

ENTERIC OUTBREAK GUIDELINE

What is the definition of an enteric outbreak?

An occurrence of vomiting and/or watery stool (diarrhea) beyond what is normally expected based on surveillance data for that child, particular area of the child care facility and the specific time of year. An enteric outbreak can also be referred to as a gastrointestinal outbreak.

What are the symptoms?

The usual symptoms are:

- diarrhea
- bloody diarrhea
- vomiting
- nausea
- fever
- stomach cramps
- general irritability
- malaise (e.g. feeling "out of sorts")

What is a suspected enteric outbreak?

- **Two suspected cases**, children or staff, with similar enteric symptoms within a 48-hour period; this could include cases in different program areas/rooms
- A case of enteric illness is defined as having at least one of the following:
 - **Two or more** episodes of unformed or watery stool (diarrhea) with a 24-hour period, or
 - **Two or more** episodes of vomiting with a 24-hour period, or
 - One episode of unformed or watery stool (diarrhea) **and** one episode of vomiting within a 24-hour period, OR
 - A confirmed lab case of a known pathogen and at least one compatible symptom (nausea, vomiting, diarrhea, abdominal pain or tenderness)

Note: Care must be taken to rule out non-infectious causes including teething or antibiotic/medication use.

Updated: March 2017

What is a confirmed enteric outbreak?

- **Three or more** children and/or staff with similar enteric symptoms in a specific program area/room within a four day period, OR
- **Three or more** program areas/rooms having a case (child or staff) with similar enteric symptoms within a 48 hour period.

Examples of a confirmed outbreak

- Two children and one staff person in the toddler room experiencing similar enteric symptoms within 4 days
- One child in the toddler room, one child in the infant room and one staff in the preschool room experiencing similar enteric symptoms within 48 hours

Who do you call if you suspect an outbreak?

If you suspect an outbreak, please notify your public health inspector as soon as possible.

- | | | |
|-------------------|----------|---------------------------|
| • Anita Allam | 625-8811 | anita.allam@tbdhu.com |
| • Kim Radul | 625-5907 | kim.radul@tbdhu.com |
| • Jocelyn Pearson | 625-5934 | jocelyn.pearson@tbdhu.com |

STEP 1 — CONTACT YOUR PUBLIC HEALTH INSPECTOR

A. Keep records during the outbreak

- Complete the *Enteric Outbreak Line Listing* form (Appendix A). List everyone who is ill in chronological order of when they became ill. Fill in all the information that is needed on the line listing. You may have to contact the parents/guardians to get accurate information.
- Update the line listing every day and report new information to the public health inspector.
- Consider a case of enteric illness to be resolved/over if the person who is ill is free from any enteric symptoms for 48 hours.

NOTE: Do not remove names of resolved cases from the line list. Instead, add each new case to the line list.

B. Create a case definition

- A case definition helps the public health inspector identify who is included as a case .
- A case definition will include information about the onset date of illness, symptoms and the location of the outbreak.
- At the beginning of the outbreak the case definition may be general.
- As the outbreak continues and staff notices a pattern of illness, the definition may be narrowed.
- The public health inspector will help you narrow the case definition using information from the line listing.

C. Stool Sample Collection

- Encourage everyone who meets the case definition to provide a stool sample; parents/guardians should be encouraged to take their child to see the family's health care provider.

D. Food Sample Collection

- If you suspect there is an outbreak situation, keep leftover food samples for the public health inspector who will collect them, if necessary. The public health laboratory needs approximately 100 to 200 grams of each food for analysis.
- Store all leftover food in the refrigerator. The food must be dated and labelled.
- If food is being catered, keep all leftovers.

NOTE: All menus must be made available in the event of an outbreak.

E. Water Sample Collection

- In the event of an enteric outbreak, child care facilities on private well water supplies should submit a water sample for testing through the public health inspector.
- Review water testing results required under the Safe Water Drinking Act and its regulations for trends in deteriorating water quality. You can get assistance interpreting water quality reports from the public health inspector.
- Have the well and/or reservoir tank checked for potential structural or maintenance problems. You can get advice from the public health inspector or your local well contractor.

- Make sure that the well water disinfection systems (e.g. ultraviolet systems, filters and chlorinators) are functioning properly. For chlorinated supplies, a chlorine residual should be taken to make sure that the chlorinator is working properly.
- Make sure that the well is properly disinfected in accordance with the *Well Disinfection Procedure* (see Appendix D), if applicable.
- Be aware that in the event of a waterborne disease outbreak, the Health Unit will issue a boil water advisory (BWA). Please follow and refer to the *Guide Boil Water Advisory* fact sheet (Appendix E).

STEP 2 — IMPLEMENT OUTBREAK CONTROL MEASURES

A. Cohorting

- Move all children who are symptomatic (with similar symptoms) to a separate area away from those who are well until they can be picked up by a parent/guardian.
- Restrict staff members' activities/duties to one area/room, if possible.

B. Exclusion

- If a child is showing symptoms, contact the parent/guardian to take the child home and advise them to consult their health care provider.
- Exclude everyone who has symptoms, including staff, until they are symptom-free for 48 hours. The public health inspector working with you on the outbreak will help you make decisions as more information becomes available. Some germs causing enteric illness can continue to be shed and spread by cases even as they are getting better.
- If there is laboratory confirmation of a specific organism that is implicated as the cause of the outbreak, this may affect the exclusion period. Cases must be excluded until they are no longer able to pass the infection on to others.
- The public health inspector will determine the length of the exclusion period.

C. Hygiene

- Emphasize good personal hygiene practices with children, their parents/guardians and staff members.
- Practice good hand washing (e.g. soap and water for at least 15 seconds), especially before eating and after using the toilet.
- Suggest to parents/guardians that during the outbreak period, they may want to use paper towels to dry hands after hand washing at home.
- Dispose of the toothbrush of any ill child.

STEP 3 — REINFORCE INFECTION CONTROL MEASURES

A. Hand washing

- Promote proper hand washing. It is the single most effective way to reduce the spread of enteric outbreaks. (See *Proper Hand Washing Procedures* - Appendix B)

B. Diapering

- Use single-use disposable gloves when changing diapers. Change gloves and perform hand hygiene (e.g. hand washing with soap and water for at least 15 seconds) between each task.
- Clean and disinfect the change table with a high level disinfectant after each use.
- Place any dirty and soiled laundry into a plastic bag; then place in a covered container.

C. Environmental Cleaning

- Clean and disinfect toilets (seats, bowls, flush handles) and hand sinks with a high level disinfectant. Use 1 part bleach to 10 parts water solution right after each episode of diarrhea.
- Clean and disinfect all toys and play materials every day during the outbreak. Use 1 part bleach to 10 parts water solution or a low level disinfectant.
- Clean and disinfect mouthed toys after each use.
- Clean and disinfect all high touch surfaces such as tables, chairs, door handles and light switches. Use a high level disinfectant.
- In the case of an accident (e.g. vomit or feces), please follow the *Procedure for Handling Blood or Body Fluids*. See Appendix C.

D. Activities

- Do not allow use of water play tables, play dough and modelling clay during an outbreak.
- Allow individual sensory play to continue; however throw out items after play is finished.
- Cancel all activities where children are leaving the day care or activities where others will be coming to the day care.
- Keep children in their own play areas. Do not allow group activities (e.g. toddlers and preschoolers playing together).

E. Inform Parents/Guardians and Other Potential Visitors

- Signs must be posted at the entrance to the day care informing parents/guardians and other potential visitors of the outbreak and any restrictions that may be in place. See Appendix F.
- Parents/guardians must be informed of the outbreak and any restrictions, in whatever way the day care typically uses to inform parents/guardians (e.g. phone call, letter).

F. Food Safety

- Ensure all food items are obtained from an inspected source.
- Protect all foods from contamination.
- Do not use leftovers from food served in the days leading up to the outbreak.
- Make sure that hot foods are held at a temperature of 60°C or higher.
- Make sure that refrigerated foods are held at a temperature of 4°C or lower.
- Make sure proper food cooling procedures are being followed.
- Clean and disinfect all equipment, utensils and work surfaces in the kitchen. During an outbreak, disinfection levels and frequency may be increased. Check dishwashing procedures and equipment to ensure proper cleaning.

Note: Food handlers who do not have symptoms may work provided that good personal hygiene, including regular and proper hand washing, is maintained.

APPENDIX A — ENTERIC OUTBREAK LINE LISTING

As noted on the second page of this guideline, it is important that a line list is started. A sample can be found on the end of this document.

Copies can also be downloaded from the Health Unit's website, TBDHU.COM/ID (click on "Childcare Settings" and then "Outbreak Management").

It is important that all of the information that is needed on the line listing is completed in full, including listing everyone who is ill in chronological order of when they became ill.

The list must be updated every day and all new information must be reported to the public health inspector.

It is important to note that a case of enteric illness is to be considered resolved/over if the person who is ill is free from any symptoms for 48 hours. Do not remove the names of resolved cases from the line list. Instead, add each new case to the line list.

Call your public health inspector (see page 2) with any questions or concerns.

APPENDIX B — PROPER HANDWASHING PROCEDURES

Hand washing, when done correctly, is the single most effective way to prevent the spread of germs. Good hand washing technique is easy to learn and can significantly reduce the spread of infectious diseases among both children and adults.

It is important to encourage and help children to wash hands before eating, after playing outdoors or playing with pets, after using the bathroom, and after coughing or sneezing/blowing their noses. Don't assume that children know how to wash their hands properly. Supervision is an essential element in forming good hand washing habits in children. Children learn by example. Let them observe good hand washing technique from the adults who care for them.

Correct Hand Washing Procedure

- Wet hands with warm running water.
- Apply liquid soap to the hands. Bars of soap should not be used.
- Lather well using lots of friction for at least 15 seconds. Scrub between the fingers as well as the back of the hand and wrists.
- Rinse well under warm water.
- Use paper towels to dry hands.
- Turn the taps off with paper towel; taps may be contaminated with germs.
- Throw away used paper towels into lined, covered trash container.

Common Mistakes That Must Be Avoided

- Do not use a single, damp cloth to wash a group of children's hands.
- Do not use a standing basin or bucket to wash or rinse hands.
- Do not use a common cloth or towel to dry hands.

Use of Alcohol-Based Hand Sanitizer

Alcohol-based hand sanitizers are excellent hand antiseptics, as long as they contain at least 60% alcohol. They should be used in situations where running water is not available and should only be used if the hands are not visibly dirty.

They are safe for children but it is important to let children know that they should not be swallowed. Supervision is important. It is also important to store the product safely so children have no access without supervision. After the alcohol is rubbed in and evaporates, it is safe for children to touch their mouth or eyes.

Resources to Teach and Reinforce Proper Technique

Posters are available as reminders to wash hands. In addition, the Health Unit has compiled a set of resources that can be used to teach children the correct hand washing procedure (e.g. DVDs, books, activity pages, fact sheets). Resources are also available for parents. Most of the resources are downloadable from the website at TBDHU.COM/id (Click on "Clean Hands") or call your public health inspector (see page 2).

You can also call your nearest branch office in Geraldton, Nipigon, Terrace Bay, Marathon and Manitouwadge for more information on the resources available.

APPENDIX C — PROCEDURE FOR HANDLING BLOOD OR BODY FLUIDS (urine, feces, vomit and blood)

Avoid direct contact with body fluids such as urine, feces, blood and vomit as they all have the potential to spread germs. Germs in vomit and diarrhea may travel through the air, so it is important to clean up quickly.

Spill Kit

A spill kit should be prepared ahead of time and should include the following items:

- Disposable gloves
- Paper towel
- Soap and detergent
- Plastic bags
- Disinfectant

Procedure

The following is recommended:

1. Wear disposable latex or vinyl gloves. Reusable rubber gloves are acceptable as long as they are cleaned and disinfected after each use.
2. Remove all visible material, working from the least to the most soiled areas, using paper towel or single-cloth. If you are cleaning up feces or vomit, be careful not to agitate the material so that virus particles do not become airborne. Put all material in a water-proof bag for disposal.
3. Clean the area using soap or detergent, again working from the least to the most soiled areas.
4. Disinfect the area using an approved broad-spectrum disinfectant following the manufacture's directions for procedures and length of time to leave on surface. If using bleach, a 1:10 ratio is recommended. Slowly add 1 cup (250 ml) of bleach to 9 cups (2250 ml) of water; or 1/2 cup (125 ml) to 4 1/2 cups (1125 ml) of water.
5. Discard gloves and other cleaning articles in a plastic bag.
6. Wash hands after removing the gloves. Use soap and water for at least 15 seconds.
7. Wash the non-disposable cleaning equipment (mops/buckets) thoroughly with soap and water, then rinse and disinfect with an approved disinfectant.

For further information on dealing with blood or bodily fluids, please contact your public health inspector using the contact numbers listed on page 2.

APPENDIX D — WELL DISINFECTION PROCEDURE

If the drinking water continues to test positive on repeated submissions, consult the Health Unit for help with interpreting the results of the tests and provide advice on what measures can be taken to safeguard the drinking water.

The first step in identifying the reason for repeated adverse water quality is to conduct a visual inspection. The area around the well should be clear of any potential contaminant sources, such as pets, lawn care products, and gardens. The land around the well should not be depressed as this promotes pooling of water. Instead, the land should be sloped away from the well. Once any problems around the well have been addressed, the next step is to take a close look at the well itself. If it is an older well, make sure that the cap and the sealant around the well casing isn't cracked or damaged. If it is, it will need to be fixed or replaced right away.

If the source of the problem can't be detected, consult a licensed well contractor right away to identify the source of the problem and eliminate it. Purchasing a home treatment device that may be expensive to install, operate, and maintain may not eliminate the source of the trouble. This is not recommended.

1. If the well is a cistern, talk to the Health Unit about disinfection requirements.
2. Measure the diameter of the well.
3. Measure the well depth and the static or resting water level; calculate the depth of water in the well.
4. Using the table on the next page, measure out the amount of bleach needed. The table gives the volume of bleach needed for different well sizes. Pour the appropriate bleach mixture into your well.
5. Mix the water in the well. This can be accomplished by attaching a hose to a tap, running water from the well, through the hose and back into the well.
6. After adding chlorine to the well, remove or bypass any carbon filters that are in the system for water treatment. If you don't, these filters will remove the chlorine from the water and any pipes beyond the filter will not get disinfected. Replace with new filters after chlorination to avoid reintroducing bacteria into the system.
7. Run water at every faucet in the building until a strong chlorine odour is detected. Be aware that your nose may lose its ability to detect chlorine.
8. If there is no chlorine smell or it is very weak, add more bleach and repeat Steps 6 and 7.
9. Drain the water heater and fill with chlorinated water.
10. Back flush the water softener and all water filters, except carbon filters.
11. Let the chlorinated water stand in the system for at least 12 hours*.
12. Clear chlorine from the well by running an outside hose to the ground surface away from your septic field if you have one. Then, run clear water through faucets until the water no longer smells of chlorine.
13. Avoid putting too much chlorine into the septic system because the bacteria needed for septic decomposition may be killed. Do not drink the water without boiling it until test results show the water is safe to drink.

*It is best to shock your well in the late evening after the majority of water has been used for the day so that chlorinated water can sit undisturbed for the 12 hours required.

ADDING BLEACH

The following chart provides directions on the volume of bleach that must be added to every 3 metres (10 feet) of water in the well.

Casing Diameter	Volume of Unscented Bleach (5.25% solution) per 3 metres
-----------------	--

Millimetres (mm)	Inches	Millilitres (mL)
50	2	6
100	4	30
150	6	60
200	8	100
250	10	200
300	12	250
400	16	400
500	20	650
600	24	900
900	36	2000 (2 litres)
1200	48	3600 (3.6 litres)

Example :

- You have 6 metres (20 feet) of water in your well. It has a casing diameter of 100 millimetres or 4 inches.
- According to the chart, you would need 30 millilitres of unscented bleach for every 3 metres of water. But because you have 6 metres, you would need to add 60 millilitres (or 2 fluid ounces of bleach).

For questions or more information on how to disinfect your well, contact your public health inspector (see page 2)

Revised: October 2015

APPENDIX E — BOIL WATER ADVISORY

The following steps should be taken to improve water safety during a boil water advisory (BWA) for child care facilities.

These steps have been designed for generic use in a boil water advisory. Please speak with the public health inspector assigned to your facility for instructions regarding the particular circumstances of a specific boil water event.

Water for Drinking

- Use only boiled or bottled water. All water for drinking or for use as an ingredient in drink mixes must be commercially bottled or boiled for one minute then stored in clean, covered containers until served.
- Post signs advising not to drink the tap water at all sinks.

Preparing Food

- Make sure all water that is used to wash, rinse or soak foods (i.e. fruits and vegetables) is commercially bottled or boiled for one minute.
- Children and staff should not consume raw foods rinsed with water that has not been disinfected.

Teethbrushing

- Make sure potable water is available for teeth brushing and ensure that children are supervised.

Hand Washing

- Enforce frequent and thorough hand washing for all staff and children.
- Post signs informing staff and children of the correct hand washing technique at all sinks.
- Supervise children during hand washing.
- Handwashing should be followed up with the use of alcohol based hand sanitizer
- See Appendix B for more information

Dishwashing

- Wash dishes by washing in a dishwashing machine or 3 compartment sink method, OR Use single-use, disposable dishware and utensils

Water Play Stations

- Stop the use of water play tables during this time.
- Drain all water play tables areas containing water.
- Discourage activities/crafts which use water and where there is a risk that children may consume a product; for example hand painting, baking, pasting with glue made from flour and water.

Washing Toys

- Wash cloth toys or dress up clothes in a washing machine and heat dry them in a clothes dryer for 30 minutes.
- Disinfect toys in a disinfectant solution ensuring adequate contact time. Dishwasher-safe toys may also be cleaned in a dishwasher providing that the machine uses a hot water wash at 60° C (or 140°F) with a hot water sanitizing rinse of 82° C (or 180° F) for 10 seconds.

Laundry

- Launder dish cloths, bedding, bibs and facecloths in a standard washing machine.
- Dry in a standard dryer for a minimum of 30 minutes.

Communication to Parents

- Let parents/guardians know about the boil water advisory, symptoms of enteric illness, need for exclusion, reporting requirements, risk of severe illness in immuno-compromised persons and necessary control measures.

Once the Boil Water Advisory is Lifted

- Restart all water-using fixtures or pieces of equipment by flushing and sanitizing according to the manufacturer's specifications.

NOTE: This may vary from fixture to fixture. Water filters, softeners and treatment devices may need to be completely replaced. The facilities engineer and/or the fixture manufacture should be consulted for specific guidance when re-starting equipment.

Additional Measures

- Run cold faucets for one minute before using the water.
- Run drinking fountains for one minute before using the water.
- Drain and refill hot water heaters set below 45° C (113 ° F)
- Drain and refill all water play stations

For More Information

For questions or more information, contact your public health inspector (see page 2).

Source: Adapted from guidelines contained in the Protocol for the Investigation and Control of Cryptosporidium and Giardia Waterborne Outbreaks (Public Health Branch, August 1997) and Cryptosporidium and Water: A Public Health Handbook (1997).

APPENDIX F — FACILITY SIGNAGE

It is important to communicate the outbreak to parents/guardians and others who visit the day care facility.

Colour copies of the signage found on the next page are available by calling your public health inspector (see page 2).

They can also be downloaded from the Health Unit's website, TBDHU.COM/ID (click on "Childcare Settings" and then "Enteric Outbreaks").