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| A guide for the management and control of gastroenteritis outbreaks in children’s services centres |
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Department of Health

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| To receive this publication in an accessible format phone 1300 651 160, using the National Relay Service 13 36 77 if required, or email infectious.diseases@dhhs.vic.gov.auAuthorised and published by the Victorian Government, 1 Treasury Place, Melbourne.© State of Victoria, Department of Health and Human Services, December 2018.Available at <<https://www2.health.vic.gov.au/public-health/infectious-diseases/infection-control-guidelines/gastrointestinal-illness-investigation-guidelines>>  |
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# Acronyms and abbreviations

The following acronyms apply throughout this guide

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| CDPC | Communicable Disease Prevention and Control, Department of Health and Human Services |
| CHO | Chief Health Officer, Department of Health and Human Services |
| the department | Department of Health and Human Services |
| EHO | Environmental Health Officer |
| FSP | Food Safety Program |
| MDU | Microbiological Diagnostic Unit (Public health laboratory) |
| PPE | Personal protective equipment |
| Ppm | Parts per million (a measure of concentration) |

# 1. Introduction

This guide has been produced to assist in the management and control of outbreaks of gastroenteritis (gastro) in children’s services centres, such as child care centres, pre-schools (kindergartens), family day care, occasional care and children’s play centres. Owners, managers and staff of these facilities should follow these guidelines to manage and control gastroenteritis outbreaks. They will also need to liaise with council environmental health officers (EHOs) and the Department of Health and Human Services (the department) in an outbreak investigation.

Local government is empowered to investigate infectious diseases under the provisions of the *Public Health and Wellbeing Act 2008*. Section 24 states:

* The function of the Council under this Act is to seek to protect, improve and promote public health and wellbeing within the municipal district by-

(d) developing and enforcing up-to-date public health standards and intervening if the health of people within the municipal district is affected;

This gives local government authorisation to investigate notifiable diseases, including outbreaks of gastroenteritis.

## 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. Gastrointestinal pathogens may be spread by direct person-to–person transmission, via aerosols of vomit, from contact with contaminated surfaces, animal to person transmission or by consuming contaminated food or water. 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 number of gastroenteritis outbreaks has increased. Young preschool children are at particularly high risk for gastroenteritis. They appear to be highly susceptible to gastroenteritis and are more likely to experience uncontrolled vomiting and/or diarrhoea, so enhancing the spread of illness to others. When outbreaks occur in child care centres, kindergartens or children’s play centres, specific control measures need to be undertaken and consideration should be given to the issues unique to child-focused settings.

Gastroenteritis is generally self-limiting and no treatment is recommended, however, this is a decision for the treating doctor. Given the high susceptibility of young children, it is essential that outbreaks of gastroenteritis are contained (keeping the number infected to a minimum) as quickly as possible by implementing the infection control procedures outlined in these guidelines and enforcing exclusion.

## 1.2 Viral gastroenteritis

Gastroenteritis outbreaks in child care centres, kindergartens and children’s play centres are largely due to a highly infectious virus called norovirus. Norovirus is transmitted from person-to-person by faecal-oral spread, via aerosolised vomit from contact with contaminated surfaces, or by consuming food contaminated by an infectious person. It is a very hardy virus and can survive in the environment for weeks and withstand freezing, heating to 60°C and weak chlorine solutions. The incubation period is generally accepted to be 12–48 hours and symptoms, predominantly of vomiting, diarrhoea and abdominal pain, usually last for only 24–48 hours. As the virus passes from one person to the next, onsets of illness in cases in an outbreak tend to occur over several days, rather than all at the same time.

Another virus, called rotavirus, also causes gastroenteritis and commonly infects very young children. Again, it is highly infectious and may cause outbreaks where numbers of children gather together. The incubation period for rotavirus is 24–72 hours and symptoms last for an average of 4–6 days. From 2007, Rotavirus vaccine have been given to infants at 2 and 4 months of age as part of the National Immunisation Program. For further information regarding **rotavirus and immunisation**, please refer to the Better Health Channel website [here](https://www.betterhealth.vic.gov.au/health/HealthyLiving/rotavirus-immunisation). <https://www.betterhealth.vic.gov.au/health/HealthyLiving/rotavirus-immunisation>

For further information on **viral gastroenteritis**, please refer to the department’s fact sheet [here](https://www2.health.vic.gov.au/about/publications/ResearchAndReports/Gastroenteritis%20-%20viral%20pamphlet) <https://www2.health.vic.gov.au/about/publications/ResearchAndReports/Gastroenteritis%20-%20viral%20pamphlet>

## 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 food to numbers sufficient to infect the consumer – this is called the infective dose. If there is no further cooking, or 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. Eggs can be high risk as they may be contaminated with *Salmonella* bacteria, 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. 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.

For more information on food safety and eggs see fact sheet on Better Health Channel [website](https://www.betterhealth.vic.gov.au/health/HealthyLiving/food-safety-eggs) <https://www.betterhealth.vic.gov.au/health/HealthyLiving/food-safety-eggs>.

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| **Care should be taken to always 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 disinfection procedures.**  |

Food safety records should be constantly maintained 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 children 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 drinking water legislation, available on the department’s [website](https://www2.health.vic.gov.au/public-health/water/drinking-water-in-victoria/drinking-water-legislation) <https://www2.health.vic.gov.au/public-health/water/drinking-water-in-victoria/drinking-water-legislation>. The department’s guidelines for the use of non-potable water in food businesses are available at <<http://www.health.vic.gov.au/foodsafety/>>.

Private drinking water supplies, such as dams, rivers, bores and rainwater tanks, cannot be guaranteed to be free of pathogens. For this reason, private water should be treated to prevent the risk of waterborne illness, where it is used for drinking and food preparation purposes. As the level of treatment is dependent on 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.

It is important to regularly check that the private drinking water supply system is maintained and working safely. Periodic samples should be collected for microbiological analysis and to check that disinfection levels are adequate. Further chemical analysis may be prudent, for example when water is sourced from a bore. Water monitoring programs should be designed in consultation with a water quality specialist.

It is therefore essential that all children’s services centres provide safe water for their children and staff at all times. Where businesses use private drinking water supplies they must:

* ensure that surface run off and leakage from sewer pipes or sullage drainage cannot contaminate water storage or reticulation;
* seal water storage tanks to prevent the entry of animals and birds;
* monitor water quality for organisms that indicate contamination; and
* operate suitable treatment facilities.

Care must be taken to ensure that potable and non-potable water supply pipes are not cross connected, and that non-potable water cannot mix with potable water at any stage along the supply.

When investigating outbreaks in children’s services centres, the water supply must be identified and assessed. If water used at a children’s services centre at the time of an outbreak is from a private water supply, such as from a bore, rainwater tank or dam, the proprietor must provide the council environmental health officer (EHO) with the most recent evidence of potability (e.g. a water supply management plan). If the cause of an outbreak in a children’s services centre is suspected to be waterborne (e.g. from contaminated rainwater tanks, bore water or other private water supplies), the EHO should collect samples of water for laboratory testing and conduct a risk assessment of the water supply. Further information can be obtained from the department’s [website](https://www2.health.vic.gov.au/public-health/water) <https://www2.health.vic.gov.au/public-health/water>.

## 1.5 Animal-to-person infection

Many animals carry bacteria even if they have no signs of illness, and these bacteria can contaminate the animal environment. After touching animals and their surroundings bacteria that is present on hands can easily be taken into the mouth when eating or drinking, or when children put their fingers into their mouths.

For this reason, it is essential that children’s services centres implement simple procedures to prevent infection from animals kept at the centre such as chicks (and eggs), reptiles, rabbits or guinea pigs, or animals visiting the centre (such as petting zoos). All children and staff must wash their hands thoroughly (section 3.2.1) after touching any animals, and after leaving an animal enclosure. Children must be carefully supervised at all times when handling animals and in any environment where animal faeces may be present (e.g. chicken enclosure, petting zoo) and should not be permitted to take dummies, bottles or toys into animal enclosures.

Environmental cleaning and disinfection of the area (e.g. playground) where the petting zoo was located should be conducted as soon as possible once the petting zoo has left the children’s services centre. This should be completed **before** children are allowed to use the area or playground again.

A brochure on Reducing the risk of gastroenteritis at open farm, petting zoos and animal exhibits can be found on the department’s [website](https://www2.health.vic.gov.au/about/publications/researchandreports/Reducing-the-risk-of-gastroenteritis-at-open-farms-petting-zoos-and-animal-exhibitspamphlet) <https://www2.health.vic.gov.au/about/publications/researchandreports/Reducing-the-risk-of-gastroenteritis-at-open-farms-petting-zoos-and-animal-exhibitspamphlet>

# 2. What should happen in the event of a gastroenteritis outbreak?

This section describes the various steps that need to be undertaken in the event of a gastroenteritis outbreak, 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 figure 1: Gastro outbreak management summary flowchart. An outbreak management checklist for children’s services centres has also been designed to assist facilities in managing their gastroenteritis outbreak (Appendix 2). The 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

Medical practitioners are legally required to notify the department if they become aware of cases who may have “Food or water borne illness (two or more associated cases)” and particularly for children who may attend the same children’s services centre. Currently there is no legal requirement for children’s services centres to notify the Department of Health and Human Services of an outbreak of gastroenteritis.

However, notification of an outbreak of gastroenteritis by a children’s services centre is **strongly recommended** as the department and local government can provide advice and support in managing outbreaks to minimise the severity and duration of illness, particularly in children.

### 2.1.1 Is a gastro outbreak occurring?

An outbreak may be defined as two or more cases of vomiting and/or diarrhoea occurring among children and/or staff within 48 hours of each other. If this occurs and the symptoms cannot be explained by medication or other medical conditions, you may have an outbreak.

### 2.1.2 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 and Human Services, Communicable Disease Prevention and Control 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.

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| **Notify outbreaks by telephone on 1300 651 160, and speak directly to a departmental officer as soon as possible. Please do not email and fax notifications of outbreaks, or leave messages regarding outbreaks on voice mail services.** |

### 2.1.3 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 must 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).

You will be contacted by your council Environmental Health Officer (EHO), who will visit the children’s services centre 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 drink;
* infected people passing the infection to others; and
* the pathogen remaining in the environment and being able to infect others.

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); and
* the setting where the outbreak has occurred.

### Figure 1. Gastro outbreak management summary flowchart

Gastro outbreak suspected or identified

Notify the outbreak to CDPC at the department on ph. 1300 651 160 (Section 2.1)

Inform **ALL** staff (including casual and agency staff) and parents of the outbreak (Section 8)

Start a case list. (Section 4 and Appendix 4)

Commence environmental cleaning and disinfection (section 3.1) and undertake twice daily

Arrange for the collection of faecal specimens from ill children and staff. (Section 5)

Implement outbreak control measures

(Section 3)

Email or fax case list and any other information to the department and council

Implement hand hygiene procedures immediately (Section 3.2)

Posts signs advising of outbreak

(Appendix 5)

Exclude ill children and staff from the centre as soon as they become ill and until 48 after symptoms have ceased.

(Sections 3.3 & 3.4)

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

(see Section 6)

# 3. Infection prevention and control measures

This section describes the various cleaning, infection prevention 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.

## 3.1 Environmental cleaning and disinfection

Gastroenteritis may be caused by a number of pathogens, but the most common cause of gastroenteritis outbreaks in children’s services centres is norovirus. Norovirus is a very hardy organism that may survive on surfaces for up to 28 days, and as norovirus is highly infectious (approximately 10-100 viruses is all that is needed to cause infection), cleaning and disinfection of the environment is one of the most important measures for limiting the spread of disease.

The frequency of environmental cleaning and disinfection during an outbreak should be at **least twice daily**, particularly of frequently touched surfaces such as, toilets, toilet seats, flush handles, taps, light switches potties, cupboard handles, door handles tables, cots, high chairs, booster seats, and change tables. All other areas of the premises, including children’s rooms, staff rooms, outdoor play equipment and all communal areas should also be cleaned and disinfected frequently during an outbreak. Change tables should be cleaned and disinfected after every nappy change.

The choice of disinfectants that are effective against norovirus is limited. Generally, quaternary ammonia compounds (QATs), chloroxylenol (e.g. Dettol™) and alcohols have **not** been shown to be effective against norovirus**, but chlorine-based disinfectants at a minimum dilution of 1000ppm are**.

**Always follow the manufacturer’s instructions for use (and dilution) of detergents and disinfectants. See also appendix 1A which is a guide for the dilution of chlorine-based solutions required for disinfection.**

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| A final clean and disinfection should be conducted when there have been no further ill cases in staff or children for more than 48 hours and when the outbreak has been declared over.**If a commercial cleaning company has been engaged by the children’s services centre to undertake the environmental cleaning it the children’s centre’s responsibility to ensure that the cleaning contractor is conducting the cleaning and disinfection in accordance with this guide and should be able to provide documentation to the facility confirming this.** |

### 3.1.1 Kitchen cleaning

All kitchen areas should be cleaned and disinfected at the **beginning** of every outbreak and then **twice daily** until the outbreak has been declared over. All work surfaces, benches, shelving, doors, sinks, floors, trolleys etc., or any other areas that are possibly contaminated should be cleaned and sanitised with 1000ppm of available chlorine. See appendix 1A for chlorine dilutions or check your supplier or manufacturer’s instructions.

#### 3.1.1.1 Kitchen – food contact surfaces (utensils, equipment, trays, etc)

Food contact surfaces including utensils, trays and equipment such as mixers and blenders, etc., need to be washed and sanitised in one of the following ways:

* Wash with hot water and detergent, then soak items in hot water at a minimum of 77°C for at least 30 seconds, **OR**
* Place items in a commercial **dishwasher** where the water temperature of the rinse cycle is greater than 80°C,.**OR**
* **Wash by hand** then immerse in 100ppm of available chlorine for at least 3 minutes at a minimum water temperature of 50°C, rinsed in hot water then dried, **OR**
* For **equipment** that **cannot** be completely soaked in water, 200ppm of available chlorine should be used on all surfaces for 10 minutes, then rinse and dry.

It is important that **all** food processing equipment (blenders, mixers, stab mixers etc.) be dismantled enough to be thoroughly cleaned and disinfected. Equipment parts need to be washed and scrubbed clean before a chlorine-based solution can be applied or before the parts are placed into a dishwasher.

#### 3.1.1.2 Eating utensils

Crockery and cutlery should be washed and sanitised in one of the following ways (See appendix 1A for chlorine dilutions):

* In a commercial **dishwasher** where the water temperature of the rinse cycle is greater than 80°C,.**OR**
* **Wash by hand** then immerse in 100ppm of available chlorine for at least 3 minutes at a minimum water temperature of 50°C, rinsed in hot water and dried.

The use of disposable cutlery or separation of cutlery and crockery during an outbreak **is not mandatory**.

Self-serve cutlery should be **avoided** during an outbreak of gastroenteritis. Eating utensils and drink bottles should not be shared.

### 3.1.2 Toys and play equipment

The cleaning and disinfection of toys is important to reduce the spread of disease, especially during an outbreak. Toys should be washed and disinfected regularly throughout the day. Some toys can be washed in a dishwasher at the end of the day (but not at the same time as any dishes) and these will effectively be disinfected if the water temperature in the rinse cycle is greater than 80°C (commercial dishwasher) or washed in a domestic dishwasher on the hottest and longest cycle (e.g. heavy duty, 65°C or above). Remove any soiled toys from use until they can be washed and disinfected. Consider rotating toys, so that only a proportion of the toys are used at any one time – this will reduce the amount of cleaning each day.

Do not move toys from room to room during outbreaks unless they have been washed and disinfected first. Toys that cannot be immersed in water, should be **removed** from use at the **beginning** of an outbreak. Soft toys that can be laundered should be washed as stated in the instructions for washing linen and laundry items (see 3.1.7).

All outdoor play equipment should be cleaned and disinfected at the end of each day throughout the outbreak. Sand pits, wading pools, water play tables and play dough **should not** be used during an outbreak.

### 3.1.3 Carpets

Vacuum cleaning carpets and polishing floors has the potential to recirculate norovirus and are NOT recommended during an outbreak[[1]](#footnote-1)

All carpets contaminated by vomit and/or faeces should be thoroughly cleaned with detergent and hot water and then steam cleaned using a vapour steam cleaner that boils the water until it turns to steam. True steam cleaners release steam under pressure, which ensures that the temperature is above 100°C and the carpet dries quickly.

Do not allow babies and toddlers to crawl, sit or play on carpeted areas where vomiting has occurred. It is advisable to barricade/close any soiled carpeted area until steam cleaning has been conducted.

### 3.1.4 Cleaning up vomit or faeces

Vomit can produce aerosols, (a fine mist of virus particles) suspended in the air and fall onto food or surfaces. If a child vomits in a public area, all children and staff should be **removed from the area for at least one hour** and the area cleaned immediately. Any **uncovered food** in the immediate area **must** be discarded.

Persons cleaning vomit or faeces should wear **disposable** personal protective equipment (PPE), (e.g. gloves, apron and a **mask**). Paper towels should be used to soak up excess vomit and faeces and disposed of into a sealed waste bag. The area can then be cleaned and disinfected.

Food handling staff **should not** be involved in cleaning up vomit or faeces.

### 3.1.5 Cleaning equipment

If illness is confined to one area/room of the children’s services centre, this area/room should be cleaned **last** so that pathogens are not transferred to other non-infected areas of the centre. Before moving between children’s rooms or other common areas, cleaning cloths and bucket contents should be renewed to prevent the transport of pathogens between rooms/areas. Durable gloves should be worn during cleaning procedures.

Where possible, cleaning equipment such as cloths, mops and brushes should be disposable and discarded immediately after use. If this is not possible all cleaning equipment should be washed with detergent and hot water, rinsed and left to air dry. Non-disposable mop heads should be laundered in a hot wash and left to air dry after use[[2]](#footnote-2).

### 3.1.6 Linen and laundry items

All soiled linen (including sheets, towels and blankets), children’s “dress-up” clothing and any washable soft toys should be laundered separately with detergent and hot water in the washing machine. The Australian Standard *AS/NZS 4146:2000**Laundry Practice* provides guidance for correct laundry practice, including water temperatures and times for correct disinfection.

To prevent transmission of infection to staff, soiled linen should have minimal handling prior to laundering. All soiled cloth nappies and children’s clothing should be placed into a sealed plastic bag for laundering by parents.

Parents should be advised to handle soiled clothing with disposable gloves and to launder clothing from ill children separately and in the hottest washing machine cycle the clothing can withstand. For temperatures less than 60°C the addition of a laundry sanitiser (for example, Napisan™) is recommended. Clothing should also be dried on the hottest dryer setting following washing.

### 3.1.7 Personal protective equipment (PPE)

Staff, cleaners and laundry workers should take extra precautions and use appropriate PPE (disposable gloves and/or disposable aprons) when cleaning environments, toys, soft furnishings or handling laundry contaminated with faeces or vomit.

Staff should take extra care when changing nappies and assisting children with toileting. Staff should use disposable gloves and place all gloves, soiled disposable nappies and wiping cloths into a plastic bag for disposal.

Hands should be washed thoroughly, before putting on PPE and immediately after removing PPE. PPE once used and removed should be placed into a sealed plastic bag and disposed of into the waste bin.

For further information on when to use gloves and how to remove effectively see [Staying Healthy](https://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ch55_staying_healthy_childcare_5th_edition_0.pdf) <https://www.nhmrc.gov.au/\_files\_nhmrc/publications/attachments/ch55\_staying\_healthy\_childcare\_5th\_edition\_0.pdf>.

A summary of cleaning and disinfection recommendations for items in a children’s services centre has been included in Table 1.

### Table 1. Cleaning and disinfection recommendations for a 3-step clean

| Item | Cleaning recommendation |
| --- | --- |
| Carpets contaminated by faeces or vomit | Clean with warm water and detergent then **steam clean** (true steam cleaners release steam under pressure, above 100°C)DO NOT vacuum carpets during an outbreak |
| Children’s learning rooms, items/fittings frequently touched (cupboard handles, tables, chairs, cots, high chairs, booster seats, nappy change tables, change mats, etc) | Wash with detergent and hot water, then disinfect for 10 minutes with 1000ppm available chlorine. Rinse with cold water then dry. |
| Kitchen – food contact surfaces (utensils, trays, equipment[[3]](#footnote-3), crockery, cutlery etc) | Wash with hot water and detergent, then soak items in hot water at a minimum of 77°C for at least 30 seconds, ORPlace items in a commercial **dishwasher** where the water temperature of the rinse cycle is greater than 80°C,.OR**Wash by hand** then immerse in 100ppm of available chlorine for at least 3 minutes at a minimum water temperature of 50°C, OR For **equipment** that **cannot** be completely soaked in water, 200ppm of available chlorine should be used on all surfaces for 10 minutes, then rinse and dry. |
| Kitchen – work surfaces, benches, shelving, doors, door and cupboard handles, storage areas, sinks, trolleys floors etc. | Wash with detergent and hot water, then disinfect for 10 minutes with 1000ppm available chlorine. Rinse with cold water then dry. |
| Mattresses and soft furnishings (pillows, curtains, couches, cushions, doonas, etc) | Clean with warm water and detergent then **steam clean** (True steam cleaners release steam under pressure, above 100°C)OR Discard if not able to be effectively cleaned. |
| Non disposable cleaning equipment (cloths, mops, brushes etc.) | Wash with detergent and hot water, rinse and leave to air dry.Non-disposable mop heads should be laundered in a hot wash and left to air dry after use. |
| Outdoor play equipment | Wash with detergent and hot water, then disinfect for 10 minutes with 1000ppm available chlorine. Rinse with cold water then leave to air dry. |
| Playdough | Discard and DO NOT use during an outbreak. |
| Sandpits | Do NOT use during an outbreak.Sand that is contaminated by animal or human faeces, blood or other bodily fluids should be removed. Use a shovel and dispose of the sand in a plastic bag. The remaining sand should be raked over at intervals during the day and left exposed to the sun. Where extensive contamination has occurred, such as through a large spill of body fluids, replace all the sand[[4]](#footnote-4).  |
| Soiled linen (including sheets, towels, blankets, etc), children’s “dress up” clothing and washable soft toys. | Wash in washing machine on the hottest cycle then dry in a dryer on the hot cycle. The Australian Standard AS/NZS 4146(2000) – guidelines for correct laundry practice. |
| Toilet/Bathroom Areas (toilet bowls/seats, potties, hand wash basins, tap handles, doors and door handles, flush buttons, floors etc) | Wash with detergent and hot water, then disinfect for 10 minutes with 1000ppm available chlorine. Rinse with cold water then dry. |
| Toys able to be immersed in water | Wash with detergent and hot water, then disinfect for 10 minutes with 100ppm available chlorine, rinse with cold water then dry, ORPlace items in a commercial dishwasher at the end of each day, where the water temperature in the rinse cycle is greater than 80°C, ORPlace items in a domestic dishwasher using the hottest and longest cycle available (e.g. heavy duty cycle, 65°C or above) |
| Toys - unable to be immersed in water | **Remove from use** at the beginning of an outbreak. |
| Wading pools/Water play tables | **Do not** use during an outbreak |

## 3.2 Hand hygiene

Hand hygiene is a general term that refers to any action of hand cleansing, such as hand washing with soap and water or hand rubbing with an alcohol-based hand rub (ABHR).

Hand hygiene is one of the **most effective** infection control measures for preventing the spread of infections. This can be done with soap and water, which removes both dirt and germs from the hands, or by using an ABHR, which reduces the number of germs on the hands. Emphasis should be placed on the importance of hand hygiene for all staff, children and visitors.

### 3.2.1 Hand washing

Hands should be washed using a plain liquid soap for 15-20 seconds, then rinsed under running water and pat dried with disposable paper towel. Soap alone cannot remove dirt or germs, it is the combination of running water, rubbing your hands and the detergent in the soap that helps loosen the dirt, remove the germs and rinse them off the skin. Hand dryers may be used, but it essential that hands are completely dried before undertaking any further activities. Multi-use cloth towels **must not** be used to dry hands.

### 3.2.2 Alcohol-based hand rubs

Generally, using an ABHR is recommended for hand cleansing when hands are not visibly dirty. Hands **must** be washed with plain liquid soap and water when visibly dirty or visibly soiled with blood or body fluids and after using the bathroom. ABHRs reduce the number of germs on the hands but they do not remove dirt from hands.

Because norovirus cannot be cultured, the effectiveness of alcohol-based preparations against this virus has been difficult to determine. ABHRs are useful in situations where soap and water are not always available.

### 3.2.3 Hand hygiene for children

Hand hygiene for children is another important measure to prevent the transmission of infections. Children should be encouraged to wash their hands after toileting, after blowing their nose and before eating. Staff caring for children should assist with this activity. Always wash children’s hands after every nappy change.

## 3.3 Staff

Staff with a gastrointestinal illness **must** be excluded from working at the children’s centre (and **cannot** work at any other centre) **until 48 hours after symptoms have ceased**, this includes food handling staff, carers, educators, volunteers etc.

During an outbreak, wherever possible, staff should not move between children’s rooms in the children’s services centres, during the same shift. This is particularly important if not all children’s rooms have been affected by the outbreak.

Management should support the recommendation that staff should not return to work for 48 hours after symptoms have ceased. Staff should not feel compelled to return to work earlier for fear of losing their employment or due to staff shortages[[5]](#footnote-5).

### 3.3.1 Food handling staff

Ensure that **only** food handling staff have access to the kitchen and are not involved in cleaning up vomit or faeces and should not be changing children’s nappies.

If food handling staff choose to wear disposable gloves, they must understand that these are single-use ONLY and need to be changed between every task and disposed of safely. Hands need to be washed with soap and water between glove changes when working with food.

## 3.4 Children with gastrointestinal illness

All ill children are required to remain at home **until 48 hours after symptoms have ceased**.

Ill children should be **isolated** if onset of illness occurs while at the centre and parents should be contacted immediately and requested to take the child home as soon as possible.

Parents of **all** children who attend the children’s centre (including those who do not attend every day), should be informed of the outbreak, the symptoms they need to be aware of and that ill children must be kept at home for 48 hours after symptoms have ceased. This may be relayed to parents via an email, telephone call or signage at the centre.

Ensure that parents of children who have been ill at home (for example, children who attend the children’s centre occasionally or casually) are informed that they should advise the children’s centre if their child has been ill with symptoms of gastroenteritis at home (and these children **must** also stay at home **until 48 hours after symptoms have stopped**).

During an outbreak of gastroenteritis, children’s services centres should not be influenced by letters from doctors stating that a child can return to the care facility. It is the doctor’s role to make the diagnosis, but care centres will need to have clear written policies on hygiene, infection control and exclusions in an outbreak setting. This should avoid any stress or conflict that can arise between parents and carers/educators during this time[[6]](#footnote-6). The department has developed a brochure for viral gastroenteritis that also states the 48 hour exclusion period and can be distributed to families during a gastro outbreak and is available [here](https://www2.health.vic.gov.au/about/publications/ResearchAndReports/Gastroenteritis%20-%20viral%20pamphlet)

< https://www2.health.vic.gov.au/about/publications/ResearchAndReports/Gastroenteritis%20-%20viral%20pamphlet>

## 3.5 Activities

Suspend cookery activities with children during an outbreak and do not allow children to assist with meals or food preparation or service.

Avoid serving ‘self-serve’ foods at the children’s centre during an outbreak. Food such as fruit platters, cheese/biscuit platters, biscuit containers, sandwich platters and lolly bowls, where a child’s hands may contaminate the foods and therefore each other should be avoided. Individually served portions are a safer alternative.

Suspend combined activities between rooms and age groups during an outbreak to further reduce the risk of disease transmission between children from one group to another.

All rooms used for family groupings and combined group activities should be cleaned at the beginning and end of each day during the outbreak.

## 3.6 Signage

Post signs at all entrances stating that a gastroenteritis outbreak is occurring. Signs advising everyone to wash hands should also be posted above hand wash basins in all toilet, bathroom and kitchen areas. See Appendix 5 for suggested signage.

## 3.7 Waste management

All personal protective equipment (such as gloves, disposable aprons etc.) as well as any disposable cleaning equipment (cloths, brushes etc.), that have been used to clean up faeces or vomit must be placed into a plastic bag, sealed and then disposed of into the rubbish bin. All soiled disposable nappies and wipes must also be disposed in the same manner during an outbreak of gastroenteritis.

# 4. Case lists

Each children’s services centre should prepare a case list of all children and staff who have been ill (see Appendix 4). Ensure that ill children and/or staff are included on the case list, even if they have not been attending/working at the centre while ill.

All case lists must be emailed or faxed to the council EHO (details to be provided by the council) and to the department on email cdi&r@dhhs.vic.gov.au or fax number 1300 651 170.

So that the outbreak can be monitored effectively, you will be requested to update this list **daily** and forward it to the council EHO and the department at least **twice per week** during an outbreak, or more often as requested.

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 or updated, 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. There is **no need to re-write the whole list** each time it is updated and each ill person is only to be added **once.**

“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 symptoms(s) – **do not include** the symptom-free period with the end date. See also Section 10 – Privacy.

# 5. Faecal specimen collection

To identify the pathogen responsible for an outbreak, faecal specimens from ill children and staff should be tested by a laboratory. It is best to obtain faecal specimens as soon as possible after the onset of symptoms. Unless advised otherwise, faecal specimens should be collected from five ill people for each outbreak. Always record the date of faecal specimen collection for each case on the case list. Label the container before collecting the specimen.

**All** outbreak faecal specimens are tested by the Microbiological Diagnostic Unit (MDU), Public Health Laboratory (PHL) at the University of Melbourne. The EHO can provide faecal specimen collection kits to distribute to ill staff and parents of ill children. They will also arrange to collect the completed specimens and deliver them to the laboratory for testing. Ensure that all ill staff and parents of ill children also receive a copy of the *Faecal specimen collection instructions* (Appendix 3). Some parents may prefer to take ill children to their doctor for treatment, advice and faecal specimen collection.

Issue a faecal specimen collection kit (provided by council) to all children that are sent home ill from the children’s services centre so their parent can collect a specimen at home.

Council EHOs can arrange to deliver faecal specimen collection kits to the homes of ill children who are currently not attending the child care centre.

In certain circumstances some ill food handling staff, may be requested to give faecal specimens. The EHO will advise if this is the case.

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

# 6 Declaring an outbreak over

**A gastro outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case, that is no ongoing cases and no new cases occurring. All staff should also be informed of this.**

The department can provide **confirmation** when this time frame has occurred to ensure that the outbreak can be declared over.

A final clean-up and disinfection of the facility is required when an outbreak has been declared over. The case list will need to be updated to reflect that there are no further cases occurring, any existing case’s symptoms have ceased and the case list has been marked as ‘final’ and sent through to the council and department, along with any faecal specimen results (if applicable), that were conducted at a private pathology service (that the department may not have a copy of). A copy of all faecal specimen results, tested at MDU and collected as part of an outbreak are already provided to the council and the department. A copy of these results, once received will be provided to staff, or parents of children who submitted a specimen.

If you are unsure whether your outbreak is over, please call the department on tel. 1300 651 160 to discuss.

**For unknown or food or water borne outbreaks:**

Although cases may have ceased and the outbreak may be declared over, the investigation of the outbreak may **not** be over. If the investigation is still continuing the council EHO will still be visiting the premises and collecting information to try and determine the cause and transmission of the outbreak. The department may also be analysing information and awaiting laboratory results of samples and specimens to inform the outbreak.

If you are unsure as to whether an **investigation** is over please ask your council EHO or speak to the public health officer dealing with your outbreak at the department.

# 7. Additional control measures for suspected 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 control measures described above.

## 7.1 Food

* Ensure that any suspect food or drink is not served but **do not** discard it. Ensure that it is kept in a suitable place (e.g. storeroom/fridge) and labelled with “do not use”, so it cannot be served by mistake, until the council EHO has collected it.
* Allow the council EHO to collect samples of foods and/or ingredients and environmental swabs (if indicated) of equipment or the kitchen environment. This should occur **before** the clean-up has been conducted. Store all food in the refrigerator until it is collected by the EHO.
* Allow the EHO to take away any equipment that is suspected to be contaminated, such as a blender used to blend raw ingredients.
* After the council EHO has collected samples ensure all potentially contaminated food is disposed of adequately under supervision by the EHO, who will advise on what food needs to be discarded.

## 7.2 Water

If the facility uses a private drinking water supply (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, that the water is safe to drink (e.g. a water supply management plan). The EHO may also conduct a risk assessment of the water supply; and
* 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 (e.g. commercially bottled), or existing water supplies must be treated by the most appropriate method, the EHO can advise on this.

## 7.3 Additional information to assist the outbreak investigation

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

* conduct a food safety compliance check/inspection;
* request a list of **all** people who may have consumed the suspect meal(s) (including **all** children and staff);
* request a copy of the menus for all meals served in the week before onset of illness in the first case;
* request details of three-day food history for all cases (this information may best be obtained from staff);
* require as much detail as possible of the food process steps for preparing any implicated foods;
* 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; and
* conduct interviews with all exposed people, both sick people and well people or their parents/guardians to try and determine a source for the outbreak.

# 8. 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), and that staff are updated as the outbreak progresses. Staff briefings should give clear instructions on:

* transmission of gastroenteritis;
* infection control procedures;
* cleaning and disinfection procedures;
* collection of faecal specimens;
* exclusion of ill children for 48 hours after symptoms cease;
* exclusion of ill staff for 48 hours after symptoms cease; and
* the need to liaise closely with council and/or department during the outbreak investigation.

Staff need to clearly understand these points so that they can relay accurate information to parents/guardians and answer their questions correctly. Staff can also issue parents with a copy of the department’s viral gastroenteritis brochure available [here](https://www2.health.vic.gov.au/about/publications/ResearchAndReports/Gastroenteritis%20-%20viral%20pamphlet)

< https://www2.health.vic.gov.au/about/publications/ResearchAndReports/Gastroenteritis%20-%20viral%20pamphlet>

# 9. Staff education and training

It is the responsibility of every children’s services centre to ensure that their staff are adequately trained and competent in all aspects of gastrointestinal outbreak management. Workplace education could be incorporated into induction training programs.

Staff should be able to identify the early signs of an outbreak and be prepared to know how to manage the outbreak while minimising the risk of infection to themselves. Equipment, staff and resources must be identified and accessible at all times.

During an outbreak, regular promotion of handwashing is recommended. Where possible, children’s services centres need to have access to PPE and staff need to be trained in how and when to use them. Training on cleaning and disinfection procedures is also important. If a vomiting incident occurs in any area, staff members need to know how to clean and disinfect the area correctly to prevent further transmission through environmental contamination and aerosolisation of vomit.

## 9.1 Adequate stock levels

Children’s services centres should ensure that they have adequate stock levels of disposable materials required during an outbreak. This includes:

* personal protective equipment (gloves, gowns, masks, eyewear);
* hand hygiene products (liquid soap, paper towels);
* faecal specimen collection kits (your council EHO should be able to supply these); and
* cleaning supplies (detergent and bleach-based disinfectant).

Childrens’ services centres should have an effective policy in place to ensure that they have access to additional stock from suppliers as required.

# 10. Privacy

When carrying out outbreak investigations, the department and council EHOs adhere to privacy legislation governing the collection, use and dissemination of personal information (the *Health Records Act 2001* and the *Privacy and Data Protection Act 2014*).

The Health Records Act, including the Health Privacy Principles, apply to health information, which is broadly defined to include information relating to physical and mental health, disability and aged care services. Much of the department’s functions, and those of our service partners (e.g. local government), require us to handle information that is covered by this legislation.

The Victorian Department of Health Privacy Principles apply when conducting any disease investigation. These can be accessed on the department’s website under [protecting patient privacy](https://www2.health.vic.gov.au/public-health/infectious-diseases/protecting-patient-privacy) <https://www2.health.vic.gov.au/public-health/infectious-diseases/protecting-patient-privacy>

In an outbreak situation, children’s services centres are requested to provide council EHOs and the department with information pertinent to the investigation. Council EHOs and departmental officers collecting this information are authorised to request this information under section 167 of the *Public Health and Wellbeing Act 2008.* Councils and the department are required to adhere to privacy legislation governing the collection, use and dissemination of personal information. This information includes, illness information for children and staff as well as names and contact details of staff and parents, which will be needed to complete the case lists.

The data collected during an outbreak investigation is kept confidential and identifying information is not disclosed for any other purpose without a person’s consent. All information collected is stored securely, protecting it from unauthorised access.

## 10.1 Freedom of information (FOI)

The *Freedom of Information (FOI) Act 1982* gives individuals the right of access to information held by the State Government, ministers and agencies. Agencies include State Government departments, councils and prescribed authorities such as statutory authorities, public hospitals, community health centres, universities, TAFE colleges and schools. Via the FOI process, individuals are able to apply for access to information held by the department and councils as part of an infectious disease investigation. FOI requests may be lodged with the department and/or with the council that conducted the investigation, and any records in document format may be accessed in this way.

# 11. Media

The media may become aware of the outbreak at your children’s services centre either officially, through a departmental media release, or unofficially through other sources such as staff/parents of children or the general public. If a centre receives media enquires directly, in relation to an outbreak, they may wish to consult the department’s media unit before releasing any information. This will ensure accuracy and consistency with any departmental communications. . Further information regarding the department’s media unit can be obtained [here](https://www2.health.vic.gov.au/about/media-centre) <https://www2.health.vic.gov.au/about/media-centre>

# 12. Further information

For further information on the management of infectious diseases in child care centres refer to the NHMRC document [*Staying healthy – preventing infectious diseases in early childhood education and care services*, 5th Edition, 2012.](https://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ch55_staying_healthy_childcare_5th_edition_0.pdf) <*https://www.nhmrc.gov.au/\_files\_nhmrc/publications/attachments/ch55\_staying\_healthy\_childcare\_5th\_edition\_0.pdf>*

# Appendix 1A: Quick guide for the dilution of chlorine-based (sodium hypochlorite) solutions required for disinfection

**Bleach (sodium hypochlorite)**

Chlorine-based (sodium hypochlorite) sanitisers/disinfectants (for example, plain, unscented household bleach) should be used in outbreak situations, as other sanitisers have very little effect on destroying viruses such as Norovirus. The following table will assist in making up the required concentration needed for disinfection.

**Dilutions using household bleach (with 4% available chlorine (sodium hypochlorite) as written on the label)**

| **Household bleach 4% available chlorine** | **Add the following amounts of bleach to the water to give the required concentration** |
| --- | --- |
| **Volume of cold water to which chlorine is added** | **100ppm** | **200ppm** | **1000ppm** |
| 1 litre | 2.6ml | 5.3ml | 26.3 ml |
| 5 litres | 12.5ml | 25ml | 125ml |
| 10 litres | 25ml | 50ml | 250ml |

**Commercial sanitisers/disinfectants**

Commercial sanitisers/disinfectants are available from a range of commercial chemical suppliers and retailers. It is important that the active ingredient in the sanitiser you use during an outbreak of gastroenteritis is chlorine (or sodium hypochlorite). This sanitiser should be an approved food grade sanitiser and must be used **in accordance with the manufacturer’s instructions.** The following table should assist with making up the required concentration needed for disinfection.

**Dilutions using a commercial grade sanitiser (with 12.5% available chlorine (sodium hypochlorite) as written on the label)**

| **Commercial grade sanitiser 12.5% available chlorine** | **Add the following amounts of bleach to the water to give the required concentration** |
| --- | --- |
| **Volume of cold water to which chlorine is added** | **100ppm** | **200ppm** | **1000ppm** |
| 1 litre | 0.84ml | 1.68ml | 8.4ml |
| 5 litres | 4.2ml | 8.4ml | 42ml |
| 10 litres | 8.4ml | 16.8ml | 84ml |

***Please Note:*** *This table is to be used as a guide only. For questions about how to dilute specific products please refer to the relevant Material Safety Data Sheet (MSDS) for the specific product being used, or contact your supplier or manufacturer of the chemical.*

***Milton tablets are not validated for use as a surface disinfectant and are not recommended for this purpose. Please see next page for important safety notes and chlorine dilution formula.***

**Chlorine dilutions calculator**

For other concentrations of chlorine-based sanitisers not listed in the tables above, please use the following link to calculate the dilution of your disinfectant:[**https://www2.health.vic.gov.au/public-health/infectious-diseases/infection-control-guidelines/chlorine-dilutions-calculator**](https://www2.health.vic.gov.au/public-health/infectious-diseases/infection-control-guidelines/chlorine-dilutions-calculator) **Note:**

* Ensure that all environmental surfaces and hand touch surfaces have been cleaned with hot water and detergent (so they are free of vomit, faeces or any other organic matter) before the sanitiser/disinfectant is applied.
* Sufficient time is required to kill the virus – **at least 10 minutes contact time**.
* Chlorine (sodium hypochlorite) solutions **must be made up prior to use** as the chlorine deteriorates over time.
* Chlorine (sodium hypochlorite) solutions should be used mainly on hard, non-porous surfaces.
* Check the expiration dates of your bleach or chemical sanitiser to ensure the active ingredients are still effective.
* Ensure your staff know how to correctly use your bleach (sodium hypochlorite) solution or chemical sanitiser.

**Important safety notes for use of sanitisers/disinfectants:**

* Use gloves and wear protective eye wear when preparing chlorine (sodium hypochlorite) solutions.
* When using bleach, it is safer to add chlorine to water – **do not** add water to chlorine.
* Do not heat water up to make chlorine solutions – cold water is safer.
* Do not mix with any other chemical.
* Mix in a well ventilated room
* Follow safety, storage and handling instructions on all bleach and chemical containers.
* Use chlorine carefully as it is corrosive to metals, damages fabrics/textiles and may irritate the skin, nose and lungs.
* Ensure that all chemicals are labelled and stored separately so as to prevent the likelihood of food being contaminated.
* Bleach solutions should NEVER be applied using a spray bottle. This is an Occupational Health and Safety Hazard.

# Appendix 1B: Quick guide to environmental cleaning and disinfection for outbreaks of gastroenteritis in children’s services centres

**NOTE: A copy of Appendix 1A – Guidance for the dilution of chlorine-based solutions required for disinfection, should be provided with this document. It will assist you with dilutions.**

*This document has been prepared as a quick reference guide for staff involved in environmental cleaning during an outbreak of gastroenteritis in a care facility, children’s services centre or camp facility. It is a guide to the steps that need to be followed to ensure that the cleaning measures implemented during an outbreak are effective. Your council Environmental Health Officer (EHO) will be supervising the following to ensure it is completed in accordance with the guidelines.*

|  |
| --- |
| ***For more detailed information regarding environmental cleaning and disinfection, please refer to section 3.2.3 in this guide*** |

**Cleaning and disinfecting should be done as separate processes. A kitchen or food handling surface needs to be thoroughly cleaned with detergent before it is disinfected/sanitised.**

**Clean and disinfect** all work surfaces, benches, shelving, doors, door handles, storage areas, sinks, floors, etc., or any other areas that are possibly contaminated - wash with hot water and detergent and apply 1000ppm of available chlorine, leave for 10 minutes, rinse then dry

Kitchen and food handling areas

**Clean and disinfect** all utensils, equipment, crockery and cutlery in one of the following ways:

1. Wash with hot water and detergent, then soak items in hot water at a minimum of 77°C for at least 30 seconds, OR
2. Place items in a commercial dishwasher where the water temperature in the rinse cycle is greater than 80°C, OR
3. Place items in a domestic dishwasher using the hottest and longest cycle available (e.g. heavy duty cycle, 65°C or above), OR
4. Wash with hot water and detergent, soak items in 100ppm of available chlorine for at least 3 minutes at a minimum water temperature of 50°C, OR
5. For items or equipment that CANNOT be completely soaked in water, wash with hot water and detergent then apply 200ppm of available chlorine on all surfaces for 10 minutes, then rinse and dry.

It is important that all food processing equipment (blenders, mixers, stab mixers, etc.) be dismantled enough to be thoroughly cleaned and disinfected. Equipment parts need to be washed and scrubbed clean before a chlorine-based solution can be applied or before the parts are placed into a dishwasher.

ALL OTHER AREAS

**Wash areas thoroughly with detergent and hot water. Rinse, then apply 1000ppm of available chlorine, leave for 10 minutes, rinse, then dry**

**Toilets and bathrooms** – toilet bowls, hand wash basins, tap handles, toilet flush buttons/handles, doors and door handles, floors and any other areas that may have been contaminated

**Communal areas** – staff rooms, dining rooms, lounge rooms, banisters, hand rails, lockers, telephones, cupboard handles, all common areas and frequently touched surfaces

**Cleaning of vomit or faeces** – remove all people from immediate area. Cleaners to use appropriate PPE, mask, gloves, apron. Clean area using detergent and hot water, then apply 1000ppm of available chlorine, leave for 10 minutes, rinse then dry. Use disposable mops and cloths.

If area is carpeted steam clean area after washing with detergent and hot water.

**Carpets, mattresses and soft furnishings** contaminated by vomit or faeces – clean all soiled surfaces with detergent and hot water then steam clean using a steam cleaner that releases steam under pressure (above 100°C). Discard if not able to be effectively cleaned.

Do NOT vacuum carpets or polish floors during a gastro outbreak as it has the potential to recirculate norovirus.

**All common and residential areas should be cleaned at least twice a day until the outbreak has been declared over.**

**A final clean of all areas needs to be completed at the end of every outbreak.**

**Soiled clothing and linen** (sheets, towels, blankets etc) – wash in washing machine on the hottest cycle then dry in a dryer on the hottest cycle (AS/NZS 4146(2000) – guidelines for correct laundry practice)

# Appendix 2: Outbreak management checklist for gastroenteritis outbreaks in children’s services centres

This checklist has been designed to assist children’s services centres in managing gastroenteritis outbreaks. The use of this checklist is optional and the Department of Health and Human Services **does not** require a copy.

**Outbreak definition**

**An outbreak may be defined as two or more cases of vomiting and/or diarrhoea occurring among children and/or staff within 48 hours of each other. If this occurs and the symptoms cannot be explained by medication or other medical conditions, you may have an outbreak.**

| Checklist | Date provided or N/A | Signature of person responsible |
| --- | --- | --- |
| **IDENTIFY AND NOTIFY:** |
| **Outbreak detected -** Identify if your centre has an outbreak using the above definition | \_\_\_/\_\_\_/\_\_\_ |  |
| **Name of outbreak coordinator:** |
| Outbreak notified to the department, Communicable Disease Prevention and Control (CDPC) on tel. 1300 651 160 | \_\_\_/\_\_\_/\_\_\_ |  |
| **IMMEDIATELY:** |
| **Implement infection prevention and control measures** (Section 3) |  |
| **Implement outbreak hand hygiene** (Section 3.2) |  |
| **Exclude ill staff from work** **and ill children from attending the centre**– until 48 hours after symptoms have ceased (Sections 3.3 & 3.4) |  |
| **Begin environmental cleaning and disinfection** (Section 3.1) |  |
| **Complete case list(s)** – include details of all ill children and staff (Appendix 4) |  |
| **Organise for the collection of faecal specimens** – give out faecal collection kits to parents of ill children and to staff (Section 5) |  |
| **Post signage** - at appropriate locations throughout the centre including all entrances (Appendix 5) |  |
| **Communicate all outbreak information to all staff** (Section 8) |  |
| **PROVIDE THE DEPARTMENT (CDPC) AND COUNCIL WITH:** |
| **Initial case list** - to the department (CDPC) either by fax on 1300 651 170 or email: cdi&r@dhhs.vic.gov.au and your local council EHO as directed | \_\_\_/\_\_\_/\_\_\_ |  |
| Menus (if requested) | \_\_\_/\_\_\_/\_\_\_ |  |
| Food suppliers list (if requested) | \_\_\_/\_\_\_/\_\_\_ |  |
| A copy of the food safety program and 3rd party audit (if requested) | \_\_\_/\_\_\_/\_\_\_ |  |
| **COMMUNICATON:** |
| Communicate all outbreak information to all staff | \_\_\_/\_\_\_/\_\_\_ |  |
| Inform parents of outbreak  | \_\_\_/\_\_\_/\_\_\_ |  |
| **ONGOING:** |
| Continue outbreak cleaning procedures (minimum twice daily cleaning) |  |
| Monitor outbreak progress through increased observation of children for gastro symptoms |  |
| Update the case list daily and provide to the department & council twice weekly |  |
| Continue communication with staff and parents of children |  |
| Other: |  |
| **DECLARE OUTBREAK OVER:** |
| **Declare outbreak over** – 48 hours after symptoms have ceased in the last case (child or staff member), so no ongoing cases and no new cases occurring. | \_\_\_/\_\_\_/\_\_\_ |  |
| **Email or fax final case list to the department and council**  | \_\_\_/\_\_\_/\_\_\_ |  |
| **Conduct a final clean-up of the centre**  | \_\_\_/\_\_\_/\_\_\_ |  |
| Communicate to staff and parents of children that the outbreak is over. | \_\_\_/\_\_\_/\_\_\_ |  |
| Remove all signage | \_\_\_/\_\_\_/\_\_\_ |  |
| Return to normal duties | \_\_\_/\_\_\_/\_\_\_ |  |
| **Review Outbreak Management & Recommendations for Improvement(s):** |
|  |
|  |
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|  |
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|  |

# Appendix 3: Instructions for the collection of faecal (poo) specimens

**This faecal kit contains:**

* A faecal (poo) collection pot (with or without) a built-in scoop inside the lid;
* A wooden spatula or plastic spoon;
* A zip-lock (bio hazard) plastic bag and a brown paper bag, if provided;
* A laboratory request form (this may or may not be provided to the patient but should be included with the specimen after collection); and
* Instructions for the collection of a faecal (poo) specimen.

**Patients should collect a faecal specimen as soon as possible.**

1. Label the specimen jar carefully, with patient’s name, date of birth or age and date and time of collection (noting AM or PM).
2. Include the outbreak name, if known.
3. Place a large clean container (e.g. clean plastic ice cream container), plastic wrap or newspaper in the toilet bowl.
4. Pass faeces (poo) directly into the large container, plastic wrap or newspaper.
5. Do not contaminate the faeces (poo) with urine.
6. Open the sample jar. Using the scoop inside the lid of the jar, scoop enough of the faeces (poo) to fill about half of the jar. If there is no scoop provided inside the lid of the jar, use the wooden spatula or plastic spoon provided to place the sample inside the jar. Take care not to contaminate the outside of the jar.
7. Dispose of left-over faecal matter (poo) from the large container, plastic wrap or newspaper into the toilet, then place the large container, plastic wrap or newspaper into a plastic bag, secure and place directly into the rubbish bin.
8. Make sure you wash your hands after collecting the faecal (poo) specimen.
9. Screw the lid on the sample jar firmly. Put the jar into the plastic zip-lock or bio-hazard bag and include the laboratory request form if provided. Then place into the brown paper bag (if provided).
10. Keep specimen cool (at 2-8°C) in the fridge – but DO NOT FREEZE.
11. Telephone the council Environmental Health Officer **without delay** and request they pick up the specimen.

# Appendix 4: Outbreak Case List - Children’s Services Centres **VICGOV_DHHS_LOGO_BLACK Inverted**

**Fax Cover Sheet**

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 adding new cases (children/staff) where applicable. There is no need to rewrite the whole list each time it is updated. Each ill person is only to be added once.
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) – do not include the symptom-free period.

**Fax or email this coversheet and case list to your council EHO and DHHS twice per week (or as requested).** |
| **Sent to:** DHHS Officer:      Communicable Disease Prevention & Control, **Email: cdi&r@dhhs.vic.gov.au****Fax: 1300 651 170** (Please print clearly) | **Sent to:** Council EHO:      Council:      **Fax**:       |
| **Sent from:** Premises/outbreak name:       |
| Contact person:       | Position:       |
| Tel:       | Fax:       | Email:       |
| **Date case list sent** | **Please complete as applicable** | **Sent by:** | **No of pages incl. cover sheet** |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |
| ..…../………./…… | [ ]  New cases added [ ]  Existing cases updated[ ]  No new cases | [ ]  Final list[ ]  Results attached  (if applicable) |  |  |

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**Premises/outbreak name:** **Page Number: \_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Case** | **Birth date** | **Sex** | **Symptoms started** | **Symptoms** | **Symptoms ended** | **Faecal specimen collected** | **Hospitalised** |
|  | *check* | *date* | *check* | *date* | *time* | *check all that apply* | *date* | *time* | *check* | *if yes, when* | *check* | *if yes, when* |
| **Child/staff name** | child | staff | *date* | month | year | male | female | day | month | year | hour | minute | vomiting | diarrhoea | fever | nausea | abdominal pain | day | month | year | hour | minute | no | yes | day | month | year | no | year | day | month | year |
| [and] **Room + parent contact/position worked** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (Example) **James Brown** | **c****[x]**  | **s****[ ]**  | 03/03/2006 | **m****[x]**  | **f****[ ]**  | 23/01/2009 | 20:15 | **v****[x]**  | **d****[ ]**  | **f****[x]**  | **n****[x]**  | **a****[ ]**  |  |  | **n****[ ]**  | **y****[x]**  | 23/01/2009 | **n****[ ]**  | **y****[x]**  | 24/0102009 |
| **Room 2 – Mary Brown 0432 123 456** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (Example) **Sue Smith** | **c****[ ]**  | **s****[x]**  |  | **m****[ ]**  | **f****[x]**  | 23/01/2009 | 20:15 | **v****[x]**  | **d****[ ]**  | **f****[ ]**  | **n****[x]**  | **a****[ ]**  |  |  | **n****[ ]**  | **y****[x]**  | 24/01/2009 | **n****[x]**  | **y****[ ]**  |  |
| **Room 2 – teacher** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (1)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (2)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (3)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (4)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (5)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (6)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (7)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (8)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (9)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (10)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Premises/outbreak name:       Page Number: \_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Case** | **Birth date** | **Sex** | **Symptoms started** | **Symptoms** | **Symptoms ended** | **Faecal specimen collected** | **Hospitalised** |
| *check* | *date* | *check* | *date* | *time* | *check all that apply* | *date* | *time* | *check* | *if yes, when* | *check* | *if yes, when* |
| **Child/staff name** | child | staff | *date* | month | year | male | female | day | month | year | hour | minute | vomiting | diarrhoea | fever | nausea | abdominal pain | day | month | year | hour | minute | no | yes | day | month | year | no | year | day | month | year |
| [and] **Room + parent contact/position worked** |
| (11)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (12)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (13)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (14)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (15)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (16)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (17)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (18)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (19)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |
| (20)       | **c****[ ]**  | **s****[ ]**  |       | **m****[ ]**  | **f****[ ]**  |       |       | **v****[ ]**  | **d****[ ]**  | **f****[ ]**  | **n****[ ]**  | **a****[ ]**  |       |       | **n****[ ]**  | **y****[ ]**  |       | **n****[ ]**  | **y****[ ]**  |       |
|       |

# Appendix 5: Signage – Children’s Services Centres

See the following pages for suggested signage.



**Attention**

Our centre currently has children 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. ******



**Attention staff**

Our facility currently has children 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 parents**

Our centre currently has children and/or staff with gastroenteritis (vomiting and/or diarrhoea).

Please advise the centre manager if your child/children have symptoms of gastroenteritis.

All children with symptoms of gastroenteritis must remain home until 48 hours after their symptoms have stopped.

******

# Glossary

The following definitions apply throughout this guide

|  |  |
| --- | --- |
| Aerosols | In medical terms means the fine particles that are emitted after coughing or vomiting and that may be a vehicle for transmitting infection. |
| Available chlorine | Free chlorine expressed as a percentage of active ingredient in a concentrated liquid or powder |
| Children’s centre | Includes child care centres, pre-schools (kindergartens), occasional day care, family day care, and play centres.  |
| Cleaning | The removal of soiled matter (including organic material) and the reduction of the number of microorganisms from the surface of an item by a process such as a detergent and water to the extent necessary for further processing of for intended use |
| Contamination | The introduction of microorganisms or foreign matter to sterile or non-sterile materials or tissues |
| Detergent | A substance that enhances the cleansing action of water (preferably warm/hot) or another liquid |
| Disinfect/Disinfection | A process that reduces the number of viable organisms on an item to a level specified as appropriate for its intended further handling or use |
| Disinfectant | A chemical agent that is applied to non-living objects to kill microorganisms |
| Environmental Health Officer | An authorised officer employed by either local or state government  |
| Faecal-oral transmission | Transmission of an infection whereby faecal particles pass from one person to the mouth of another person, mainly through poor hygiene practices |
| Foodborne transmission | Transmission of an infection through the ingestion of contaminated food |
| Food safety program | A food safety program is a written document indicating how a food business will control the food safety hazards associated with the food handling activities of the business. Only certain high risk food businesses are required to have food safety programs. (Standard 3.2.1 Safe Food Australia – FSANZ). |
| Gastroenteritis (Gastrointestinal illness, Gastro) | Inflammation of a membrane of the stomach and intestines, caused by variety of different enteric pathogens. Symptoms may include diarrhoea, nausea, vomiting, abdominal pain, abdominal cramps, fever and sometimes headaches, lethargy, chills and muscular pains |
| Incubation period | The time interval between initial contact with an infectious agent and the appearance of the first clinical signs and symptoms of the disease |
| Infection | Invasion and multiplication of microorganisms in body tissues |
| Infection control | The process of minimising the risks of spreading infection |
| Microorganism | A microscopic organism |
| Organism | An individual animal, plant or single-celled life form |
| Outbreak | The occurrence of a disease or health event in excess of the expected number of cases for a given time or place |
| Person-to-person transmission | Transmission of a disease by close and direct personal contact. For example, touching, kissing or sexual intercourse |
| PPE (personal protective equipment) | Protective clothing, goggles, or other garments or equipment designed to protect the wearer’s body form injury or infection. |
| Ready-to-eat food | Food that is ordinarily consumed in the same state as that which it is sold and does not include nuts in the shell and whole, raw fruits and vegetables that are intended for hulling, peeling or washing by the consumer[[7]](#footnote-7).  |
| Sanitise | To reduce pathogenic microorganisms to a safe level |
| Self-limiting | (of a condition) ultimately resolving itself without treatment |
| Transmission | In terms of infection, it relates to any mechanism by which an infectious agent is spread from a source or reservoir to a person. |
| Viable | Alive; capable of living, developing or reproducing. |
| Waterborne transmission | Transmission of illness through the ingestion of contaminated water |

1. Communicable Diseases Network Australia. (2010). Guidelines for the public health management of gastroenteritis outbreaks due to norovirus or suspected viral agents in Australia.. Available: http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-cdna-norovirus.htm. [↑](#footnote-ref-1)
2. Guidelines for the public health management of gastroenteritis outbreaks due to norovirus or suspected viral agents in Australia, Australian Government Department of Health < http://www.health.gov.au/internet/publications/publishing.nsf/Content/cda-cdna-norovirus.htm-l~cda-cdna-norovirus.htm-l-app5~cda-cdna-norovirus.htm-l-app5.2> [↑](#footnote-ref-2)
3. It is important that all food processing equipment (blenders, mixers, stab mixers etc.) be dismantled enough to be thoroughly cleaned and disinfected. Equipment parts may need to be washed and scrubbed clean before a chlorine-based solution can be applied or before the parts are placed into a dishwasher. [↑](#footnote-ref-3)
4. National Health and Medical Research Council. (2012). Staying Healthy - Preventing infectious diseases in early childhood education and care services 5th edition. [↑](#footnote-ref-4)
5. Communicable Diseases Network Australia. (2010). Guidelines for the public health management of gastroenteritis outbreaks due to norovirus or suspected viral agents in Australia.. Available: http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-cdna-norovirus.htm. [↑](#footnote-ref-5)
6. National Health and Medical Research Council. (2012). Staying Healthy - Preventing infectious diseases in early childhood education and care services 5th edition. [↑](#footnote-ref-6)
7. Standard 3.2.2, Safe Food Australia, Food Standards Australia New Zealand, <http://www.foodstandards.gov.au/industry/safetystandards/safetypractices/pages/default.aspx> [↑](#footnote-ref-7)