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## OUTBREAK MANAGEMENT INTRODUCTION

As per the Health Protection and Promotion Act, RSO 1990, c. H.7, Regulation 559/91 - outbreaks in institutions are reportable to the local medical officer of health. A day nursery under the *Day Nurseries Act* is defined as an institution.

All day nurseries are required to report a suspected enteric or respiratory outbreak to their local public health unit.

### Background

Outbreak control in day nurseries requires a coordinated effort by everyone involved.

Signs and symptoms of enteric illnesses include more than one episode of diarrhea or vomiting, which may be accompanied by abdominal cramps/stomach aches, fever, nausea, loss of appetite, bloody and/or mucous stools. 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.

A respiratory infection usually starts with the onset of a fever and may be accompanied with one or more of the following: runny nose, cough, nasal congestion, sore throat, chills, muscle aches, fatigue and poor appetite. Young children may also have diarrhea.

### Surveillance

Daily surveillance of children and daily recording of any enteric and/or respiratory symptoms will give a clear picture of the baseline incidence in the centre. An outbreak may be occurring when there are clusters of cases, characterized by common symptoms, above the normal or baseline levels for the centre in a short period of time. Early reporting of the suspect outbreak along with implementation of infection control measures will decrease the number of children and staff who could be affected and will also reduce the duration of the outbreak.

### Identifying an Outbreak

A suspect outbreak exists when there is an increase in the baseline incidence indicating there are a higher than expected number of children or staff who are experiencing similar symptoms of illness. To determine whether a suspect outbreak exists:

- Review illness surveillance recording forms, communication books or daily log.
- Identify similar symptoms of illness among the symptomatic children/staff.
- Check recent child/staff absenteeism records.
- **Contact your local public health inspector to discuss unusual clustering of symptoms.**

# **SIMCOE MUSKOKA DISTRICT HEALTH UNIT'S ROLE IN OUTBREAK CONTROL**

The SMDHU has three major roles related to the investigation of an enteric or respiratory outbreak in day nurseries.

### ***Legislated Role***

In order to protect the public's health, the health unit's 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 facility to follow specific outbreak control measures.

### ***Consulting Role***

The health unit will provide advice to the day nurseries regarding:

- signs and symptoms of enteric and respiratory illnesses including case definitions
- information about infectious diseases capable of causing illness in a centre
- how to reduce the spread of infectious microorganisms in a centre
- how to obtain and store specimen samples.

### ***Coordinating Role***

The health unit will help to coordinate the necessary steps to bring the outbreak under control by:

- identifying the type and number of specimen samples needed
- delivering enteric outbreak kits to the centre and possibly to ill staff and children at home
- ensuring specimen samples collected are appropriately transported to the Public Health Laboratory in a timely manner
- recommending and/or ensuring the implementation of specific outbreak infection control measures
- conducting a kitchen inspection at the centre if an outbreak of food-borne illness is suspected.

## DAY NURSERY'S ROLE IN OUTBREAK CONTROL

All day nurseries are legally responsible for reporting enteric and/or respiratory outbreaks to their local public health unit. Once the outbreak has been reported, the centre is required to:

- Follow all health unit recommendations and requirements.
- Assist the investigating public health inspector by facilitating the collection of requested specimen samples and providing the necessary information pertaining to children and staff.
- Immediately report changes associated with the outbreak and provide updated information about the outbreak on a daily basis (see Day Nursery Line Listing Forms).
- Communicate necessary information to the families of children attending the centre.

## MANAGING OUTBREAKS OF GASTROENTERITIS IN CHILD CARE CENTRES

Child Care centres are becoming a frequent site of outbreaks of gastroenteritis. These settings present specific risks of spread of this illness amongst children because of large groups of children sharing the same rooms, toys/activities, eating spaces and bathroom facilities.

### Steps to managing an outbreak:

#### 1. Isolate ill children and arrange for prompt pick up

- Information on gastroenteritis and management at home should be provided to families of affected children.
- Parents of infants and young children need to be made aware of the danger of dehydration and the advice of a physician should be sought if the parents are concerned.

#### 2. Notify public health

- When cases of suspected gastroenteritis (nausea, vomiting, and/or diarrhea) are about baseline (normal) levels for the centre or room contact the Simcoe Muskoka District Health Unit's Communicable Diseases (CD) team at 705-721-7520 or 1-877-721-7520 Ext. 8809.
- The following criteria should be considered when reporting a suspect outbreak:
- two or more children and/or staff in the same classroom experiencing symptoms of gastroenteritis (nausea, vomiting and/or diarrhea) within a two day period.

### **3. Establish control measures**

- Exclude ill children and staff from child care until 48 hours after symptoms have stopped. This recommendation may change during an outbreak upon direction by the Medical Officer of Health.
- There should be no new registrations or “short-term” care during the outbreak period.
- Ensure surfaces contaminated by feces or vomit are immediately cleaned and disinfected using a high level disinfectant. Gloves, mask and water resistant gown will reduce the risk of infection to the staff cleaning and disinfecting.
- Review hand hygiene with staff. Increased handwashing is strongly recommended during an outbreak and children and staff must have access to warm running water, single use soap and paper towels in dispensers. Sharing towels is not recommended.
- Wash children’s hands upon arrival at child care facility, in addition to usual hand-washing practices.
- Use of alcohol-based hand rubs (ABHRs), particularly for staff, will support increased hand hygiene in the centre. ABHRs should have 60-90% alcohol concentration, kept out of reach of children and only used with children under direct supervision.
- Suspend interactions between groups that have experienced illness and groups that have not experienced illness. Staff should be dedicated to assigned rooms and not move between rooms. Breaks should be covered off by a supervisor if possible. Staff responsible for diapering should not be preparing or handling food.
- Children using cloth diapers should be switched to disposable diapers for the duration of the outbreak.
- Cancel social outings including field trips for the duration of the outbreak period.
- Implement a program of increased cleaning and disinfection of common touch surfaces such as door handles, handrails, sink/toilet handles etc.
- Stop sensory play activities such as water tables, sand tables etc.
- Clean and disinfect toys in outbreak affected areas on a daily basis. All plush toys, if not dedicated per child, should be removed during the duration of the outbreak. Toys handled by a child who has become ill while in care should be immediately removed from circulation until they have been washed and disinfected. “Mouthed” toys should continue to be one-time use items, being cleaned and disinfected after each use.
- Contaminated clothing should be put into a plastic bag and sent home with parents for hot water washing. Play clothing/costumes, re-usable mop heads, and all linens including cot liners should be washed on a hot cycle (>71°C for 25 minutes) with a detergent and hot air dried.

- Soft furnishings or carpets should be thoroughly cleaned with detergent and hot water.
- Hard surfaces (including common high touch surfaces and toys) should be thoroughly cleaned with detergent, hot water and a single use cloth then wiped down or immersed with a high level disinfectant and allowed to air dry. It is critical to ensure the appropriate contact time is used for the disinfectant.

#### 4. Communicate with parents/guardians

- It is essential that parents and guardians are kept informed of the status of the outbreak. Notices should be posted indicating to visitors, delivery services, families etc. that the facility is experiencing an 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 facility.

#### Declaring an Enteric Outbreak Over:

An outbreak of gastroenteritis is declared over in consultation with the Simcoe Muskoka District Health Unit. Generally, the outbreak is declared over 4 days after the last episode of illness at the centre. These criteria may change depending on the identification of a specific agent causing the outbreak and upon consultation with the Medical Officer of Health.

# MANAGING OUTBREAKS OF RESPIRATORY ILLNESS IN CHILD CARE CENTRES

Respiratory illnesses are emerging infectious diseases and are caused by a number of bacteria and viruses. Child care centres are at an elevated risk for spread of respiratory illnesses due to the large amount of children sharing rooms, toys, activities, eating spaces and bathrooms. This, in conjunction with underdeveloped immune systems make child care centres a very likely setting for spreading respiratory illnesses.

## Steps to Managing an Outbreak

### 1. Isolate ill children and arrange for prompt pick-up

- Information on respiratory illnesses should be provided to families of affected children and promotion to seek medical treatment.

### 2. Notify public health

Generally an outbreak is defined as a cluster of respiratory illness in groups with related symptoms. Signs and symptoms must include at least **two** of the following:

- Fever
- Cough
- Runny nose or sneezing
- Sore throat or hoarseness or difficulty swallowing
- Tiredness
- Muscle aches
- Loss of appetite
- Headache
- Chills
- Irritability

### 3. Establish control measures

- Consult with the Simcoe Muskoka District Health Unit's Communicable Diseases (CD) team to determine the exclusion time for ill children and staff from child care centres. A doctor's note may be required.
- There should be no new registrations or "short-term" care during the outbreak period.
- Notices should be posted indicating to visitors, delivery services, families etc. that the facility is experiencing an outbreak.

- Review hand hygiene with staff. Increased handwashing is strongly recommended during an outbreak and children and staff must have access to warm running water, single use soap and paper towels in dispensers. Sharing towels is not recommended.
- Wash children's hands upon arrival at child care facility, in addition to usual hand-washing practices.
- Use of alcohol-based hand rubs (ABHRs), particularly for staff, will support increased hand hygiene in the centre. ABHRs should have 60-90% alcohol concentration, kept out of reach of children and only used with children under direct supervision.
- Suspend interactions between groups that have experienced illness and groups that have not experienced illness. Staff should be dedicated to assigned rooms and not move between rooms. Breaks should be covered off by a supervisor if possible.
- Cancel social outings including field trips for the duration of the outbreak period.
- Implement a program of increased cleaning and disinfection of common touch surfaces such as door handles, handrails, sinks, toilet handles etc.
- Stop sensory play activities (water tables, sand tables etc.).
- Clean and disinfect toys in outbreak affected areas on a daily basis. All plush toys, if not dedicated per child, should be removed during the duration of the outbreak. Toys handled by a child who has become ill while in care should be immediately removed from circulation until they have been washed and disinfected. "Mouthed" toys should continue to be one-time use items, being cleaned and disinfected after each use.
- Play clothing/costumes, re-usable mop heads, and all linens including cot liners should be washed on a hot cycle (>71°C for 25 minutes) with a detergent and hot air dried.
- Soft furnishings, carpets or cloth-covered mattresses should be thoroughly cleaned with detergent and hot water.
- Hard surfaces should be thoroughly cleaned with detergent, hot water and a single use cloth then wiped down with a high level disinfectant and allowed to air dry. It is critical to ensure the appropriate contact time is used for the disinfectant.
- Complete documentation (line listing) on a daily basis and fax to the Simcoe Muskoka District Health Unit's CD team.

#### **4. Communicate with parents**

- It is essential that parents are kept informed of the status of the outbreak. It is also important that they understand the policy surrounding exclusion and understand why ill children are not to be present in the child care facility.

#### **5. Disinfecting during an outbreak**

- When an outbreak has been declared, disinfection in the child care centre needs to be increased. This occurs by increased frequency and level of disinfecting. Please contact your local public health inspector for more information on disinfecting during an outbreak.

### **Declaring a Respiratory Outbreak Over**

*A respiratory outbreak in a childcare centre is declared over in consultation with the Simcoe Muskoka District Health Unit. Generally, the outbreak is declared over six (6) days after the last episode of illness at the centre. This criteria may change depending on the agent causing the outbreak and upon consultation with the Medical Officer of Health.*

## Day Nursery Enteric Outbreaks




### Day Nursery Enteric Outbreaks

<b>Enteric Outbreak Management Checklist</b>		<b>Date Initiated yy/mm/dd</b>
1.	Health Unit notification – CD team, Barrie or Gravenhurst	
2.	Enteric precautions: a) Increase Hand-washing – staff/volunteers and children - review use of hand sanitizers (minimum 60% alcohol content) b) Review diapering procedures c) Review staff assignments (staff providing care should not handle food)	
3.	Identify cases and staff Start Enteric Line List (separate lists for children/staff cases).	
4.	Isolate any symptomatic children until alternate daycare arrangements are made	
5.	Cohort care of children, as able.	
6.	Exclude ill children & staff. Exclusionary period to be reviewed with health unit. Have supervisor discuss with symptomatic employee the issue of exclusion from working in other centres.	
7.	Discuss deferring admissions until outbreak under control.	
8.	Notify parents. Educate visitors/parents/volunteers re precautions. Post signage indicating outbreak.	
9.	Cancel social activities, field trips and community functions.	
10.	Review activities and sensory play. Water play should be discontinued for duration of the outbreak.	
11.	All bedding, dress up clothes, plush toys laundered on high heat.	
12.	Thorough cleaning/sanitizing of equipment, toys etc. with high level disinfectant.	
13.	Specimen collection: Number of kits on site _____ Expired? <input type="checkbox"/> Yes <input type="checkbox"/> No Call CD Team for arrangement of pick-up of specimens.	
14.	Complete documentation – i.e. Line Listing. Daily update of new and resolved cases to be faxed to health unit – CD Team.	

Reviewed with \_\_\_\_\_ by: \_\_\_\_\_

Date: \_\_\_\_\_ yy/mm/dd \_\_\_\_\_ No \_\_\_\_\_ Copy faxed to facility  Yes

## Day Nursery Respiratory Outbreaks

 <p><b>simcoe muskoka</b> DISTRICT HEALTH UNIT <i>Your Health Connection</i></p>		<p><b>Day Nursery Respiratory Outbreaks</b></p>	
<b>Respiratory Outbreak Management Checklist</b>		<b>Date Initiated yy/mm/dd</b>	
1.	Health Unit notification – CD team, Barrie or Gravenhurst		
2.	Control measures: <ul style="list-style-type: none"> <li>• Increase Handwashing – staff/volunteers and children                             <ul style="list-style-type: none"> <li>◦ review use of hand sanitizers (minimum 60% alcohol content)</li> </ul> </li> <li>• Review staff assignments (staff providing care should not handle food)</li> </ul>		
3.	Identify cases and staff Start Respiratory Line List (separate lists for children/staff cases). <ul style="list-style-type: none"> <li>• Case definition should include <b>at least two</b> of the following: fever, cough, runny nose or sneezing, congestion, sore throat or hoarseness or difficulty swallowing, tiredness, muscle aches, loss of appetite, headache, chills, irritability.</li> </ul>		
4.	Isolate any symptomatic children until alternate daycare arrangements are made.		
5.	Cohort care of children, as able.		
6.	Exclude ill children & staff. Exclusionary period to be reviewed with health unit. Have supervisor discuss with symptomatic employee the issue of exclusion from working in other centres.		
7.	Discuss deferring admissions or "short term care" until outbreak under control.		
8.	Notify parents. Educate visitors/parents/volunteers re precautions. Post signage indicating outbreak.		
9.	Cancel social activities, field trips and community functions.		
10.	Review activities and sensory play. Water play should be discontinued for duration of the outbreak.		
11.	All bedding, dress up clothes, plush toys laundered on high heat. Steam cleaning should occur for all carpets in affected rooms.		
12.	Thorough cleaning/sanitizing of equipment, toys etc. with high level disinfectant. If toys were used by an ill child, they should be immediately removed, cleaned and disinfected.		
13.	Specimen collection: Parents should be advised to bring child to physician for assessment and possible arrangement of specimens.		
14.	Daily update of new and resolved cases to be faxed to health unit – CD Team.		
<p>Reviewed with _____ by: _____</p> <p>Date: _____ yy/mm/dd Copy faxed to facility <input type="checkbox"/> Yes <input type="checkbox"/> No</p>			
<p>CS-CD Revised February 2012</p>			

## HOW TO USE THE DAY NURSERY OUTBREAK LINE LISTING FORM

The outbreak line listing form is a tool that allows the health unit to evaluate the progress of the outbreak, including the number of new cases that occur each day.

How to complete line listing:

- List staff and children on separate line lists using the outbreak case definition. Staff includes part-time staff and volunteers at the centre.
- Record those that may have been part of the outbreak and are not present at the centre.
- Record those that may have been part of the outbreak and are admitted to hospital.
- Do not list children and staff experiencing symptoms that are not included in the case definition.
- Do not record the same ill child or staff member more than once on the line list.
- The line list should be updated daily.
- Fax an updated line list into the health unit on a daily basis.

### STOOL COLLECTION TECHNIQUE

1. Use an enteric outbreak kit. Do not use the kit if the date on the outer plastic bag is past due.
2. Remove the bottles from the plastic bag.
3. Fill in the following information on the label of the bag:
  - Child's LAST NAME, first name
  - Date specimen was collected
  - Date the child first started with symptoms (Onset date)
  - Outbreak number as given by SMDHU,
    - i. Health unit # - year – outbreak number 2260 - 201# - ###
  - Do not remove this sticker from the bag.
4. The following information must be completed on each bottle:
  - Child LAST NAME, first name
  - Date and time specimen was collected
  - Outbreak number as given by SMDHU
    - i. Health unit # - year – outbreak number 2260 - 201# - ###
  - Attach one small numbered sticker to each bottle. Do not remove or use the fourth numbered sticker.
5. Obtain stool from child's diaper or from method discussed with public health inspector.
6. Put on gloves.
7. Using the spoon from the green capped vial (bacteriology):
  - Add 2 to 3 spoonfuls of feces
  - Mix into the transport medium
  - Replace and tighten the cap
8. Using the spoon from the white capped vial (virology and toxicology):
  - Add feces up to the line indicated
  - Replace and tighten the cap

9. Using the spoon from the other white capped vial (parasitology):
  - Add feces up to the line indicated
  - Replace and tighten the cap
10. Dispose of remaining feces and collection material. **Wash your hands** when you are done.
11. 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 it by peeling off the blue strip.
12. Refrigerate (do not freeze) specimen immediately and notify public health inspector to send to the laboratory within 48 hours.

## LABELLING AN ENTERIC OUTBREAK KIT

**Complete all information on big sticker of kit. DO NOT REMOVE.**

**This is for public health lab use.**

DO NOT USE kit if beyond expiry date.  
Return expired kits to SMDHU

EXPIRY: 2006 FEB 28

Ministry of Health Ontario Laboratory Services Branch

**ENTERIC OUTBREAK KIT**

Kit No. 120485 Patient's Name \_\_\_\_\_  
Date Collected: \_\_\_\_\_ Health No. \_\_\_\_\_  
Onset Date: \_\_\_\_\_  
Outbreak No. 120485 Resident  Staff  Sympt  Asympt

Enter child's name: LAST NAME, first name

Date specimen collected.

Earliest onset date of all child's symptoms.

Outbreak number provided by SMDHU.

This sticker needs to remain here for public health lab use. DO NOT REMOVE

These stickers will be placed on bottles inside kit by the centre.