A guide for the management and control of gastroenteritis outbreaks in aged care, special care, health care and residential care facilities

Communicable Disease Prevention and Control Unit
Department of Health
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* This guide is a supplement to the *Guidelines for the investigation of gastroenteritis*, which is a comprehensive guide to assist environmental health officers to investigate gastroenteritis outbreaks. The appendices listed here are appropriate to the industry-specific setting, and are therefore not in sequential order.
A guide for the management and control of gastroenteritis outbreaks in aged care, special care, health care and residential care facilities
1. Introduction

This guide has been produced to assist in the management and control of outbreaks of gastroenteritis (gastro) in aged care, special accommodation, hospitals and other residential facilities. Owners, managers, directors of nursing, infection control practitioners and all clinical and allied health staff should follow these guidelines to manage and control gastroenteritis outbreaks. They may also need to liaise with council environmental health officers (EHOs), and the Department of Health (DH) if an outbreak investigation is conducted.

This guide is a supplement to the Guidelines for the investigation of gastroenteritis, which is a comprehensive guide to assist EHOs in their role of investigating gastro outbreaks. The Guidelines for the investigation of gastroenteritis is available at www.health.vic.gov.au/ideas

1.1 Gastroenteritis

Gastroenteritis may be caused by a variety of different bacteria, viruses or parasites. Symptoms of diarrhoea, nausea, vomiting and abdominal pains may be experienced over several hours, days or weeks, and may also be accompanied by fever, headache and lethargy. Generally, gastrointestinal pathogens are spread by direct person-to–person transmission (viruses), via aerosols of vomit, from contact with contaminated surfaces, or by consuming contaminated food or water (bacteria, viruses or parasites). The time from becoming infected to the commencement of symptoms (the incubation period) can vary from a few hours to several days.

In recent years, the numbers of gastroenteritis outbreaks in aged care facilities, hospitals and residential facilities has increased. Residents and patients of many of these facilities represent populations at high risk for gastroenteritis, who tend to experience greater severity and longer duration of illness. In these settings, transmission of disease may be complicated by close living conditions, shared bathroom facilities, low mobility and incontinence.

Gastroenteritis is generally self-limiting and no treatment is required, however, this is a decision for the treating doctor. Given the highly susceptible populations in aged care and health care facilities, it is essential that outbreaks of gastroenteritis are contained (keeping the number of patients, residents and staff infected to a minimum) as quickly as possible by implementing the infection control procedures outlined in these guidelines.

1.2 Viral gastroenteritis

Recent increases in gastro outbreaks in aged care, hospitals and residential facilities are largely due to a highly infectious virus called norovirus. Norovirus is transmitted from person to person by faecal-oral spread, via aerosolised vomit or by consuming food contaminated by an infected person. It is a very hardy virus that can survive in the environment for weeks and withstand freezing, heating to 60°C and weak chlorine solutions. The incubation period is thought to be 10–50 hours, and symptoms, predominantly vomiting, diarrhoea and abdominal pain, usually last for only 24–48 hours. As the virus passes from one person to the next, onset of illness in cases tends to occur over several days, rather than all at the same time.
1.3 Foodborne illness

Gastroenteritis can also be caused by eating contaminated food. Most foodborne illness is caused by bacteria which, given the right conditions, can grow in the food to numbers sufficient to infect the consumer – this is called the infective dose. If there is no further cooking, or if the cooking process is inadequate, the bacteria may survive and infect those who eat the food.

Certain foods are considered to be high risk for susceptible populations such as the elderly, very young children and those who are already ill. These foods should not be served to residents of aged care facilities or patients in hospital (table 1). Eggs can be high risk as they may be contaminated with *Salmonella* bacteria, and so should not be eaten raw or undercooked. Eggs should always be kept in the fridge in the original carton and used before the best-before date on the carton. Cracked and/or dirty eggs should be discarded. When storing, handling and preparing eggs, always take the same precautions as you would for raw chicken, meat, seafood and dairy products.

Soft cheeses, deli meats, uncooked or smoked fish, pre-prepared salads and sandwiches containing any of these ingredients may sometimes be contaminated with *Listeria* bacteria, which can cause serious illness and death in the elderly and anyone whose immune system has been weakened by disease, illness or medications. All of these foods should be avoided, or only served in cooked, hot dishes for vulnerable people.

Bacteria called *Clostridium perfringens* can survive the cooking process in a spore state. The spores may germinate to live bacteria that can then grow to large numbers in the food and produce a toxin (poison) in the gut of the consumer. This bacteria may be found in meat-based foods such as soups, gravies, casseroles and roasts, so if these foods are prepared ahead of serving time, they must be cooled quickly in small quantities, and stored in the fridge, and then re-heated quickly to at least 75°C before serving. It is not safe practice to repeatedly cool and reheat food over several meals or days – re-heat food only once.

Bacteria called *Staphylococcus aureus* can also produce toxins in food if allowed to grow to high numbers. As food can be contaminated with *Staphylococcus aureus* from a food handler’s hands it is essential that ready-to-eat food is not handled with bare hands. It is also important to keep food at less than 5°C or above 60°C to reduce the risk of any bacterial growth.

Care should always be taken to follow all aspects of the Food Safety Program (FSP), especially with regard to personal hygiene of food handlers, temperature control, cross-contamination and cleaning and sanitising procedures. Food safety records should be maintained continually to show that food is being stored, prepared and served safely and that food handling staff are well trained in all aspects of food hygiene.
1.4 Waterborne illness

Gastroenteritis can be caused by drinking contaminated water. Waterborne illness may be caused by parasites such as *Giardia* and *Cryptosporidium*, by bacteria or by viruses. It is therefore essential that all facilities provide safe water for their residents, patients and staff at all times.

All water used for drinking and food preparation must be potable (safe to drink). The water quality standards for potable water are described in the Australian drinking water guidelines, available at [http://www.nhmrc.gov.au/](http://www.nhmrc.gov.au/)

Private water supplies, such as dams, rivers, bores and rainwater tanks, cannot be guaranteed to be free of pathogens. For this reason, private water supplies that need to be potable should be treated to prevent the risk of waterborne illness. As the level of treatment is dependent upon the quality of the source water, proprietors should seek advice from a water quality specialist to ensure the treatment system is appropriate for their circumstances.

If water used at a facility, at the time of an outbreak, is other than mains supplied (such as from a bore, rainwater tank or dam), the proprietor must provide the council EHO with the most recent evidence of potability (a sampling laboratory report showing that the water is safe to drink). If the cause of an outbreak is suspected to be waterborne (for example, from contaminated rainwater tanks, bore water or other private water supplies), the EHO will collect samples of water for laboratory testing.

1.5 Antibiotic-related diarrhoea

Diarrhoea in residents of care facilities, particularly aged care, can be caused by a bacteria called *Clostridium difficile*. This diarrhoeal illness generally lasts longer than two days. The bacteria is present in 2–3 per cent of healthy adults, but diarrhoea can result when changes to the normal gut bacteria allow the *Clostridium difficile* bacteria to grow in numbers and produce a toxin. The use of antibiotics is the key factor affecting the normal gut bacteria. Outbreaks of antibiotic-related diarrhoea are most likely to occur in patients/residents who are taking, or have recently taken, antibiotics. Other risk factors include being older than 60 years, and spending time in health care or residential care settings. For this reason it is important when notifying an outbreak to indicate any antibiotic treatment of symptomatic patients/residents.
**Table 1: High risk foods for the elderly or immunocompromised**

<table>
<thead>
<tr>
<th>Food</th>
<th>Advice</th>
<th>Safer alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eggs</strong></td>
<td><strong>Do not add raw eggs to food (e.g. custard) or drinks (e.g. milkshakes, protein shakes) unless the food or drink is then cooked/reheated to 75°C.</strong>&lt;br&gt;<strong>Do not make sauces, salad dressings or desserts (e.g. mayonnaise, hollandaise sauce, trifle, tiramisu) using raw eggs.</strong>&lt;br&gt;<strong>Do not serve undercooked (sloppy/runny) eggs.</strong></td>
<td><strong>Use pasteurised egg pulp or powdered eggs for foods that are not cooked.</strong>&lt;br&gt;<strong>Purchase commercial brands of sauces and salad dressings.</strong>&lt;br&gt;<strong>Cook eggs, and food containing raw eggs, well, so that all parts of the egg are firm.</strong></td>
</tr>
<tr>
<td><strong>Soft cheeses</strong></td>
<td><strong>Do not serve cheeses such as brie, camembert, ricotta or fetta (unless they are in a dish that is cooked and served hot).</strong></td>
<td><strong>Serve hard cheeses (e.g. cheddar) or processed cream cheese or cheese spreads.</strong></td>
</tr>
<tr>
<td><strong>Retailed precooked meat products (such as pate and deli meats)</strong></td>
<td><strong>Do not serve these products uncooked, as part of a meal or in sandwiches.</strong></td>
<td><strong>Only serve in cooked, hot dishes (e.g. toasted sandwiches, pizzas, pasta).</strong></td>
</tr>
<tr>
<td><strong>Ready to eat seafood (e.g. smoked fish, mussels, oysters, raw seafood)</strong></td>
<td><strong>Do not serve uncooked or smoked fish or seafood.</strong></td>
<td><strong>Only serve cooked, hot fish and seafood, or canned fish.</strong></td>
</tr>
<tr>
<td><strong>Pre-prepared or stored salads (e.g. coleslaw, fruit salad)</strong></td>
<td><strong>Do not prepare salads too far ahead of serving, even if they are stored in the fridge.</strong>&lt;br&gt;<strong>Do not serve leftover salads for subsequent meals.</strong></td>
<td><strong>Always wash salad ingredients thoroughly, and prepare them as close to serving as possible.</strong></td>
</tr>
<tr>
<td><strong>Leftover roast meats to be used in salads or sandwiches</strong></td>
<td><strong>Slice, cover and cool roast meats quickly and store refrigerated. Serve in sandwiches and salads within 24 hours.</strong></td>
<td><strong>Use processed fillings for sandwiches (e.g. vegemite, cream cheese, canned tuna) and use leftover roast meats in hot dishes (reheat to 75°C).</strong></td>
</tr>
<tr>
<td><strong>Ready-to-eat foods, including leftovers that have been in the fridge for more than one day</strong></td>
<td><strong>Do not serve these foods cold.</strong></td>
<td><strong>Always reheat any leftovers to 75°C before serving.</strong></td>
</tr>
<tr>
<td><strong>Soups, gravies, casseroles and roasts</strong></td>
<td><strong>If prepared ahead of service, decant or slice into small shallow containers, cover and refrigerate. Re-heat quickly to at least 75°C (‘liquid’ foods should reach boiling).</strong></td>
<td><strong>Prepare as needed, and serve hot immediately whenever possible.</strong></td>
</tr>
</tbody>
</table>

*Prevention is better than cure!*
2. What should happen in the event of a gastroenteritis outbreak?

This section describes the various steps that need to be undertaken if a gastroenteritis outbreak occurs, including notification, control measures and other actions required to assist in the investigation of the outbreak, such as faecal specimen collection. These steps are summarised in a flow chart at the end of this guide (Gastro outbreak management summary). An outbreak management checklist has also been designed to assist facilities in managing their gastroenteritis outbreak (Appendix 8). This checklist identifies the tasks that need to be undertaken and allows individual tasks to be signed off by staff members.

2.1 Notify the outbreak

Is a gastro outbreak occurring?

An outbreak may be defined as more than the expected number of cases of illness over a given time period. An outbreak in a care facility is defined as two or more cases of vomiting and/or diarrhoea among residents/patients and/or staff (that cannot be explained by medication or other medical conditions) within 72 hours, in a setting that makes epidemiological sense.

It is important to note that this definition may not always cover all outbreaks. Any concerns regarding gastroenteritis amongst residents/patients should be discussed with the Department of Health.

How do you notify a gastro outbreak?

If you suspect you have a gastro outbreak, the first step is to notify the Department of Health on 1300 651 160 within 24 hours. The department officer will collect information on the number of cases, symptoms, duration of illness and other details, and can discuss any issues you may have and provide advice if necessary. Based on the information you provide, the officer will assess the probable cause of the outbreak and the way in which it is likely to spread.

What if someone dies during a gastro outbreak?

The death of any resident/patient during a gastrointestinal outbreak should be reported to the department within 24 hours, giving the cause of death if known.

What can be done to control the spread of illness?

Once an outbreak of gastroenteritis has been identified it is essential that cleaning and infection control measures are implemented immediately to reduce the risk of the infection spreading and the number of cases increasing. Clean-up and control measures should be implemented for all gastrointestinal outbreaks as soon as possible after an outbreak is suspected, and should continue until the outbreak has been confirmed as being over (48 hours after symptoms have ceased in the last case – no further cases of illness occurring).

If the premises is registered with local government, you will be contacted by your council EHO, who may visit the facility to conduct an inspection, check that infection control measures have been implemented, collect further information and provide advice.
The control measures outlined in this guide have been suggested to reduce the risk of:

- people contracting the illness from contaminated food or water
- infected people passing the pathogen to others
- the pathogen remaining in the environment and being able to infect others.

2.2 Implement cleaning and infection control procedures

This section describes the various clean-up and control measures that should be implemented for all outbreaks of gastroenteritis, as well as additional control or investigational measures that should be implemented for food or water borne outbreaks.

2.2.1 Control measures for all gastro outbreaks

General clean-up procedures for all outbreaks

For all gastrointestinal outbreaks, the following cleaning procedures must be carried out to ensure that all areas in the facility are effectively cleaned and sanitised:

- **In the kitchen** clean and sanitise all work surfaces, benches, shelving, doors, door and cupboard handles, storage areas, sinks, floors and any other areas possibly contaminated. Hot water and detergent should be used to wash, followed by a solution of 1,000ppm of available chlorine as a disinfectant (Appendix 6). Leave disinfectant on surfaces for ten minutes then rinse with cold water and dry.

- **All kitchen food contact surfaces** must be cleaned and sanitised (such as utensils, equipment, crockery and cutlery). This should be done by washing with hot water and detergent, sanitising, and then rinsing with clean cold water. Sanitising can be carried out in one of the following ways:
  - Immersing in hot water at a minimum of 82°C for two minutes (this can be done in a dishwasher as long as the rinse cycle reaches this temperature).
  - Washing by hand then immersing in 100ppm of available chlorine for at least three minutes at 50°C. Water from the hot water tap should be 50°C.
  - For equipment that cannot be completely immersed, 200ppm of chlorine should be used on all surfaces for 10 minutes.

- **All other areas** of the premises, including dining rooms, cases bedrooms, communal areas and bar areas should be cleaned. Hot water and detergent should be used to wash, followed by a solution of 1,000ppm of available chlorine as a disinfectant. Leave disinfectant for ten minutes then rinse with cold water and dry.

- **Toilet/bathroom areas** must be cleaned thoroughly, including toilet bowls, hand wash basins, tap handles, doors, door handles, toilet flush buttons/handles, floors and any other areas that may have been contaminated. Hot water and detergent should be used to wash, followed by a solution of 1,000ppm of available chlorine as a disinfectant. Leave disinfectant on surfaces for ten minutes then rinse with cold water and dry.

Specific control measures may depend upon:

- the pathogen (bacteria or virus) known or suspected to be responsible for the illness
- the way in which the pathogen spreads to others (known or unknown)
- the setting where the outbreak has occurred.
• All items or fittings that are touched frequently should be washed with detergent and hot water, disinfected with 1,000ppm chlorine solution for ten minutes, then rinsed with cold water and dried (this includes, commodes, bedpans, cupboard handles, bath and toilet rails, telephones, meal trays, bedside tables, lockers, banisters and hand rails) - use disposable cleaning cloths and equipment.

• Ensure that when a faecal accident has occurred (for example in dining room, bathroom) all surrounding surfaces are cleaned using hot water and detergent followed by 1,000ppm of available chlorine for 10 minutes as a disinfectant, then rinsed with cold water and dried.

• Ensure that when vomiting has occurred (for example, in dining room, bathroom) all surrounding surfaces are cleaned using hot water and detergent followed by 1,000ppm of available chlorine for 10 minutes as a disinfectant, then rinsed with cold water and dried. All people should be immediately removed from the area for at least one hour (when a case vomits a fine mist of virus particles is introduced into the air and can easily infect others and contaminate surfaces). Any uncovered food in the immediate area must be discarded.

• For cleaning of faecal accidents and vomit ensure that disposable brushes, mops and cloths are used, and discarded after use.

• All carpets contaminated by vomit and/or faeces should be steam cleaned, as high temperature and moisture are required to kill viruses. Clean all surface soiling thoroughly with hot water and detergent. Then use a vapour steam cleaner that boils the water until it turns to steam, rather than carpet cleaners as these use lower temperature hot water to wet the carpet (they are often called ‘steam cleaners’ but do not actually use steam). True steam cleaners release steam under pressure, which ensures that the temperature is above 100°C, and the carpet dries quickly.

As some viruses can survive for extended periods of time in the environment, and infection generally results in short-term immunity only, the following is advised:

• Mattresses and soft furnishings (including pillows, curtains and doonas) that have been contaminated by vomit and/or faeces should be steam cleaned. If this is not possible, consider discarding them.

• All soiled linen, including sheets, towels and blankets, should be laundered separately using the hottest washing machine cycle. The Australian Standard AS/NZS4146 (2000) provides guidelines for correct laundry practice, including water temperatures and times for correct disinfection.

• Disposable gloves and aprons should be worn when handling soiled linen.

• Vacuuming carpets and polishing floors should be avoided during an outbreak, as these can cause viruses to recirculate and continue to infect people.
General infection control measures for all outbreaks

For all gastroenteritis outbreaks, the following infection control measures must be implemented as soon as possible to reduce the risk of spreading the illness:

• Wherever possible, ensure that ill people are isolated from well residents/patients.

• Ensure that only food handling staff have access to the kitchen and other food preparation areas.

• Where possible, in order to reduce the risk of transmission, assign staff to specific duties during an outbreak, rather than allowing them to undertake multiple tasks in several areas (for example, carers should not also prepare or serve food; food handlers should not also assist with cleaning).

• Ascertain if any staff have been ill with gastrointestinal symptoms (this includes all food handling staff, kitchen staff, waiting staff, serving staff/volunteers and may also include nursing or personal care staff) and ensure that they are sent home and do not return to work until 48 hours after symptoms have stopped, or, if the pathogen is known, for the time period specified in the guidelines for exclusion (Appendix 3).

• Send all other ill staff home and request that they do not return to work until 48 hours after their symptoms have ceased or, if the pathogen is known, for the time period specified in the guidelines for exclusion (Appendix 3).

The following is also advised:

• Where possible, ensure there are dedicated staff to care for ill residents/patients, and that these staff do not attend to well patients. Also ensure that all staff observe strict hand washing procedures, especially between attending to patients/residents.

• Use protective clothing, such as disposable gloves (with hand washing after gloves are removed) and plastic aprons or gowns, when cleaning up after ill residents/patients (for further information see Appendix 3 in The Blue Book at www.health.vic.gov.au/ideas/bluebook).

• Instruct agency nursing, allied health, child care and medical staff about the risks of transmission to other facilities where they may also be working.

• Wherever possible, isolate ill residents/patients for at least 48 hours after symptoms have ceased. However, where well and unwell patients/residents share a room/ward it may not be advisable to separate them as those who currently have no symptoms may be incubating the infection.

• Restrict the movement of patients/residents and staff between units, sections, and wards.

• Where possible, serve meals directly to patients/residents rooms, rather than in a communal dining area.
• Do not admit new patients/residents during an outbreak. If this is unavoidable, ensure that the new patient/resident is admitted to a room/ward/area with no ill patients/residents. Ill residents of a facility who have been admitted to hospital with gastroenteritis should however be re-admitted to the facility once they are discharged from the hospital, and appropriate precautions should be undertaken to prevent further transmission of the illness.

• Avoid transferring patients/residents to other facilities while the outbreak is in progress. If this is unavoidable, ensure that the receiving facility is informed of the outbreak so that they can take appropriate precautions to prevent transmission of the illness in their facility.

• Suspend all non-essential and non-medical activities, treatments, services and social gatherings during the outbreak.

• Suspend all swimming, hydrotherapy and communal spas during the outbreak.

• Avoid serving ‘self-serve’ foods, such as fruit platters or bowls, cheese platters, sandwich plates and lolly bowls, where residents’ hands may contaminate the foods and therefore each other. Individually served portions are a better alternative.

• Ensure that toilet lids are closed before flushing to prevent faecal and/or vomit contaminated airborne droplets being generated.

• Post signs at all entrances stating that a gastroenteritis outbreak is occurring. Signs advising of hand washing could also be posted above hand washbasins in all toilet, bathroom and kitchen areas. Suggested signs are provided in Appendix 12.

Hand washing for all outbreaks

Effective hand washing is the most important measure in preventing the spread of infection and should be practised by all staff at all times. Health care staff may generally use alcohol wipes or antibacterial gels (as per the Victorian Hand Hygiene Project, at www.health.vic.gov.au/qualitycouncil/), to reduce the risk of transmission of bacteria such as MRSA (methicillin resistant Staphylococcus aureus) while going about their routine duties. However, while these products are able to kill bacteria on the hands, they are far less effective against viruses. While washing with soap and running water does not kill viruses, it can physically wash them off the skin and down the drain, which reduces the numbers of viruses on the hands to a safer level. In outbreak situations where the pathogen is often unknown, it is essential that thorough hand washing is undertaken by ALL staff as follows:

• Using warm water and soap, rub hands together vigorously for 40–60 seconds, ensuring that all surfaces are washed thoroughly including the wrists and around the nails.

• Rinse well under running water to remove all soap residues.

• Dry thoroughly using disposable paper towels. Multi-use cloth towels and air dryers are not suitable during outbreaks.
Hands should be washed in this way:

- before entering a food preparation area
- after any break
- after eating or smoking
- after going to the toilet
- after using a handkerchief or tissue
- after touching hair, scalp, nose or mouth
- after handling any raw food
- anytime hands are visibly soiled
- before putting on, and after removing, disposable gloves
- after any cleaning tasks, and especially after cleaning toilets and bathroom areas
- after emptying garbage containers
- before and after every patient/resident contact (remember: patients with no symptoms may be incubating the disease, and could therefore be infectious)
- after assisting patients/residents with the toilet
- after handling any bed linen or clothes
- after handling dishes and cutlery used by patients/residents
- after cleaning up of any vomit or diarrhoeal accidents
- before and after assisting patients/residents with meals.

If food handling staff choose to wear disposable gloves, ensure they understand that these are single use only and need to be changed between every task and disposed of safely.

Ensure that the need for careful hand washing during outbreaks is communicated to all staff (including nurses, doctors, specialists, allied health staff, patient care staff, food handlers, cleaners, auxiliary staff and casual or agency staff, carers and assistants) and all visitors and patients/residents. They should all understand that thorough hand washing during outbreaks is the most effective way to reduce the risk of infecting themselves and passing the infection on to others, both at work and at home.

Hand washing, as described here, should be continued until the outbreak has been declared to be over, and staff may then return to their routine hand hygiene practices.
Visitors to the facility

It is advisable to ensure that:

• visiting is limited during gastrointestinal outbreaks
• all visitors to a facility are made aware of the outbreak, and the need for them to follow all infection control procedures (including washing hands before and after visiting a resident/patient, and not visiting other residents/patients)
• visitors experiencing symptoms of gastroenteritis are advised not to visit the facility until 48 hours after their symptoms have ceased
• visitors are discouraged from bringing young children to visit during an outbreak as they are highly susceptible to infection
• visitors are discouraged from bringing food to the facility to share amongst the residents/patients during an outbreak.

2.2.2 Additional control measures for food or water borne outbreaks

If it is suspected that the outbreak is food or water borne (caused by eating contaminated food or drinking contaminated water), you may be required to undertake tasks in addition to those measures described above.

Additional infection control measures

• If requested, arrange for ill food handling staff to give faecal specimens (in some circumstances faecal specimens may be required from all food handling staff, and the EHO will advise of this).

Food

• Stop serving any suspect food or water (the EHO can advise on this).
• Allow the EHO to collect samples of foods and/or ingredients, and swabs of equipment or the kitchen environment. This should occur before the clean-up has been conducted.
• Allow the EHO to take away any equipment that is suspected to be contaminated, such as a blender used to blend raw ingredients.
• Under the supervision of the EHO, dispose of any contaminated or implicated food.

Water

If the facility uses non-mains water (such as water from rainwater tanks):

• allow the EHO to collect samples of water
• provide the EHO with the most recent documentation proving potability of the water (the water is safe to drink)
• ensure that all water intended for drinking, food preparation and brushing teeth is boiled before use, until results of laboratory testing are available. Alternatively, water must be brought in from a safe source, or existing water supplies must be treated by the most appropriate method.
Additional information to assist the outbreak investigation

As part of a foodborne disease outbreak investigation, the EHO may also:

- conduct a food safety compliance check/inspection
- request a copy of the menus for all meals served in the week before onset of illness in the first case
- collect details of the type of meals served to individuals, such as vitamised, soft option, peg fed, as well as any specific dietary or nutritional needs of individuals. A Food history support form has been developed for this purpose (Appendix 7)
- require details of the methods of service/distribution of meals
- request as much detail as possible regarding the food process steps for preparing any implicated foods
- request details of three-day food history for all cases (this information will usually be best obtained from care staff)
- require a copy of the suppliers list for the business (this should be easily available as a part of your FSP)
- review your FSP, particularly with regard to processes in place for the preparation of suspect foods and maintenance of records
- require a copy of the most recent food safety auditor’s report
- sometimes require that interviews are conducted with all exposed people.

2.3 Complete case lists

Each facility should prepare a case list of all residents/patients and staff who have been ill (Appendix 9). These case lists must be faxed to the council EHO and to the department.

So that the outbreak can be monitored effectively, you will be requested to update this list and send it to your council EHO twice per week during an outbreak, or more often as requested, for example during suspected food or water borne outbreaks. This means that new cases (people who have started to have symptoms since the last case list was completed) should be added to the list, and any additional information on cases already on the list should be added, for example, a case may have been sent to hospital or a case’s symptoms may have stopped since the last time you updated the list.
2.4 Collect faecal specimens

To identify the pathogen responsible for an outbreak, faecal specimens from ill people should be tested by a laboratory. It is best to obtain faecal specimens as soon as possible after the onset of symptoms. Unless otherwise advised, faecal specimens should be collected from five ill people for each outbreak, and these should be from ill residents/patients and ill staff.

Ensure that all ill staff/residents/patients, and all staff who are assisting ill residents/patients, receive a copy of the Faecal specimen collection instructions (Appendix 10). It is the responsibility of the premises/facility to ensure that all specimen containers are adequately labelled with the name and date of birth of the case, the date of collection and the name of the outbreak or the name of the facility where the outbreak is occurring. Labelling is best done before the specimen has been collected into the container. Always record the date of faecal specimen collection for each case on the case list.

In outbreak situations, all faecal specimens should be forwarded to the Microbiological Diagnostic Unit (MDU) at the University of Melbourne. In most cases during outbreaks, council EHOs can provide faecal specimen collection kits and will arrange to collect the completed specimens and deliver them to the laboratory for testing.

For any queries concerning faecal specimen collection, contact the department or your council EHO.
3. Communication

It is essential that details of the outbreak and the control measures in place are conveyed to all staff, including casual or agency staff, allied health professionals and visiting medical practitioners/locums, and that staff are updated as the outbreak progresses. Staff briefings should give clear instructions on:

- transmission of gastroenteritis
- infection control procedures
- cleaning and sanitation procedures
- isolation of ill patients
- collection of faecal specimens
- restricted transfer of patients
- infection control measures in place for visitors
- exclusion of ill staff for 48 hours after symptoms cease
- staffing of wards/areas during the outbreak
- details of any agency/contract staff during the outbreak
- the need to liaise closely with council and/or the department during the outbreak investigation
- names and contact numbers for infection control personnel and the council EHO.

4. Privacy

In an outbreak situation, facilities are requested to provide council EHOs and the department with information pertinent to the investigation. Councils and the department are required to adhere to privacy legislation governing the collection, use and dissemination of personal information. This information includes names and illness information for all staff and patients/residents, which will be needed to complete the case lists.
Gastro outbreak management summary

1. **Gastro outbreak suspected or identified**
   - Notify the outbreak to DH
   - Inform ALL staff of the outbreak (including casual and agency staff) – keep staff informed as the outbreak progresses

2. **Start a case list as a record of those who are ill – forward updated list to DH at least twice per week**
3. **Arrange collection of faecal specimens from those who are ill**
4. **Provide DH and/or council with additional information as requested**
5. **Notify all deaths to DH immediately**

6. **Conduct outbreak cleaning, and repeat regularly throughout outbreak**
7. **Implement outbreak infection control procedures – note additional infection control for suspected foodborne outbreaks**
8. **Implement hand washing procedures immediately**
9. **Advise visitors/families of the outbreak (signage)**

Continue until outbreak is over (48 hours after symptoms stop in last case)
5. Appendices

8: Outbreak management checklist
6: Chlorine concentrations
3: Exclusion advice
7: Food history support form
9: Case lists
10: Instructions for the collection of faeces
12: Signage
This checklist has been designed to assist facilities in managing their gastroenteritis outbreak. The use of this checklist is optional, and DH does not require a copy.

<table>
<thead>
<tr>
<th>Date</th>
<th>Signature of person responsible</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

### Outbreak detected
- more than expected numbers of cases with gastro symptoms that cannot be explained by medication or other medical conditions

Name of outbreak coordinator:

Outbreak notified
- notify DH

<table>
<thead>
<tr>
<th>Date</th>
<th>Date provided or n/a</th>
<th>Signature of person responsible</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

### IMMEDIATELY:

<table>
<thead>
<tr>
<th>Person responsible</th>
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<tbody>
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</tbody>
</table>

- Follow outbreak control measures – as described in Guidelines
- Exclude ill staff from work – until 48 after symptoms have ceased
- Implement outbreak hand washing – as described in Guidelines
- Begin outbreak cleaning procedures – as described in Guidelines
- Complete case list(s) – include details of all ill staff and residents
- Collect faecal specimens - from ill patients/residents and staff
- Post signage – at appropriate locations throughout facility
- Communicate all outbreak information to all staff
- Other:

### PROVIDE DH and/or COUNCIL WITH:

<table>
<thead>
<tr>
<th>Date provided or n/a</th>
<th>Signature of person responsible</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

- Initial case list
- Faecal specimens for submission to lab (correctly labelled)
- Menus*
- Food process details*
- Food suppliers list*
- A copy of the Food Safety Program*
- Final case list

*if requested

### ON-GOING:

<table>
<thead>
<tr>
<th>Person responsible</th>
</tr>
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<tbody>
<tr>
<td></td>
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</table>

- Outbreak cleaning procedures conducted regularly
- Update case lists regularly and forward to council/DH
- Continued communication with all staff
- Other:
Appendix 8: Outbreak management checklist

Date outbreak over (48 hours after symptoms stopped in last case): ___ / ___ / ____

Review of outbreak management:

Recommendations for modifications/improvements to outbreak management:

Signature: ___________________________ Date: ___________________________
Chlorine concentrations required for disinfection

Chlorine based sanitisers (like household bleach) should be used in outbreak situations, as other sanitisers and disinfectants (such as quaternary ammonium compounds) are only effective against some bacteria but have very little effect on destroying viruses.

Chlorine solutions must be made up freshly as the chlorine deteriorates over time. To make the concentration required dilute the chlorine as follows:

**Milton disinfectant (with 1% available chlorine)**

<table>
<thead>
<tr>
<th>Volume of warm water to which chlorine is added</th>
<th>100ppm</th>
<th>200ppm</th>
<th>1000ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 litres</td>
<td>50 ml</td>
<td>100 ml</td>
<td>500 ml</td>
</tr>
<tr>
<td>10 litres</td>
<td>100 ml</td>
<td>200 ml</td>
<td>1000 ml</td>
</tr>
<tr>
<td>50 litres</td>
<td>500 ml</td>
<td>1000 ml</td>
<td>5000 ml</td>
</tr>
</tbody>
</table>

**Household bleach (with 4% available chlorine)**

<table>
<thead>
<tr>
<th>Volume of warm water to which chlorine is added</th>
<th>100ppm</th>
<th>200ppm</th>
<th>1000ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 litres</td>
<td>12.5 ml</td>
<td>25 ml</td>
<td>125 ml</td>
</tr>
<tr>
<td>10 litres</td>
<td>25 ml</td>
<td>50 ml</td>
<td>250 ml</td>
</tr>
<tr>
<td>50 litres</td>
<td>125 ml</td>
<td>250 ml</td>
<td>1250 ml</td>
</tr>
</tbody>
</table>

**Liquid pool chlorine (with 12.5% available chlorine – concentrations based on 10% available chlorine)**

<table>
<thead>
<tr>
<th>Volume of warm water to which chlorine is added</th>
<th>100ppm</th>
<th>200ppm</th>
<th>1000ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 litres</td>
<td>5 ml</td>
<td>10 ml</td>
<td>50 ml</td>
</tr>
<tr>
<td>10 litres</td>
<td>10 ml</td>
<td>20 ml</td>
<td>100 ml</td>
</tr>
<tr>
<td>50 litres</td>
<td>50 ml</td>
<td>100 ml</td>
<td>500 ml</td>
</tr>
</tbody>
</table>

**Granular chlorine (with 65% available chlorine) – if using sachets follow manufacturers instructions**

<table>
<thead>
<tr>
<th>Volume of warm water to which chlorine is added</th>
<th>100ppm</th>
<th>200ppm</th>
<th>1000ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 litres</td>
<td>0.8 g</td>
<td>1.5 g</td>
<td>8 g</td>
</tr>
<tr>
<td>10 litres</td>
<td>1.5 g</td>
<td>3 g</td>
<td>15 g</td>
</tr>
<tr>
<td>50 litres</td>
<td>8 g</td>
<td>15 g</td>
<td>77 g</td>
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</tbody>
</table>

**Important safety notes:**

- It is safer to add chlorine to water – do not add water to chlorine.
- Do not heat water to make up chlorine solutions – warm tap water is safer (up to 50°C).
- Use gloves when preparing and handling chlorine solutions.
- Use chlorine carefully as it is corrosive to metals, bleaches fabrics and may irritate the skin, nose and lungs.
- Follow safety, storage and handling instructions on all bleach and chlorine containers.

ppm = parts per million (a measure of concentration of chlorine)

5ml = 1 teaspoon. A standard bucket holds approximately 9-10 litres
### Exclusion guidelines for food handlers, health care workers and childcare workers

<table>
<thead>
<tr>
<th>Gastrointestinal illness/pathogen</th>
<th>Exclusion period advised</th>
</tr>
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<tbody>
<tr>
<td>Cholera, <em>Shigella</em>, STEC/VTEC</td>
<td>Until 2 successive negative faecal specimens are taken 24 hours apart, and not less than 48 hours after taking antimicrobials. Food handlers, health care workers and childcare workers need to be counselled on personal hygiene before returning to work.</td>
</tr>
<tr>
<td>Typhoid and Paratyphoid</td>
<td>Until 3 consecutive negative stools are taken one week apart, and not less than 48 hours after taking antimicrobials. Cases who continue to excrete for 90 days or more are not to engage in food handling.</td>
</tr>
<tr>
<td>Other bacterial gastroenteritis (including Campylobacter, Salmonella, Staphylococcus, Clostridium, Helicobacter, Vibrio, Listeria, Entamoeba). Giardia or Cryptosporidium</td>
<td>Until diarrhoea has ceased. Food handlers, health care workers and childcare workers to be counselled on personal hygiene before returning to work.</td>
</tr>
<tr>
<td>Hepatitis A or E</td>
<td>Until a medical certificate of recovery is received, but not before 7 days after onset of jaundice or illness. Food handlers with acute hepatitis illness should be excluded from work until laboratory tests confirm that the infection is not due to either Hepatitis A or E.</td>
</tr>
<tr>
<td>Other viral gastroenteritis (including rotavirus and norovirus), or when the pathogen is unknown</td>
<td>Until 48 hours after symptoms have ceased.</td>
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Appendix 3: Exclusion guidelines for food handlers, health care workers and childcare workers
Food history support form

<table>
<thead>
<tr>
<th>Case name</th>
<th>Vitamised meals Y/N</th>
<th>Soft meals Y/N</th>
<th>Assistance to eat Y/N (if yes, who assists and type of assistance)</th>
<th>Where most meals are eaten</th>
<th>Any known foods disliked</th>
<th>Any special diets Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe Bloggs</td>
<td>Y</td>
<td>N</td>
<td>Y - Mary (carer) full assisted feeding</td>
<td>Dining room</td>
<td>Red meat</td>
<td>N</td>
</tr>
</tbody>
</table>
Information about cases is important as it allows the outbreak to be described and monitored, and can assist in identifying the cause of illness. Please keep this coversheet together with your case list.

**Instructions**

1. Update the information on the case list, making a notation of any hospitalisations and/or deaths and adding new cases where applicable. There is no need to rewrite the whole list each time it is updated.
2. On the case list:
   - ‘symptoms started’ means the date and time the case had the first symptom(s).
   - ‘symptoms ended’ means the date and time the case had the last symptom(s).
3. Fax this coversheet and case list to your council EHO and DH twice per week (or as requested).
4. Aged care facilities should also fax lists to the Department of Health and Ageing on 9665 8877

---

**Fax to:**

DH Officer:  
Communicable Disease Prevention & Control Unit, Department of Health  
Fax: 1300 651 170

**Fax from**

Premises/outbreak name:  
Contact person:  
Position:  
Tel:  
Fax:  
Email:

**Dates case list faxed**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Comments:</th>
<th>Faxed by:</th>
<th>No. pages faxed (incl coversheet):</th>
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Appendix 9: Outbreak case list Care facility – ill residents/patients/staff
| Case | Room/ward/position worked | Premises/outbreak name: | Resident/patient/staff name | Child/staff name | Staff day | Staff month | Staff year | Room + parent contact/position worked | Room 2 – Mary Brown 0432 123 456 | Staff start date | Staff start time | Staff end date | Staff end time | Staff start date | Staff end date | Staff start time | Staff end time | Staff start date | Staff end date | Staff start time | Staff end time |
|-----|--------------------------|-------------------------|----------------------------|--------------------|-----------|-------------|-----------|-------------------------------|-----------------|----------------|----------------|---------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| (1) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (2) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (3) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (4) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (5) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (6) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (7) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (8) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (9) |                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
| (10)|                          |                         |                            |                    |           |             |           |                               |                 |               |               |               |               |               |               |               |               |               |               |               |
Instructions for the collection of faeces

Patients should collect specimen as soon as possible

1. Label the specimen jar (and swab’s transport medium container, if used) carefully, with your name, age/date of birth and date and time (noting AM or PM) of collection. The outbreak name should be included if known.

2. Place a large clean container (e.g. plastic ice cream container), plastic wrap, or newspaper in the toilet bowl.

3. Pass faeces directly into large container or onto the plastic wrap or newspaper.

4. Do not contaminate faeces with urine.

5. Using a disposable wooden spatula or plastic spoon, scoop enough of the faeces to at least half fill the specimen jar taking care not to contaminate the outside of the jar. If a specimen jar is not available, place a sample at least as large as an adult thumb or walnut into a clean jar.

6. Dispose of excess faecal matter from large container, plastic wrap or newspaper into the toilet, then place all soiled articles inside 2 plastic bags and dispose of in domestic waste.

7. If blood is seen mixed in the stool insert the swab (from the transport medium kit provided) into the faeces in the pot, then remove the swab and replace it in the transport medium (you will be instructed to take this step if it is necessary).

8. Screw the lid on the specimen jar firmly. Place in a zip-lock plastic bag taking care not to contaminate the outside of the bag, seal it and then place into a brown paper bag (if provided).

9. Wash your hands well.

10. Keep specimen cool (at 2 - 8°C) in the fridge - but DO NOT FREEZE.

11. Telephone the council EHO without delay, and request that they pick up the specimen.

A faecal specimen collection kit should include:

• A faecal pot
• A wooden spatula or plastic spoon
• A zip-lock bag
• A brown paper bag
• Instructions
Attention visitors

Our facility currently has residents/staff with gastroenteritis (vomiting and/or diarrhoea).

Please see a staff member before visiting any residents.

Thank you for your cooperation.
Attention staff

Our facility currently has residents and/or staff with gastroenteritis (vomiting and/or diarrhoea).

If you are ill with vomiting and/or diarrhoea, please let management know, and remain at home until 48 hours after symptoms have stopped.
Attention

Our facility currently has residents and/or staff with gastroenteritis (vomiting and/or diarrhoea).

To protect yourself and others please wash and dry your hands thoroughly and often.

Thank you for your cooperation.
How to wash and dry hands with liquid soap and water

Duration of the entire procedure: **40–60 secs.**

1. **Wet hands with water**
2. **Apply enough soap to all hand surfaces**
3. **Rub hands palm to palm**
4. **Right palm over left palm, dorsum with interlaced fingers and vice versa**
5. **Palm to palm with fingers interlaced**
6. **Backs of fingers to opposing palms with fingers interlocked**
7. **Rotational rubbing, left thumb clasped in and forwards with clasped fingers of right hand in palm and vice versa**
8. **Rotational rubbing, backwards and forwards with clasped fingers of right hand in palm and vice versa**
9. **Rinse hands with water**
10. **Dry thoroughly with single use towel**
11. **Use towel to turn off faucet**
12. **...and your hands are safe.**

Adapted from World Health Organisation