

Prevention and management of a gastroenteritis outbreak in a camp facility

A manual for camp facilities, schools and community groups

December 2015

Prevention and management of a gastroenteritis outbreak in a camp facility – A manual for camp facilities, schools and community groups

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Contents

Gastroenteritis outbreak kit.....	1
Checklist for control of a gastroenteritis outbreak in a camp facility	2
1. Introduction.....	3
1.1 Viral gastroenteritis.....	3
How is viral gastroenteritis spread?	3
1.2 Bacterial gastroenteritis	4
How is bacterial gastroenteritis spread?	4
1.3 Less common causes of gastroenteritis.....	4
2. Prevention of a gastroenteritis outbreak in a camp facility	5
2.1 Good hygiene	5
Hand washing.....	5
How to wash your hands	5
When to wash and dry your hands.....	5
Eating utensils and drink bottles/cups.....	6
2.2 Food safety.....	6
Getting ready for meals and snacks.....	6
Preparing food.....	6
Preventing cross-contamination between raw and cooked foods.....	7
Keeping food at the right temperature.....	7
2.3 Water Safety.....	7
Rainwater Tanks.....	7
2.4 Screening and monitoring of campers and staff upon arrival at camp and throughout their stay	8
2.5 Exclusion/isolation/removal of sick campers and staff	8
2.6 Rapid access to more staff and medical assistance in the event of an outbreak	8
3. Management of a gastroenteritis outbreak in a camp facility.....	9
3.1 Isolation of sick people	9
3.2 Seeking medical attention.....	9
3.3 Early identification of all sick people	9
3.4 Collection of laboratory samples.....	9
3.5 Notifying the local public health unit.....	10
3.6 Good hygiene	11
3.7 Cleaning of facility (both during and after an outbreak).....	11
3.8 Transportation to medical care and/or home.....	13
3.9 Advice to staff, campers and visitors/volunteers on management of sick people and prevention of further cases.....	13
Appendix 1 – Gastroenteritis outbreak notification form	15
Appendix 2 – Specimen collection form	17
Appendix 3 – Collecting a faecal sample.....	18
Appendix 4 – Advice for staff.....	19
Appendix 5 – Advice for campers.....	21

Appendix 6 – Advice for visitors/volunteers	23
Appendix 7 – Template letter to camper.....	24
Appendix 8 – Template letter to parents (of campers in a school group)	25
Appendix 9 – Advice for students (campers in a school group).....	26
Abbreviations.....	28
Bibliography.....	29

Gastroenteritis outbreak kit

While a gastroenteritis outbreak kit may be available from the local public health unit, it is recommended that camps create and maintain their own outbreak kits. As a guide the contents of a gastroenteritis outbreak kit are listed below.

A gastroenteritis outbreak kit containing the following items should be used in the event of a gastroenteritis outbreak within a camp facility.

- This camp facility manual
- Disposable gloves for self-protection
- Plastic aprons and disposable masks for use when cleaning up
- A roll of garbage bags e.g. to store clothing contaminated with vomit/faeces
- Paper towels, disposable cleaning cloths
- Sticky labels for labelling garbage bags, specimen jars etc
- Disposable cooler and icepacks
- Faecal collection kits (available from local Public Health Unit)
- Vomitus collection kits (available from local Public Health Unit).

Faecal, vomitus and food samples can be kept in a cooler with ice packs, or in a refrigerator but not in the freezer. Put the sample container in a plastic bag and store away from food for consumption. Ensure all specimens are clearly and appropriately labelled ([see page 18](#)).

Checklist for control of a gastroenteritis outbreak in a camp facility

In the event of a gastroenteritis outbreak, check that you have completed these vital steps.

Actions to support affected people

- Immediately isolate people experiencing nausea, vomiting and/or diarrhoea
- Seek medical attention. If the person is a child who is not in the company of their parent/guardian, contact their parent/guardian to determine who will collect the child and who will seek medical attention. Urgent medical attention should not be delayed.
- Arrange transport for ill people, while continuing to isolate people with symptoms from the remainder of the group.
- Maintain a plentiful supply of drinking water and fluids to the sick and seek medical advice if symptoms do not settle or if concerned. Consider oral replacement therapy fluids in severe or prolonged cases
- Collect samples of diarrhoea and/or vomitus from each person with symptoms and refrigerate samples until they can be collected by a health professional. (Only samples from six people are required.)
- Notify your local public health unit within Queensland Health to arrange collection.

Preventative actions for all people on camp

- Reinforce the message about the importance of good hand hygiene to all campers and staff. See [page 5](#) for more detail.
- On a daily basis, identify all people experiencing nausea, vomiting and/or diarrhoea by questioning if they have any symptoms.
- Collect all remaining or samples of food which may have been eaten, or used to prepare food, in the past 3 days and keep them clearly labelled and separated from other food in the refrigerator.
- Clean rooms/dormitories/tents of well people, followed by cleaning of all potentially contaminated areas.
- Distribute advisory letters to staff, campers and visitors/volunteers. See the end of this manual for templates that you can use.

Isolation of sick people and good camp and personal hygiene (including frequent hand washing) are very important.

1. Introduction

The following guidelines are designed to assist camp managers and those supervising camping groups, such as teachers and community group leaders, in the prevention and management of gastroenteritis within a camp facility.

Gastroenteritis in a camp environment is usually caused by viral or sometimes bacterial infections. In this environment, large numbers of people can quickly become ill as the germs which can cause gastroenteritis can be highly infectious and transmitted easily (for example, from person to person or via contaminated food or water). If not managed appropriately, one sick person can result in more than twenty sick people in one or two days.

Gastroenteritis is a prescribed contagious condition under the *Public Health Act (2005)* so if a suspected outbreak of gastroenteritis takes place, it is vital that steps are taken to protect the health of those on camp and the wider community.

If there is a reasonable suspicion that a student attending the camp may have gastroenteritis and other students may be at risk of contracting the condition, it is important to contact the local Public Health Unit for advice on the prescribed contagious condition and strategies to manage the condition.

1.1 Viral gastroenteritis

Viral gastroenteritis is caused by many different kinds of viruses, with Norovirus being the most common cause of vomiting and diarrhoea outbreaks in camp facilities. Common symptoms include: vomiting, which can be violent and profuse; diarrhoea; nausea; stomach cramps; fever; headache; and muscle aches. Diarrhoea can be considered to be passing loose or liquid bowel stools more often than is normal for a person (World Health Organization 2013). All symptoms may not be present.

Symptoms usually take from 24 to 48 hours to develop, but may develop within 12 hours. The illness may last a few days. Viral diseases such as Norovirus usually settle without further problems. It is important to maintain a good fluid intake and seek medical advice if symptoms do not settle or if concerned. Anti-diarrhoeal medications are not effective for viral gastroenteritis and are not recommended.

How is viral gastroenteritis spread?

Viral gastroenteritis is extremely infectious. It can be spread by:

- person-to-person contact, from the germs being transferred from hand to mouth
- swallowing something that has been contaminated through contact with infected vomit or faeces
- indirect contact from the contaminated hands of a sick person to objects, surfaces, food or water and then to another person
- airborne spread. When a person vomits, virus particles may pass into the air as an invisible mist and inhaled by nearby people.

Someone with viral gastroenteritis is potentially infectious while they have the symptoms and for up to 48 hours after the symptoms have stopped. Any camper or staff member who has had nausea, vomiting and/or diarrhoea in the 48 hours prior to the camp, should NOT attend.

1.2 Bacterial gastroenteritis

Bacterial contamination of food or water is another common source of gastroenteritis outbreaks. Bacterial gastroenteritis is less readily passed from person to person than viral gastroenteritis, but large numbers of people may become sick through consuming the same contaminated food and/or fluids.

Symptoms of bacterial gastroenteritis can differ according to the type of bacteria, but can include fever, headache, abdominal pain, diarrhoea, nausea and vomiting. It can take from two hours to five days for symptoms to develop after consuming contaminated food or water and the illness may last for a few days.

Symptomatic treatment is the same as for viral gastroenteritis. It is important to maintain a good fluid intake and seek medical advice if symptoms do not settle or if concerned.

How is bacterial gastroenteritis spread?

Bacterial gastroenteritis can be spread through eating or drinking contaminated food or water, such as:

- food that has been improperly stored or handled, enabling bacteria in the food to multiply
- ready-to-eat food that has been contaminated by an infected food handler
- contaminated water that has not been treated
- food that has been contaminated and then eaten raw or undercooked.

1.3 Less common causes of gastroenteritis

Most gastroenteritis outbreaks at camp facilities are expected to be due to bacteria or viruses. Infection with other microorganisms (e.g. protozoa such as cryptosporidium) can also lead to gastroenteritis, as can chemical poisoning. Chemical poisoning may occur following high oral exposure to metals such as copper, zinc, iron and cadmium, or exposure to some chemicals (e.g. carbon monoxide) in high concentration. Individuals with some medical conditions and/or taking some medications can also be affected by gastroenteritis.

2. Prevention of a gastroenteritis outbreak in a camp facility

The most important ways to prevent a viral gastroenteritis outbreak in a camp facility are routine thorough hand washing and rapid isolation or exclusion of sick campers and/or staff when they become ill.

Prevention includes:

- 2.1 [Good hygiene](#)
- 2.2 [Food safety](#)
- 2.3 [Water safety](#)
- 2.4 [Screening and monitoring of campers and staff upon arrival at camp and throughout their stay](#)
- 2.5 [Exclusion/isolation/removal of sick campers and staff](#)
- 2.6 [Rapid access to more staff and medical assistance in the event of an outbreak.](#)

2.1 Good hygiene

An important way to minimise the spread of gastroenteritis is to ensure you keep unwashed hands away from mouths.

Hand washing

Make hand washing an important part of camp culture. Emphasise to campers and staff the importance of thorough washing of hands with liquid soap and running water and drying afterwards. Alcohol-based hand gel should be used if liquid soap and running water are unavailable.

How to wash your hands

- Wet hands with running, drinking-quality water (warm water if available is better than cold water), apply liquid soap to hands and rub hands vigorously for at least 15 seconds. Pay particular attention to washing the palms and backs of hands, in between fingers, under finger nails and around wrists.
- Rinse hands and dry them thoroughly using a disposable paper towel if available, or your own clean towel. Do not dry your hands on another person's towel.
- Prevent hands from becoming sore or chapped by avoiding harsh cleansers and by drying hands thoroughly.

When to wash and dry your hands

- Before food preparation, handling and serving
- Before eating
- Before and after smoking
- After going to the toilet
- After contact with blood, faeces or vomit and other body fluids

- After handling garbage
- After touching animals or animal feed.

Eating utensils and drink bottles/cups

- Do not share eating utensils or drink bottles/cups.
- Wash eating utensils and drink bottles/cups in hot soapy drinking-quality water, rinse and allow to air dry.
- Wash hands after clearing away used eating utensils or drink bottles/cups.

2.2 Food safety

The prevention of foodborne illness involves attention to hygiene, proper handling and preparation of food and care during food storage and distribution.

Food handlers should not prepare, handle or serve food if they have vomiting or diarrhoea. They should advise the camp manager immediately and before returning to work.

Be aware of your responsibilities under food safety legislation.

Getting ready for meals and snacks

- Before meals, ensure that tables have been cleaned. [See page 11](#) for details.
- Wash and dry your hands before preparing or serving food. If you are interrupted during preparation and then return, wash and dry your hands again before you continue.
- Check that all the campers' hands are washed before they eat or drink.
- If campers are serving themselves from the same container, they must be supervised. Utensils are to be used to prevent people from touching food that other people will eat.

Preparing food

Viruses can be passed very easily from person to person and also via food.

The food preparation area should have running, drinking-quality water (preferably warm), liquid soap and disposable towels so those who are preparing food can easily wash and dry their hands. Long hair should be tied back.

If you are involved in handling, preparing or serving food remember these basic points:

- Wash and dry your hands. Wearing jewellery will make it harder to clean your hands thoroughly and will require extra attention.
- If you have cuts or wounds on your hands make sure they are completely covered by a waterproof dressing. The use of disposable gloves over the dressing will provide an extra level of protection.

Preventing cross-contamination between raw and cooked foods

- Keep raw and cooked foods separate (even in the fridge).
- Do not store raw food above cooked food in the fridge.
- Cover and store raw meats on the lowest shelf not touching other foods.
- Use different utensils (including cutting boards, knives, etc) for raw and cooked food.

Keeping food at the right temperature

- Keep food hot (over 60°C) or keep food cold (5°C or less).
- When food has not been stored under 5°C or over 60°C, the 4 hour/2 hour rule should be followed (Box 1).
- If reheating, it is recommended that food should be reheated to 70°C for 2 minutes. (The best way of checking food temperatures is with a probe thermometer.)
- Reheat food once only.
- Do not reheat milk/formula.
- Store a non-mercury thermometer in your fridge so that you can check the temperature is 5°C or less.

Box 1. The '4 hour/2 hour rule'

If ready-to-eat food has been at temperature between 5°C and 60°C for a total of:

- less than 2 hours, it must be refrigerated or used immediately.
- between 2 and 4 hours, it must be used immediately.
- 4 hours or longer, it must be thrown out.

2.3 Water Safety

Water at a camp facility used for drinking, cooking and washing should meet the standards for drinking water as set out in the *Australian Drinking Water Guidelines (NHMRC 2011)*. Water for consumption or food preparation should be free from viruses, bacteria, parasites or chemicals that can cause disease.

Rainwater Tanks

Rainwater tanks generally pose a low risk for disease if simple maintenance is carried out:

- Keep debris cleared from roofs and gutters on catchment buildings.
- Trim overhanging branches away from roofs so that the potential for faecal contamination from animals and birds is limited.
- Ensure that the inlet to the tank has a mesh screen filter not exceeding 1mm width to prevent mosquitoes and debris from entering the tank.

- Inspect the tank for sludge build-up every 2-3 years. Cleaning of the tank may be carried out by professional tank cleaning businesses, which are found in telephone directories or online.

More detailed information on the maintenance of rainwater tanks is provided in the Guidance on the use of rainwater tanks ([enHealth 2010](#)).

2.4 Screening and monitoring of campers and staff upon arrival at camp and throughout their stay

This can be done quickly and simply:

- Before departing for camp, ask whether any campers/staff have had vomiting or diarrhoea in the last 48 hours. If anyone has, they should not attend camp until they have been free of symptoms for 48 hours.
- Campers should be advised that if they are sick **at any time** during the camp, they should inform the camp manager, a supervisor or a teacher. Early isolation (until the cause is identified) of people with symptoms of nausea, vomiting and/or diarrhoea is essential if an outbreak is to be avoided. [See Section 3.1](#) for more detail.
- In addition, the camp manager, staff and/or teachers should make informal enquiries regarding campers' health on a regular basis.

2.5 Exclusion/isolation/removal of sick campers and staff

- People with vomiting or diarrhoea should be excluded from or isolated within the camp until at least 48 hours after the symptoms have stopped e.g. they have not had a loose bowel action or vomited for at least 48 hours.
- Food handlers should be excluded from food preparation until at least 48 hours after the symptoms have stopped. Large outbreaks have occurred when food handlers have returned earlier than 48 hours.
- People who are sick should be kept away from public areas and from well people. If practicable, sick people should use a separate toilet.

2.6 Rapid access to more staff and medical assistance in the event of an outbreak

- Ensure staff have fully charged mobile phones with them during the camp.
- Staff also need a list of emergency contact numbers, e.g. school principal, school registrar etc.
- The camp facility is to have the contact phone numbers handy for ambulance, local hospital, local doctor and the nearest public health unit. Contact numbers for the nearest [Public Health Unit](#) are available by clicking on this link; or call **13 HEALTH (13 43 25 84)** 24 hours a day, 7 days a week, for the cost of a local call.

3. Management of a gastroenteritis outbreak in a camp facility

Management includes:

- 3.1 [Isolation of sick people](#)
- 3.2 [Seeking medical attention](#)
- 3.3 [Early identification of all sick people](#)
- 3.4 [Collection of laboratory samples](#)
- 3.5 [Notifying the local public health unit](#)
- 3.6 [Good hygiene](#)
- 3.7 [Cleaning of the facility \(both during and after an outbreak\)](#)
- 3.8 [Transportation to medical care and/or home](#)
- 3.9 [Advice to staff, campers and visitors/volunteers on management of sick people and prevention of further cases.](#)

3.1 Isolation of sick people

To minimise the spread of this illness, people with symptoms of gastroenteritis should be separated from the rest of the group.

Ideally, arrangements should be made to transport sick people home as soon as possible. If this is not possible these people should be isolated from the rest of the group. They should use separate bathrooms and toilets from other campers. The bathrooms and toilets should have signs to ensure that well people do not use them. Well people should also be discouraged from visiting the people who are sick to minimise the risk of disease spread.

3.2 Seeking medical attention

If any sick person or groups of people requires medical treatment, telephone ahead and inform the ambulance, hospital or general practitioner that you are coming from a camp with one or more cases of gastroenteritis.

If a medical practitioner is visiting the camp, ensure there are adequate hand washing facilities so they may wash hands before seeing people, in between seeing people and when they leave.

3.3 Early identification of all sick people

The early identification and management of a person or group of people experiencing nausea, vomiting and/or diarrhoea is essential if a large outbreak is to be avoided.

3.4 Collection of laboratory samples

The Camp Coordinator may be requested by the Public Health Unit to arrange collection of samples. This will increase the likelihood that the cause of the outbreak can be identified.

- Samples of **diarrhoea and/or vomit** should be obtained when possible from all new cases until samples from six sick people have been collected (refer to [Appendices 2](#) and [3](#) for supporting information).
- Collect and refrigerate **all food** left uneaten during the 72 hours before onset of illness if possible. Do not freeze the food. (If the food has already been frozen, leave it frozen.)
- Save or retrieve **original food containers or packages**.
- Save any water in refrigerator and trays of ice cubes in freezer.
- Collect water sample in a clean jar from any suspect supply of water and refrigerate.

Samples of diarrhoea or vomit should be collected by the affected person (wherever possible) in a lidded container and clearly labelled.

Labels for samples of diarrhoea or vomit should include the person's name, date of birth, type of specimen (e.g. vomit) and date the specimen was collected.

Samples of food and water should be labelled with a description of the food or water (e.g. garden salad from lunch, Monday 4 January), where the sample was collected from (e.g. buffet table, XYZ Camp) and when the sample was collected (e.g. collected 5 January 11am). If the information is available, also include the brand (e.g. XXX Company), the pack size (e.g. 500g), the 'Best before' or 'Use by' date, and any batch codes or details, if applicable.

The sealed container should be clearly labelled and placed in a plastic bag and kept in the fridge, not the freezer. These samples must be clearly separated from other food until collected by public health unit staff.

Record details of specimens on appropriate form ([page 17](#)) and contact the public health unit. They will provide advice on collecting and transporting samples.

3.5 Notifying the local public health unit

Please notify the local public health unit with preliminary details.

Be prepared to answer questions including:

- How many campers and staff are present?
- How many people are sick?
- Are the symptoms in campers, staff or both?
- What are the symptoms e.g. vomiting, nausea, diarrhoea, fevers?
- When did the symptoms in the first sick person begin?
- Are any people waiting for, or receiving, medical treatment? If so, what sort of treatment did they receive?
- Has anyone gone to a hospital or been hospitalised?
- What are the catering arrangements? (The public health unit may ask you to help to collect the menus and details of foods used for the three days prior to first person becoming ill.)
- Was the catering provided onsite?

- What is the source of drinking water exposure, e.g. tap, tank, bottled?
- Was there other water exposure, e.g. from swimming pools, lakes, dams?
- Have faecal or vomitus samples been collected?

Begin documentation by using the *Gastroenteritis Outbreak Notification form* (see [page 15](#)). The public health unit can assist with information regarding gastrointestinal outbreaks in mass gatherings, sampling of food and water, guidelines for cleaning of the facility, provision of sample collection kits for faeces and vomit and transportation of samples for testing. Contact numbers for the nearest Public Health Unit are available by clicking on this link; or call **13 HEALTH (13 43 25 84)** 24 hours a day, 7 days a week, for the cost of a local call.

3.6 Good hygiene

Check, reinforce and ramp up good hygiene practices. See [page 5](#).

3.7 Cleaning of facility (both during and after an outbreak)

Some organisms can remain viable on surfaces for a prolonged period of time and are therefore able to infect others during and even after the outbreak appears to be over. To prevent transmission via contaminated surfaces particular attention to environmental cleaning is needed.

- All rooms/dormitories/tents of well campers should be cleaned first.
- All potentially contaminated areas need to be cleaned initially with hot water and detergent and then disinfected with bleach (sodium hypochlorite) solution. See below for details.
- These potentially contaminated areas include: toilets, showers, chairs, floors, handles, phones and any surface exposed to hand contact.
- Use a freshly constituted solution of household bleach at a concentration of 0.1% available chlorine (or 1,000 parts per million) as shown in Box 2. Norovirus can only be inactivated by chlorine based products. Consider the manufacturer's advice regarding preparation of the bleach, usage, times in contact with surfaces, storage and disposal. The manufacturer's recommendations for use and occupational health and safety instructions should be followed when using bleach.
- Ideally, use disposable cleaning equipment that is discarded after each use. A mop and bucket can be useful for larger surfaces.
- Detachable mop heads should be laundered in a hot wash and left to air dry in the sun after use.
- Bathrooms/toilets should be cleaned twice daily and when visibly dirty.
- Contaminated carpets and curtains from rooms of sick campers/staff should be cleaned with detergent and then steam-cleaned.
- Soft furnishings or metal surfaces which might be damaged by a bleach solution should be cleaned thoroughly with detergent and water and then left to dry.
- Contaminated upholstered furniture and bed mattresses should be steam cleaned.

Cleaning up vomit and faeces

- Cleaning should be attended to immediately.
- Wear gloves and a disposable plastic apron.
- Use paper towels to soak up excess liquid and place in plastic bag.
- Clean the contaminated area with detergent and hot water using a disposable cloth.
- Disinfect the contaminated area with the freshly made disinfectant solution as described above.
- Wash and dry hands thoroughly with liquid soap and running water.
- **Close the area for at least one hour.**

Laundering clothes and linen

- Place clothes and linen in plastic bag.
- If laundering onsite, ensure a hot wash cycle is used.
- If sending contaminated laundry off-site, double-bag and ensure the people doing the laundry are aware they are dealing with contaminated laundry.
- It is important for people laundering clothes to maintain good hygiene also. (See [page 5](#))

After an outbreak

You may be asked by the Public Health Unit to do further cleaning after an outbreak. This is because some organisms that cause gastroenteritis are able to survive in the environment for several days.

Box 2: How to prepare bleach solution*

1. Follow the safety instructions on the bleach product and/or the material safety data sheet.
2. Locate the percent mass per volume (% m/v), percent weight per volume (% w/v) or parts per million (ppm) of available chlorine on the product label.
3. Prepare a 0.1% (1,000 parts per million) solution of available chlorine. Use the table below to determine how many parts of bleach with how many parts of water are required to prepare this solution.

For example, if the original strength of bleach is 4% m/v available chlorine, 250 ml of the bleach could be diluted with water up to a volume of 10 litres to achieve the appropriate concentration (that is, 250 ml bleach with 9,750 ml water).

Original strength of bleach		Solution recipe		Volume of bleach in a standard 10 litre bucket
% available chlorine	Parts per million available chlorine	Parts of bleach	Parts of water	
1	10,000	1	9	1,000 ml
2	20,000	1	19	500 ml
3	30,000	1	29	333 ml
4	40,000	1	39	250 ml
5	50,000	1	49	200 ml

*table modified from *Guidelines for the public health management of gastroenteritis outbreaks due to Norovirus or suspected viral agents in Australia* (Communicable Diseases Network of Australia 2010)

3.8 Transportation to medical care and/or home

Transporting sick people **to** a health care facility:

- If there is private transport available from the campsite to medical facility, ensure there are bowls/buckets handy to take with them.
- If an ambulance is required, inform the ambulance personnel that the sick person/s are coming from a camp with one or more cases of gastroenteritis.

Transporting sick people **from** a health care facility back to camp:

- This is **not** recommended due to the risk of exposing sick people back at the camp. If there is no alternative and the person **has to** return to camp, minimise the number of well people in the vehicle and ensure the person is effectively isolated when they return. (See recommendations regarding isolation of sick people on [page 9](#)).

Transporting sick and well people **from** a health care facility back to their home:

- Try to arrange for transport for all sick people as a group.
- Try to separate sick and well people from travelling together. This may necessitate using another bus or making an extra journey.

3.9 Advice to staff, campers and visitors/volunteers on management of sick people and prevention of further cases

The appendices contain advice for staff, campers and visitors/volunteers on management of sick people and prevention of further cases in the form of kits, checklists, notification forms, fact sheets and letters to enable the camp facility to readily provide campers and others with useful information during a gastrointestinal outbreak.

Appendices

Use the *Gastroenteritis Outbreak Notification form* ([Appendix 1](#)) as soon as possible after the second person shows signs of gastroenteritis. Notify the local public health unit by phone at this time. Contact numbers for the nearest [Public Health Unit](#) are available by clicking on this link; or call **13 HEALTH (13 43 25 84)** 24 hours a day 7 days a week for the cost of a local call.

- When you phone the public health unit, they are likely to ask for the information on this form. Fax or email this form to the local public health unit if facilities available. Otherwise, hand it to the public health officer upon their arrival at the camp facility.
- Use the Specimen Collection form ([Appendix 2](#)) is to be used if an outbreak occurs. Please record name, date of birth, sample type and collection date and time on the form. If fax facilities are available, fax this form to the local public health unit. Otherwise, hand it to the public health officer upon their arrival at the camp facility.
- The Collecting a Faecal Sample fact sheet ([Appendix 3](#)) is to ensure correct and safe specimen collection.
- Advice for camp facility staff ([Appendix 4](#)) if an outbreak occurs, to prevent further spread of disease.
- Advice for campers ([Appendix 5](#)) if an outbreak occurs, to prevent further spread of disease.

Additional resources for general groups:

- Give the Advice for Visitors/Volunteers letter ([Appendix 6](#)) to visitors/volunteers if an outbreak occurs, to prevent further spread of disease.
- Edit the Template Letter to Camper ([Appendix 7](#)) and send home with each camper following a gastrointestinal outbreak at a camp facility.

Additional resources for school groups:

- Edit the Template Letter to Parents (of campers in a school group), accompanied by the Advice for Students, home with each student ([Appendix 8](#)).
- Advice for students (campers in a school group) - Outbreak of viral gastroenteritis in a camp facility ([Appendix 9](#)).

Appendix 1 – Gastroenteritis outbreak notification form

This form is to be used by the camp manager or supervisor and sent to the Public Health Unit as soon as possible after a second person shows signs of gastroenteritis.

Camp and Contact details:

Facility name:

Facility address:

Name of person notifying Outbreak:

Position:

Phone number - Landline: Mobile: Fax:

Email:@.....

Preferred contact method: Phone Fax: Email

Total number of staff at camp:

Camp Group Details:

Name:

Year level (if school group):

Date of arrival:/...../..... Time: am/pm Number of campers:

Is this the only group at the camp? Yes No If no, provide details

.....

People sick:

Name of 1st person with symptoms: DOB:/...../.....

Date symptoms began:/...../..... Time: am/pm

Name of 2nd person with symptoms: DOB:/...../.....

Date symptoms began:/...../..... Time: am/pm

Number of people with diarrhoea only: Staff: Campers:

Number of people with vomiting only: Staff: Campers:

Number of people with vomiting & diarrhoea: Staff: Campers:

Total number with vomiting &/or diarrhoea: Staff: Campers:

Are the people affected isolated/separated from the rest of the group/s?

Yes No Unknown

Number of people, if any, seen by a doctor:

Name of the doctor: Dr..... Ph:

Number of people taken to hospital: Name of hospital:

Number of vomit / diarrhoea samples collected: From (number) people:

Food consumption

Provide details of common food consumed in the days prior to the first person developing symptoms. Common foods include set menus at camp, other camp foods such as damper, fast food on the way to camp, and meals packed by school prior to camp.

If menus are available, please attach.

Day	Day of week (e.g. Monday)	Places where food eaten	Foods consumed
Day of onset (when first person developed symptoms)			
Day before onset			
Two days before onset			
Three days before onset			

Water consumption (campers and staff) Tick all that are applicable.

Water consumed	Day of onset (when first person developed symptoms)	Day before onset	2 days before onset	3 days before onset
Town supply	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bottled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rainwater tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stream, river, dam, lake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Was water consumed treated (e.g. boiled, purification tablets used)? If yes, provide details:				

Recreational water contact (campers and staff) tick all applicable:

Recreational Water	Day of onset (when 1 st person became unwell)	Day before onset	2 days before onset	3 days before onset
Swimming pool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water slides	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Theme park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stream, river, dam, lake, ocean	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide details e.g. name of pool				

Animal contact:

Did any campers have contact with animals in the 3 days prior to becoming unwell?

Yes No Unknown

If yes, was it direct contact, which is touching? Yes No Unknown

Type of animals: Date and time of contact (if known):

Phone your local public health unit to notify of an outbreak ([Public Health Unit contact details](#))

If possible, fax/email this form to your local public health unit.

Otherwise, hand this form to a public health officer when they arrive at camp.

Appendix 2 – Specimen collection form

Name of camp facility: _____

Contact person: _____ Contact person's position: _____ Contact number/s: _____

No	First name	Last name	Date of birth	Specimen type (e.g. faeces, vomit, food sample)	Collection		Comments
					Date	Time	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Appendix 3 – Collecting a faecal sample

Step 1

If it is your sample, write on the label:

- your name
- your date of birth
- your gender
- the date and time you collected the sample.



Step 2

Use one of these methods to collect some of your faeces for testing.

Hold a clean disposable
plastic container
underneath



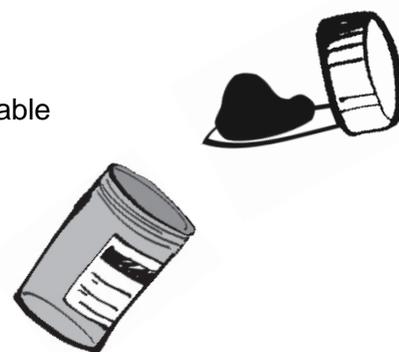
Hold a clean plastic bag underneath

OR



Step 3

- Use the scoop inside the lid of the container or a clean disposable spatula to transfer a small amount (e.g. 5–10 ml or an amount similar to a cherry or marble) of faeces to the container.
- Screw on the lid and wash your hands.
- Place container inside plastic bag.
- Place plastic bag inside white bag.
- Keep the sample in a cool place (in esky or fridge).
- Store away from food.



Important

- Keep the faeces sample free from urine if possible.
- If blood or mucus is present in the faeces, some should be included in the sample.
- When you have transferred the sample to the container, dispose of the materials you used to collect it by wrapping in newspaper and putting in the rubbish immediately.
- Place sample in esky with icepacks or refrigerate AWAY from food.
- Wash your hands.

Appendix 4 – Advice for staff

Outbreak of viral gastroenteritis in a camp facility

This is to advise you that several staff and/or campers within this facility have become sick with 'gastroenteritis' (nausea, vomiting and/or diarrhoea).

The public health unit has advised that they suspect the cause is a virus. Viruses are a common cause of vomiting and diarrhoea, and occasionally can cause outbreaks in setting such as child care centres, aged care facilities and camp and convention settings. The illness may last a day or two and it generally settles without further problems, but it can be a serious illness for the very young or the elderly. There is generally no specific treatment other than maintaining a good fluid intake.

Viral gastroenteritis is highly infectious and can be spread in the following ways:

- By person to person contact
- By eating something that has been contaminated through contact with infected vomit or faeces.
- By indirect contact from the contaminated hands of a sick person to objects, surfaces, food or water and then to another person.
- By airborne spread when a person vomits. (When a person vomits, large amounts of virus can pass into the air as an invisible mist, infecting other people nearby).

The public health unit recommends the following:

Ensure thorough hand washing:

How to wash your hands

- Wet hands with running, drinking-quality water (warm water if available is better than cold water), apply liquid soap to hands and rub hands vigorously for at least 15 seconds. Pay particular attention to washing the palms and backs of hands, in between fingers, under finger nails and around wrists.
- Rinse hands and dry them thoroughly using a disposable paper towel if available, or otherwise a clean towel. Do not dry your hands on another person's towel.
- Prevent hands from becoming sore or chapped by avoiding harsh cleansers and by drying hands thoroughly.
- Use alcohol-based hand gel if soap and water are not available.

When to wash and dry your hands:

- before food preparation, handling and serving
- before eating
- before smoking
- after going to the toilet
- after contact with blood, faeces or vomit
- after handling garbage.

Wear appropriate personal protective equipment:

- Wear gloves whenever there is a risk of exposure to body substances.
- Wear waterproof aprons or gowns whenever there is a risk of contamination of your skin or clothing by body substances.

Report any sickness:

If you become sick you must notify your manager. You should not return to work until at least 48 hours after all symptoms of diarrhoea, vomiting, abdominal pain and nausea have stopped

Appendix 5 – Advice for campers

Outbreak of viral gastroenteritis in a camp facility

This is to advise you that several campers and/or staff of this facility have become sick with 'gastroenteritis' (nausea, vomiting and/or diarrhoea).

The public health unit has advised that they suspect the cause is a virus. Viruses are a common cause of vomiting and diarrhoea, and occasionally can cause outbreaks in setting such as child care centres, aged care facilities and camp and convention settings. The illness may last a day or two and it generally settles without further problems, but it can be a serious illness for the very young or the elderly. There is generally no specific treatment other than maintaining a good fluid intake.

Viral gastroenteritis is highly infectious and can be spread in the following ways:

- By person to person contact.
- By eating something that has been contaminated through contact with infected vomit or faeces.
- By indirect contact from the contaminated hands of a sick person to objects, surfaces, food or water and then to another person.
- By airborne spread when a person vomits. (When a person vomits, large amounts of virus pass into the air as an invisible mist, and can infect other people nearby).

The public health unit recommends the following:

Ensure high levels of personal hygiene:

- Wash your hands thoroughly.
 - a) Wet hands with running, drinking-quality water (warm water if available is better than cold water), apply liquid soap to hands and rub hands vigorously for at least 15 seconds. Pay particular attention to washing the palms and backs of hands, in between fingers, under finger nails and around wrists.
 - b) Rinse hands and dry them thoroughly using a disposable paper towel if available, or otherwise a clean towel. Do not dry your hands on another person's towel.
 - c) Prevent hands from becoming sore or chapped by avoiding harsh cleansers and by drying hands thoroughly.
 - d) Use alcohol-based hand gel if soap and water are not available.
- Do not share drink bottles/cups or eating utensils.
- Please avoid contact with people who are sick with this illness.
- If you become sick, please notify management.

-
- If you become sick and feel like vomiting while you are in a public place such as eating areas, try to leave the area as soon as possible. If you are unable to make it to a bathroom, go outside to be sick. This will reduce the risk of spreading the infection to others. Avoid contact with other people until all your symptoms have completely gone.

Appendix 6 – Advice for visitors/volunteers

Outbreak of viral gastroenteritis in a camp facility

This is to advise you that several campers and/or staff of this facility have become sick with 'gastroenteritis' (nausea, vomiting and/or diarrhoea).

The public health unit has advised that they suspect the cause is a virus. Viruses are a common cause of vomiting and diarrhoea, and occasionally can cause outbreaks in setting such as child care centres, aged care facilities and camp and convention settings. The illness may last a day or two and it generally settles without further problems, but it can be a serious illness for the very young or the elderly. There is generally no specific treatment other than maintaining a good fluid intake.

Viral gastroenteritis is highly infectious and can be spread in the following ways:

- by person to person contact
- by eating something that has been contaminated through contact with infected vomit or faeces
- by indirect contact from the contaminated hands of a sick person to objects, surfaces, food or water and then to another person
- by airborne spread when a person vomits. (When a person vomits, virus particles may pass into the air as an invisible mist, and can infect other people nearby).

The public health unit has made the following recommendations in regard to visiting:

- Visiting may be restricted, please telephone the facility prior to visiting.
- Please postpone any visits to an affected part of the facility until further notice.
- If you are visiting a non-affected part of the facility, please wash your hands on arrival and before you leave.
- If you are sick yourself, please notify management and do not visit.

Appendix 7 – Template letter to camper

____/____/20____

Dear Camper

Please find attached information regarding a gastroenteritis outbreak that occurred at camp.

The following further advice has been agreed on for parties involved with the _____ camp outbreak this week:

1. All campers who have been sick with gastroenteritis should stay away from work or school until they have been symptom free for 48 hours and no sooner than _____.
2. All other campers who have not been ill should stay away from work or school tomorrow (_____), returning back to work or school on _____ as long as they have remained well.
3. Any campers attending the camp who develop gastroenteritis symptoms over the next few days should stay away from work or school until they have been symptom free for 48 hours.
4. Other work or school activities should continue as usual.

If you require further information, please contact _____ public health unit on _____.

Yours sincerely

Dr _____

Public Health Physician

Appendix 8 – Template letter to parents (of campers in a school group)

____/____/20____

Dear Parent

Please find attached information regarding gastroenteritis outbreak that occurred at _____ camp.

The following advice is provided for schools involved with the camp outbreak:

1. All students/staff who have been sick with gastroenteritis should stay away from school and camp and may return when they have been symptom free for 48 hours and no sooner than _____.
2. All students/staff who have not been ill should stay away from school tomorrow____, and may return on _____ as long as they have remained well.
3. Any students/staff attending the camp who develop gastroenteritis over the next few days should stay away from school until they have been symptom free for 48 hours.
4. Other school activities should continue along as usual.

If you require further information, please contact _____public health unit on _____.

Yours sincerely

Dr _____

Public Health Physician

Appendix 9 – Advice for students (campers in a school group)

Outbreak of viral gastroenteritis in a camp facility

This is to advise you that several students and/or staff of the camp facility have become sick with 'gastroenteritis' (nausea, vomiting and/or diarrhoea). The public health unit has advised that the suspected cause is a virus.

Viral gastroenteritis often causes large numbers of people to be sick in a short period of time. The viruses involved are highly infectious and pass very easily from person to person. Bacterial gastroenteritis is less readily passed from person to person than viral gastroenteritis but large numbers of people may become sick through consuming the same contaminated food and/or fluids.

The illness may last a day or two and it generally settles without further problems, but it can be a serious illness for the very young or the elderly. There is generally no specific treatment other than maintaining a good fluid intake.

What is viral gastroenteritis?

Viral gastroenteritis is caused by many different kinds of viruses, with norovirus being the most common cause of vomiting and diarrhoea outbreaks in camp facilities. Common symptoms include: vomiting, which can be violent and profuse; diarrhoea; nausea; stomach cramps; fever; headache; and muscle aches. Symptoms usually take from 24 to 48 hours to develop, but may develop within 12 hours.

How is viral gastroenteritis spread?

Viral gastroenteritis is extremely infectious. It can be spread by:

- person-to-person contact, from the germs being transferred from hand to mouth
- indirect contact from the contaminated hands of an sick person to objects, surfaces, food or water and then to another person
- airborne spread. When a person vomits, virus particles may pass into the air as an invisible mist and inhaled by nearby people.

The public health unit recommends the following

Ensure high levels of personal hygiene:

- Wash your hands thoroughly.
 - a) Wet hands with running, drinking-quality water (warm water if available is better than cold water), apply liquid soap to hands and rub hands vigorously for at least 15 seconds. Pay particular attention to washing the palms and backs of hands, in between fingers, under finger nails and around wrists.
 - b) Rinse hands and dry them thoroughly using a disposable paper towel if available, or otherwise a clean towel. Do not dry your hands on another person's towel.
 - c) Prevent hands from becoming sore or chapped by avoiding harsh cleansers and

by drying hands thoroughly.

d) Use alcohol-based hand gel if soap and water are not available.

- Do not share drink bottles/cups or eating utensils.
- Please avoid contact with people who are sick with this illness.
- If you become sick, please notify management.
- If you become sick and feel like vomiting while you are in a public place such as eating areas, try to leave the area as soon as possible. If you are unable to make it to a bathroom, go outside to be sick. This will reduce the risk of spreading the infection to others. Avoid contact with other people until all your symptoms have completely gone.

Someone with viral gastroenteritis is potentially infectious while they have the symptoms and for up to 48 hours after the symptoms have stopped.

Abbreviations

NHMRC	National Health and Medical Research Council
MC&S	Microscopy, culture and sensitivity

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