this label from the bag):
 - Child's LAST NAME, first name
 - Date specimen was collected

- Date the child first started with symptoms (Onset date)
 - Outbreak number (this will be given to you by Public Health)
- d) The following information must be on each bottle:
- Child's LAST NAME, first name
 - Date specimen was collected
 - Outbreak number as given by Public Health
 - Attach one small numbered sticker to each bottle. Do not remove or use the fourth numbered sticker.
- e) Put on gloves and obtain stool from child's diaper, potty chair or have child defecate in a disposable plate inside the toilet bowl. Use caution because urine and/or water may contaminate the sample, which may alter the results. One bowel movement may be used to fill the vials in an outbreak kit. If there is not enough stool to fill all vials be sure to fill the white capped vial first.
- f) Fill the white capped vial first. Using the spoon from the white capped vial (virology and toxicology):
- Add feces up to the line indicated
 - Replace and tighten the cap
- g) Using the spoon from the green capped vial (bacteriology):
- Add two to three spoonful's of feces
 - Mix into the liquid in the vial
 - Replace and tighten the cap
- i) Dispose of remaining feces and collection material. **Wash your hands** when you are done.
- j) To ensure testing can be done, the bottles must be free of feces on the outside and capped to prevent any leakage. Place all bottles and requisition forms into the plastic bag and seal by peeling off the blue strip.
- k) Refrigerate (do not freeze) specimen immediately and notify the Public Health Inspector promptly.

7. Communicate with parents/guardians

It is essential that parents and guardians are kept informed of the outbreak status. Place an outbreak notice on the door and provide/post the factsheet entitled [Information for Parents/Guardians- Gastrointestinal Outbreak](#). It is important that parents/guardians understand the policy surrounding exclusion and understand why ill children are not to be present in the child care centre. Advise parents to promptly report symptoms to the child care centre providers.

8. Updates and consultation with Public Health

Update your Public Health Inspector daily on the outbreak situation (e.g. new cases, hospitalizations, etc.). Consult with your Inspector on any questions you may have (e.g. pick-up/drop-off of specimen kits, environmental cleaning, etc.).

Declaring an outbreak over

Inform your Inspector when five days have passed since the onset of a new case. Typically that is when an outbreak can be declared over. Your inspector will review the situation and, if applicable, confirm the outbreak can be declared over.

Factsheets and resources

1. [Region of Waterloo Public Health Diseases of Public Health Significance List \(Reportable\)](#)
2. [Infectious Diseases Exclusion Guidelines for Child Care Providers and Schools](#)
3. [Caring for Kids website, Canadian Pediatric Society](#)
4. [Information for Parents/Guardians about Gastrointestinal Outbreaks factsheet](#)
5. [Chickenpox and Pregnancy](#)
6. [Fifth Disease and Pregnancy](#)
7. [Surface Disinfection with Chlorine \(Bleach\) Chart](#)