

# Guidelines for the investigation of gastroenteritis

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Council EHOs

Infection Control Professionals

## Foreword

This publication provides a comprehensive guide for those involved in the investigation of a number of infectious diseases causing gastroenteritis. It guides investigators from the time the incident is detected, through the investigational requirements, to the implementation of control measures.

The State Government of Victoria has a role to play in promoting and protecting the health and wellbeing of the Victorian population. This includes controlling threats to public health, such as gastroenteritis, imposed by infectious pathogens found in food, water, the environment, or in other infected individuals. The incidence of gastroenteritis may be influenced by a range of factors such as changes in agricultural and manufacturing practices, and consumer food choices. The effects of gastroenteritis can range from mild to more severe forms of illness, sometimes with complicated sequelae. Vulnerable population groups, such as the aged and those with pre-existing medical conditions, can be severely affected by gastroenteritis. As such, the guidelines aim to provide an effective health response framework to minimise the morbidity and potential mortality associated with gastrointestinal disease outbreaks and their impacts on the Victorian community.

This publication expands upon the *Guidelines for the Investigation of Gastrointestinal Illness*, first published by the department in 1998. This revised publication presents a more detailed resource and reference tool for investigators. This edition has new chapters, including a chapter on laboratory testing covering aspects of sampling and specimen collection, and interpretation of results. Also new in this edition is the inclusion of industry-specific guides: *A guide for the management and control of gastroenteritis outbreaks in: aged care, special care, health care and residential facilities; children's centres; and camp facilities*. These supplements are written for proprietors and managers to assist them in the process of notification and outbreak management.

The revised guidelines have been developed by a range of staff across the Department of Health with input from our Public Health Laboratories, which we greatly appreciate. To the staff members who contribute to the investigation of gastroenteritis incidents and outbreaks, we are grateful for your efforts in protecting the health and wellbeing of Victorians, and I encourage you to read these guidelines and have systems in place to protect your community.



**DR JOHN CARNIE**

Chief Health Officer



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## Glossary

<b>Aetiological agent</b>	The agent (for example bacteria or virus) that causes the illness.
<b>Airborne transmission</b>	Transmission by air of infectious agents from respiratory secretions.
<b>Asymptomatic infection</b>	Infection of a person or animal that does not display any clinical symptoms, but they may still be capable of transmitting disease to others.
<b>Available chlorine</b>	Free chlorine expressed as a percentage of active ingredient in a concentrated liquid or powder.
<b>Camp settings</b>	Includes recreational camps, school camps and boarding schools, where accommodation, sanitary and dining facilities are provided. Food service may or may not be provided by the premises.
<b>Case finding</b>	A process or method used to find additional cases of an illness under investigation. Examples of case finding include contacting doctors, laboratories, hospitals or cases.
<b>Children's Centre</b>	Includes child care centres, kindergartens and play centres, and any other centre designed specifically for the care of, and use by, children.
<b>Chain of Custody</b>	Refers to the ability to trace possession of a sample or specimen from the time of collection, and its subsequent handling, transport, storage, analysis and final disposition.
<b>Cluster</b>	An increased number of notifications of a particular pathogen, generally clustered in time and/or place with no apparent association between cases.
<b>Contact</b>	A person or animal who has been in association with an infected person, animal or contaminated environment, from whom they may acquire the infection.
<b>Cross-contamination</b>	The spread of micro-organisms from one surface to another, or from something that is contaminated to something that is not.
<b>Disinfection</b>	Killing of infectious agents outside the body by direct exposure to chemical or physical agents. High level disinfection refers to the inactivation of all micro-organisms except some bacterial spores.
<b>Epidemiology</b>	The study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems. <sup>1</sup>

1 Beaglehole.R., Bonita.R., Kjellstrom.T. *Basic Epidemiology*. World Health Organisation. 1993.



<b>Faecal-oral transmission</b>	Transmission of an infection whereby faecal particles from one host are introduced into the mouth of another potential host. Direct contact is rare in this route, for humans at least. More common are the indirect routes; food or water become contaminated (by people not washing their hands before preparing food, or untreated sewage being released into a drinking water supply) and the people who eat or drink them become infected.
<b>Foodborne transmission</b>	Transmission of an infection through the ingestion of contaminated food.
<b>Food Safety Program</b>	Some food businesses registered with municipal Councils in Victoria are required to submit a Food Safety Program when first registering the premises and on each annual registration date (current legislation at the time of writing). It is a document that describes a standard approach and the steps required to ensure that food that is sold is safe to eat by identifying all food process steps within a premises.
<b>Fomites</b>	Objects such as towels, bed linen, books, toys, wooden objects or articles of clothing that are not harmful in themselves but are able to harbour pathogenic micro-organisms and thus may serve as an agent of transmission of an infection.
<b>Gastroenteritis (gastrointestinal illness, gastro)</b>	Inflammation of the membrane of the stomach and intestines, caused by a variety of different enteric pathogens. Symptoms may include diarrhoea, nausea, vomiting, abdominal pain, abdominal cramps, fever and sometimes headaches, lethargy, chills and muscular pain.
<b>Health care facility</b>	Includes aged care facilities, hospitals, nursing homes, hostels, special accommodation facilities, disability and psychiatric centres. Also referred to as special care facilities or institutions.
<b>High risk occupation</b>	An occupation where employees are at high risk of transmitting infections to susceptible populations in their workplace (for example food handlers, health care workers and child care workers).
<b>Incubation period</b>	The time interval between initial contact with an infectious agent and the appearance of the first clinical signs and symptoms of the disease.
<b>Index case</b>	The first case in a family or other defined group to experience symptoms.

<b>Infection</b>	Invasion and multiplication of micro-organisms in body tissues.
<b>Infection control</b>	The process of minimising the risks of spreading infection.
<b>Infectious disease</b>	A disease capable of being transmitted from an infected person or species to a susceptible host, either directly or indirectly.
<b>Isolation</b>	The process of separating infected persons from others, usually for as long as the organism may be transmitted to other susceptible persons. Isolation usually occurs in places and under conditions to prevent or limit the direct or indirect transmission of the infectious agent to susceptible persons.
<b>Notifiable disease</b>	A disease or condition that is required by law to be notified to the state health department. In Victoria, notifiable diseases are required to be reported to the Department of Health by pathology services and medical practitioners.
<b>Notification</b>	The process of reporting a notifiable infectious disease.
<b>Outbreak</b>	The occurrence of a disease or health event in excess of the expected number of cases for a given time or place.
<b>Pathogen</b>	An organism that is capable of producing infection or infectious disease. Bacterial, viral and protozoan pathogens are all capable of causing gastroenteritis. Also known as an infectious agent.
<b>Personal hygiene</b>	The protective measures within the responsibility of the individual that limit the spread of infectious diseases.
<b>Person-to-person transmission</b>	Transmission of a disease by close and direct personal contact. For example, touching, kissing or sexual intercourse.
<b>Point source outbreak</b>	Occurrence of a disease as a result of a common exposure at a defined time and place, attended by a discrete group of people (for example, gastroenteritis among people who have attended a birthday party). Also referred to as a common event outbreak.
<b>Prevalence</b>	The prevalence of a disease is the total number of cases of the disease in the defined population at a specified point in time. <sup>2</sup> It is used as an estimate of how common a condition is within a population over a certain period of time.

2 Beaglehole.R., Bonita.R., Kjellstrom.T. *Basic Epidemiology*. World Health Organization. 1993.

<b>Primary case</b>	The individual who introduces the disease into the family or group under study. Not necessarily the first diagnosed case in a family or group. See also Index Case.
<b>Sanitise</b>	To reduce pathogenic micro-organisms to a safe level.
<b>School exclusion</b>	Exclusion from a primary school or children's services centre as required under state legislation.
<b>Secondary case</b>	Case of disease occurring among contacts within the incubation period following exposure to the primary case.
<b>Source of infection</b>	The person, animal or substance from which an infectious agent passes to a host.
<b>Sporadic case</b>	Cases appearing in scattered or isolated instances, with no apparent association to each other. Also referred to as single incident cases.
<b>Standard precautions</b>	Practices that require everyone to assume that all blood and body fluids are potential sources of infection, independent of perceived risk. Such precautions involve the use of safe practices and protective barriers, and the safe disposal of body substances and soiled material (Blue Book).
<b>Sterilisation</b>	The complete destruction or elimination of all living micro-organisms, including bacterial spores.
<b>Surveillance</b>	The on-going systematic collection, analysis and interpretation of health data. This is an essential part of disease control, whereby routine notifications of infectious diseases are monitored over time.
<b>Susceptibility</b>	Lack of resistance to a particular pathogenic agent.
<b>Transmission</b>	In terms of infection, it relates to any mechanism by which an infectious agent is spread from a source or reservoir to a person. This may be direct or indirect (that is, vehicle-borne, vector-borne, or airborne).
<b>Waterborne transmission</b>	Transmission of illness through the ingestion of contaminated water.

## Acronyms

<b>AQIS</b>	Australian Quarantine Inspection Service
<b>CDPCU</b>	Communicable Disease Prevention and Control Unit, Department of Health
<b>CHO</b>	Chief Health Officer, Department of Health
<b>DH</b>	Department of Health
<b>DHS</b>	Department of Human Services
<b>DFSV</b>	Dairy Food Safety Victoria
<b>EHO</b>	Environmental Health Officer
<b>EHP</b>	Environmental Health Practitioner
<b>EHU</b>	Environmental Health Unit, Department of Health
<b>FOI</b>	Freedom of Information
<b>FSRAU</b>	Food Safety and Regulatory Activities Unit, Department of Health
<b>FSANZ</b>	Food Standards Australia and New Zealand
<b>FSP</b>	Food Safety Program
<b>GOOA</b>	Gastro Outbreak Onsite Assessment
<b>GP</b>	General practitioner
<b>IDEAS</b>	Infectious Diseases Epidemiology and Surveillance
<b>HUS</b>	Haemolytic Uraemic Syndrome
<b>MDU</b>	Microbiological Diagnostic Unit
<b>MRSA</b>	Methicillin resistant <i>Staphylococcus aureus</i>
<b>NHMRC</b>	National Health and Medical Research Council
<b>NIDS</b>	Notifiable Infectious Diseases Surveillance
<b>PHO</b>	Public Health Officer
<b>Ppm</b>	parts per million (a measure of concentration)
<b>REHO</b>	Regional Environmental Health Officer
<b>STEC</b>	Shiga-toxin producing <i>Escherichia coli</i>
<b>VIDB</b>	Victorian Infectious Diseases Bulletin
<b>VIDRL</b>	Victorian Infectious Diseases Reference Laboratory
<b>VTEC</b>	Vero-toxin producing <i>Escherichia coli</i>

# 1 Introduction

- 1.1 Legislation
- 1.2 Privacy
- 1.3 Freedom of information
- 1.4 Purpose of these guidelines

## 1 Introduction

Gastroenteritis may occur as apparent sporadic cases, as small clusters of cases, or as point source outbreaks that may vary in size and last from hours to weeks, or even months. While most gastroenteritis in the community initially presents as individual sporadic cases, often the precise route of transmission is unknown, and may never be discovered. Common viral, bacterial and protozoan enteric pathogens are transmitted by the faecal-oral route; however, the path from excretion by an infected person or animal to ingestion by the next case may be obscure and complicated. Transmission of the pathogen may occur by close person-to-person contact, contaminated environmental surfaces, fomites, food or water.

It is important to note that identification of the source of illness is not the sole reason for investigating either single cases or outbreaks of gastroenteritis – mode of transmission and preventing further cases of illness are equally important.

Infectious disease surveillance and the investigation of sporadic cases and outbreaks of gastroenteritis enable us to:

**Identification of the source of illness is not the sole reason for investigating either single cases or outbreaks of gastroenteritis – mode of transmission and preventing further cases of illness are equally important.**

- measure the prevalence of disease in the population
- identify trends in the community which may signify an outbreak
- initiate action to prevent, contain or minimise outbreaks and illness
- evaluate control and prevention measures
- take the opportunity to educate the public in disease prevention
- attempt to identify possible or probable sources
- plan services and set priorities.

### 1.1 Legislation

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. The Public Health and Wellbeing Act can be accessed at [www.legislation.vic.gov.au/](http://www.legislation.vic.gov.au/)

## 1.2 Privacy

When carrying out investigations into notifiable infectious diseases, investigating officers need to be aware of privacy legislation governing the collection, use and dissemination of personal information (the *Health Records Act 2001* and the *Information Privacy Act 2000*).

The Health Records Act, including the Health Privacy Principles, applies to health information, which is broadly defined to include information and opinion relating to physical and mental health, disability and aged care services. Much of the department's functions, and those of our service partners, 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 privacy website at [www.health.vic.gov.au/notifying/privacy](http://www.health.vic.gov.au/notifying/privacy)

During investigations, the following privacy issues may need to be addressed:

- Only information needed for a specified public health purpose is to be collected.
- Each person should be informed as to why information is to be collected from them, and how it will be handled.
- The collection must be lawful, fair and not intrusive.
- Information should be collected from the individual themselves where reasonable and practicable (unless authorised by law).
- The identity of an infected individual must not be disclosed to any third party without consent of that individual.
- All information collected is used and disclosed only for the primary or a directly related purpose, or for another purpose with the person's consent (unless otherwise authorised by law).
- All information collected is stored securely, protecting it from unauthorised access.
- Information is retained for the period authorised by the *Public Records Act 1973*.
- A person can be provided with access to his or her own information, through the *Freedom of Information Act 1982* (section 1.3).

A privacy statement is included on the front of all department standard gastroenteritis questionnaires, and this should be read to the case by the interviewer at the start of all interviews. The interviewer should sign on each questionnaire that this has been done.

The Communicable Disease Prevention and Control Unit (CDPCU) of the department has privacy fact sheets for patients and doctors; these can be accessed on the department website at [www.health.vic.gov.au/ideas/notifying/privacy](http://www.health.vic.gov.au/ideas/notifying/privacy)

EHOs should also contact their council privacy officers for advice on privacy legislation and how it applies to disease investigations.

**A privacy statement is included on the front of all department standard gastroenteritis questionnaires, and this should be read to the case by the interviewer at the start of all interviews. The interviewer should sign on each questionnaire that this has been done.**

### 1.3 Freedom of information

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. Any document requests should be dealt with by the council FOI officer.

### 1.4 Purpose of these guidelines

These guidelines have been produced to assist investigating officers (including council environmental health officers (EHOs), regional environmental health officers (REHOs), public health officers, medical practitioners and others) in the investigation of sporadic cases and outbreaks of gastroenteritis. The original document, '*Guidelines for the investigation of gastrointestinal illness*' (1998), has been reviewed and amended, to produce a detailed reference document designed to guide investigations from the time of notification, through the initial investigation to the implementation of control strategies. These revised guidelines include a more detailed, step-wise approach to investigating single incidents of gastroenteritis (section 3) and outbreaks (section 4). There are two new sections: one describing control measures to be implemented during outbreaks (section 5), and the other giving a comprehensive coverage of the laboratory aspects of investigations (section 6). The guidelines now also include information on privacy and freedom of information (section 1).

The industry specific guides (refer to Supplements) have been designed to assist facilities in managing their outbreaks and in providing the required outbreak details to the investigating officer. These guides contain much of the information included in this document, but they have been written for proprietors/managers of health care facilities, children's centres and school camps rather than for EHOs.

Investigating officers should take time to familiarise themselves with all sections of these guidelines so that they are well-informed and confident in the investigation process and fully understand the roles and responsibilities of all parties involved.

A web-based version of the guidelines can be obtained, along with further information on infectious diseases, on the IDEAS (Infectious Diseases Epidemiology and Surveillance) website at [www.health.vic.gov.au/ideas](http://www.health.vic.gov.au/ideas).



For information on the investigation of foodborne disease outbreaks that cross state, territory and country borders, also refer to *The guidelines for the detection, investigation and management of multi-jurisdictional outbreaks of foodborne illness*. This document has been developed by OzFoodNet and the Department of Health and Ageing, and can be found at <http://www.health.gov.au/>. The purpose of these guidelines is to provide clear guidance on the national management and investigation of potential multi-jurisdictional outbreaks linked to contaminated food sources. These guidelines do not override the existing responsibilities of individual agencies or states; rather they provide a framework to guide principal partners in responding to potential multi-jurisdictional outbreaks.

## 2 Roles and responsibilities

- 2.1 Local government
- 2.2 Department of Health
  - 2.2.1 Regional office
  - 2.2.2 Communicable Disease Prevention and Control Unit
  - 2.2.3 Food Safety and Regulatory Activities Unit
  - 2.2.4 Environmental Health Unit

**In certain situations there may be some crossover of the roles and responsibilities described here.**

## 2 Roles and responsibilities

For successful and effective investigation of gastrointestinal illness and outbreaks, it is necessary that all involved parties work together as a team. Responsibilities for the investigation and management of the public health aspects of cases and outbreaks of gastrointestinal illness are shared by the department and local government public health authorities as outlined here.

The department's CDPCU is the lead agency, having an overall management/coordination role, while the department's region has a coordination/liaison role, and local government has the investigative role required to protect the health of their community. The department's Environmental Health Unit (EHU) and the Food Safety and Regulatory Activities Unit (FSRAU) also have defined roles to play in situations where illness may be water or food borne, respectively. It is important to note, however, that in certain situations there may be some crossover of these roles and responsibilities.

### 2.1 Local government

#### General

Council EHOs may become involved in the public health management of cases of infectious diseases in various ways, for example:

- cases may be referred by the department for further investigation
- cases may be reported directly to local government from their local community
- local government may become aware of cases as a result of their own observations and investigations.

#### Single incident cases

The role of the council EHO in single incident sporadic case investigations includes:

- interviewing cases of gastroenteritis, as referred by CDPCU, and completing the appropriate disease questionnaire with as much information as possible
- following up on identified risk factors for these cases as necessary (for example, premises inspection, food sampling)
- identifying further related cases and investigating these (completing questionnaires, collection of faecal specimens, follow-up of any identified risk factors)
- providing written feedback (on the referral form, and including the completed questionnaire, with additional notes as necessary) to the REHO on each case within ten days of receiving the referral.

Refer to section 3 for details of the single incident investigation protocol.

## Outbreaks

Outbreaks that are confined to a local government area are primarily the responsibility of that local government authority. Outbreaks where cases are spread beyond council or regional boundaries will usually be coordinated by CDPCU in conjunction with the regions, and may potentially involve several councils investigating collaboratively.

If outbreaks are notified directly to local government, the EHO should immediately notify the department. During all outbreak investigations, local government should regularly liaise with their Department of Health region. It is also essential to keep CDPCU informed throughout the investigation to enable departmental briefings and appropriate, timely guidance and advice.

The role of the council EHO during gastroenteritis outbreaks may include:

- collecting all information requested on the gastro outbreak onsite assessment (GOOA) and forwarding this to the REHO along with the required attachments within two working days of notification to the council
- conducting site inspections
- supervising the clean-up
- providing advice on infection control practices and cleaning procedures
- providing the operator of the affected facility/premises with information as required, and ensuring they have a copy of the industry specific guidelines 1, 2 or 3, and all other appropriate appendices
- notifying the department of any significant issues arising from investigations
- conducting appropriate interviews with exposed people
- collecting food or water samples and faecal specimens
- reviewing food processes, Food Safety Programs (FSPs) and FSP records
- providing advice to the operator of the premises on food processes and any changes that may need to be made as a result of the outbreak
- informing the REHO if closure of a premises is thought to be necessary
- providing feedback to the operator of the implicated premises regarding any results and conclusions of the investigation
- ongoing monitoring of food processes where they have been found to be inadequate, or where changes have been requested by council
- attending post-investigation debrief meetings.

Refer to section 4 for details on the outbreak investigation protocol.

## 2.2 Department of Health

### 2.2.1 Regional office

#### Single incident cases

The role of the region in single incident sporadic case investigations includes:

- coordinating the investigation of referred cases of gastroenteritis within the region and ensuring that local government is investigating cases in accordance with these guidelines
- providing assistance and advice to local government on the investigation
- ensuring that any outbreaks, or significant issues arising from any investigations, are notified to CDPCU without delay
- regularly tracking the status of referrals within the region
- reviewing the information obtained by local government EHOs during investigations, and seeking clarification and additional information where necessary, before submitting to the CDPCU
- ensuring that investigations are completed and the results returned to CDPCU within 10 days of referral to council.

Refer to section 3 for details of the single incident investigation protocol.

#### Outbreaks

The role of the region during outbreak investigations includes:

- assisting with investigations of outbreaks of gastroenteritis within the region while maintaining liaison with local government, CDPCU, FSRAU and the EHU (the CDPCU may notify outbreaks directly to local government for action if the REHO is not available)
- providing advice to local government on the investigation of outbreaks, as requested
- reviewing the information obtained by the investigating EHO as recorded on the GOOA, and seeking clarification and additional information where necessary, before submitting to the CDPCU
- ensuring that the GOOA is returned to the CDPCU within two working days of notification of the outbreak to council
- ensuring that any significant issues arising from investigations are notified to the appropriate department unit as appropriate
- conducting an on-site inspection of premises as requested by the CDPCU, FSRAU, EHU, the Chief Health Officer or council EHOs
- assisting, where necessary, in investigating failures in premises' food preparation processes
- assisting, where necessary, in reviewing the FSP and, in the case of premises requiring third party audits, obtaining and reviewing the recent audit report

- assisting, where necessary, in arranging food/water sampling and collection of faecal specimens, on advice from the CDPCU
- responding to council request for premises closure
- referring possible food recalls to the FSRAU for risk assessment
- attending post-investigation debrief meetings
- responding to FOI requests in a timely manner, in consultation with the relevant department unit
- providing a public health emergency response to infectious disease outbreaks.

Refer to section 4 for details on the outbreak investigation protocol.

## 2.2.2 Communicable Disease Prevention and Control Unit

### General

General responsibilities of the CDPCU include:

- formulating policy and program standards for the prevention and control of gastrointestinal illness
- maintaining a surveillance system for notifiable infectious diseases in Victoria
- developing and coordinating appropriate education and prevention strategies
- providing expert advice on infectious diseases issues
- providing public health emergency response to infectious disease outbreaks
- coordinating and delegating the investigation of single incidents, clusters and outbreaks of gastroenteritis
- notifying the Victorian State Coroner of any deaths associated with an outbreak.

### Outbreaks

The role of CDPCU during outbreak investigations includes:

- circulating an incident report within 24 hours of the outbreak being notified
- managing and coordinating the investigation of gastroenteritis outbreaks and the investigation teams
- liaising with OzFoodNet, Communicable Diseases Network Australia, the Department of Health and Ageing and other public health authorities
- liaising with public health laboratories
- liaising with the FSRAU with regard to foodborne outbreaks, and EHU for waterborne outbreaks
- requesting information and action from REHOs and local government EHOs relating to the outbreak (for example, infection control measures, audit reports, FSP compliance, premises inspection, process information, written reports, food and faecal samples, interviews)

- initiating control measures to prevent ongoing spread of illness as per these guidelines and specific department disease investigation protocols
- providing advice to the operator of the affected premises, local government authorities and regions relating to the investigation and any actions or interventions to be undertaken
- participating in on-site attendances and inspections at the premises if deemed necessary by the unit, senior management or the Chief Health Officer
- coordinating the interviewing of all exposed persons and all controls (if a case control study is conducted)
- coordinating collection of investigative food and water samples and faecal specimens
- providing advice on key epidemiological aspects of the outbreak (for example, case definitions or questionnaire development)
- analysing all epidemiological data
- coordinating investigation meetings, as required
- initiating and chairing post-investigation debrief meetings
- briefing senior management and/or the Chief Health Officer on outbreak issues:
  - which are, or are likely to be, of public health significance
  - which are, or are likely to become, media issues
  - as requested by senior management and/or the Chief Health Officer
- facilitating the issuing of directions under the *Public Health and Wellbeing Act*
- responding to requests for information regarding the outbreak and its investigation from the department media unit as they occur, in accordance with department media policy
- responding to FOI requests in a timely manner, in consultation with the FSRAU, EHU and the department's regional offices
- preparing outbreak reports as deemed necessary.

### **Cluster investigations**

Clusters of disease (that is, an increased number of notifications of a particular pathogen) may be identified periodically through surveillance conducted routinely by CDPCU, and also by laboratories. Cases identified as part of a cluster are usually followed up by an actioning officer within CDPCU; however, REHOs and council EHOs may have a role to play (such as collecting faecal specimens or food samples) depending on the outcomes of these investigations. Specific requests in these instances will be made by CDPCU. Feedback on cluster investigations may not always be provided individually to each participating council, but can be obtained upon request.

### 2.2.3 Food Safety and Regulatory Activities Unit

#### General

General responsibilities of the FSRAU include:

- formulating policy and standards to ensure food safety
- providing advice and assistance on monitoring of foods identified as being associated with foodborne incidents to prevent further incidents of contamination
- managing and facilitating the issuing of *Food Act 1984* closure orders and closure revocations
- acting on referrals from the CDPCU regarding food premises auditing and FSP issues
- initiating food recalls, as warranted.

#### Outbreaks

The role of the FSRAU during outbreak investigations includes:

- providing support, advice and assistance to the CDPCU during an outbreak investigation of foodborne illness
- participating in on-site inspections of food premises, if required
- assisting in the coordination of food sampling during an outbreak investigation
- conducting the trace-back of food or food ingredients to their source or origin, where necessary
- providing advice on specific enforcement issues such as FSP compliance and interpretation of Food Standards Code and the Food Act
- providing advice on food preparation processes
- liaising with and referring relevant matters to other food regulatory authorities (such as state and territory health authorities, Primesafe and Dairy Food Safety Victoria) and to other organisations (such as the Australian Quarantine Inspection Service (AQIS) and Food Standards Australia and New Zealand (FSANZ))
- briefing senior management and/or the Chief Health Officer on food safety or Food Act issues:
  - which are, or are likely to be, of public health significance
  - which are, or are likely to become, media issues
  - as requested by the Chief Health Officer
  - attending post-outbreak debrief meetings when appropriate
  - responding to requests for information regarding food safety and Food Act issues from the department media unit as they occur, in accordance with the department media policy



- responding to FOI requests in a timely manner, in consultation with the CDPCU and the department's regional offices
- liaising with and referring relevant matters to other regulatory authorities as required.

#### **2.2.4 Environmental Health Unit**

The role of the EHU during outbreaks includes:

- providing advice on potential public health risks arising from public and private drinking water supplies, water tanks, swimming pools, spas, recreational waters or flood waters
- providing advice on procedures to minimise the risk to public health arising from waterborne hazards
- investigating potential sources of contamination in conjunction with the region and local government
- would have a role similar to Food Safety on briefings/FOIs etc.



# 3 Single incidents of gastroenteritis

- 3.1 The notification process
- 3.2 Assessment of cases for referral
- 3.3 Non-referred cases
- 3.4 Why do we investigate single incident cases?
- 3.5 Steps in the investigation
  - 3.5.1 Contact the doctor
  - 3.5.2 Contact the case
  - 3.5.3 Undertake risk assessment and risk management
  - 3.5.4 Interview the case
  - 3.5.5 Health education opportunities
  - 3.5.6 Referral to other local government authorities
  - 3.5.7 Completion of investigation
  - 3.5.8 Record keeping

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## Flowcharts

1. Notification and referral of single incidents of gastroenteritis
2. Single case investigation by councils

## 3 Single incidents of gastroenteritis

### 3.1 The notification process

All medical practitioners and pathology services are required under the *Public Health and Wellbeing Act 2008* to notify the department of cases of scheduled infectious diseases. Notifiable enteric diseases include Botulism, Campylobacteriosis, Cholera, Cryptosporidiosis, Hepatitis A, Hepatitis E, Listeriosis, Paratyphoid, Salmonellosis, Shigellosis, Typhoid, Haemolytic uraemic syndrome (HUS) and Shiga-toxin/Vero-toxin producing *Escherichia coli* (STEC/VTEC). Two or more related cases of food or water borne illness are also notifiable, regardless of the pathogen, which is usually unknown at the time of the first notification. The CDPCU surveillance manager then assesses all notifications to determine which are to be referred to local government (via the region) for investigation, which are investigated internally by CDPCU, and which require no further action.

All notifications are also reviewed on a weekly basis by the surveillance manager to identify clusters and monitor trends. Clusters of disease, such as specific serovars of *Salmonella*, are generally investigated by an actioning officer within CDPCU. These cases are usually clustered in time or place with no apparent association between cases. Each case is investigated to ascertain if there are any common exposures or links between the cases.

Summaries of all notifications by departmental region are available on the department IDEAS website, and are published quarterly in the Victorian Infectious Diseases Bulletin (VIDB) and can be viewed at [www.health.vic.gov.au/ideas/surveillance/vidb](http://www.health.vic.gov.au/ideas/surveillance/vidb)

### 3.2 Assessment of cases for referral

All notifications of enteric diseases are checked daily by a surveillance manager of CDPCU. Of the notifiable enteric diseases listed above, all cases of food or water borne illness are referred to councils for investigation. Cases confirmed with *Campylobacter*, *Cryptosporidium* or *Salmonella* are assessed for referral as follows:

Disease	Criteria for referral
Campylobacteriosis	<p>Referred for investigation when one or more of the following criteria are met:</p> <ul style="list-style-type: none"> <li>The case lives in (or the illness may have been acquired in) a health or institutional setting*</li> <li>Two or more associated cases have been notified</li> </ul> <p>-----</p> <p>Additionally:</p> <ul style="list-style-type: none"> <li>If the case is a <b>health care worker, child care worker, food handler</b> or a <b>child in child care</b>, CDPCU will send a letter to the case with information on <i>Campylobacter</i>, its transmission and the recommended workplace exclusion.</li> </ul>

Disease	Criteria for referral
Cryptosporidiosis	<p>Referred for investigation when one or more of the following criteria are met:</p> <ul style="list-style-type: none"> <li>• The case lives in (or the illness may have been acquired in) a health care or institutional setting*</li> <li>• Two or more associated cases have been notified</li> <li>• A possible source of their illness has been named (water, environmental)</li> <li>• The case is a child in child care</li> <li>• The case is a child care worker</li> </ul> <p>-----</p> <p>Additionally:</p> <ul style="list-style-type: none"> <li>• If the case is a <b>health care worker</b> or <b>food handler</b>, CDPCU will send a letter to the case with information on <i>Cryptosporidium</i>, its transmission and the recommended workplace exclusion.</li> </ul>
Salmonellosis	<p>Referred for investigation when one or more of the following criteria are met:</p> <ul style="list-style-type: none"> <li>• The case lives in (or the illness may have been acquired in) a health care or institutional setting*</li> <li>• Two or more associated cases are notified</li> <li>• A possible source of their illness has been named (food**, water, environmental)</li> <li>• The case is a food handler</li> <li>• The case is a child in child care</li> <li>• The case is less than six months old</li> </ul> <p>-----</p> <p>Additionally:</p> <p>If the case is a <b>health care worker</b> or <b>child care worker</b>, CDPCU will send a letter to the case with information on <i>Salmonella</i>, its transmission and the recommended workplace exclusion.</p>
Food/water borne illness	<p><b>All</b> cases of food or water borne illness are referred to council for investigation.</p>

\* 'institutional setting' is defined as: hospital, residential care facility (e.g. aged care, disability services), prison, other (overnight accommodation being the defining factor).

\*\* Referrals will only be generated if a specific food source or premises is named, and not simply a notation by the medical practitioner of 'food' or 'water' as the risk factor/mode of transmission.

The reasons for referral will be indicated on the referral form, and EHOs should address these during the investigation, while ensuring they also seek information on the risk factors summarised in the tables in section 3.5.3.

Notifications selected for referral are forwarded to local government via the department's regional offices. This enables the REHOs to monitor regional trends and liaise with councils during investigations. Referral is conducted within one working day of receipt of notification by CDPCU, except in circumstances where additional information needs to be obtained. Cases are referred to the local government area in which the case resides.

Occasionally cases have already been referred to local government before being identified as part of a cluster. For example, a case of *Salmonella* notified by a doctor may be referred initially, and then days later, when the result of typing is available, it indicates that the case is part of a cluster currently under investigation by CDPCU. In these instances the actioning officer in CDPCU will liaise with the REHO and the local government EHO acting upon the referral, to collate all information collected on the case.

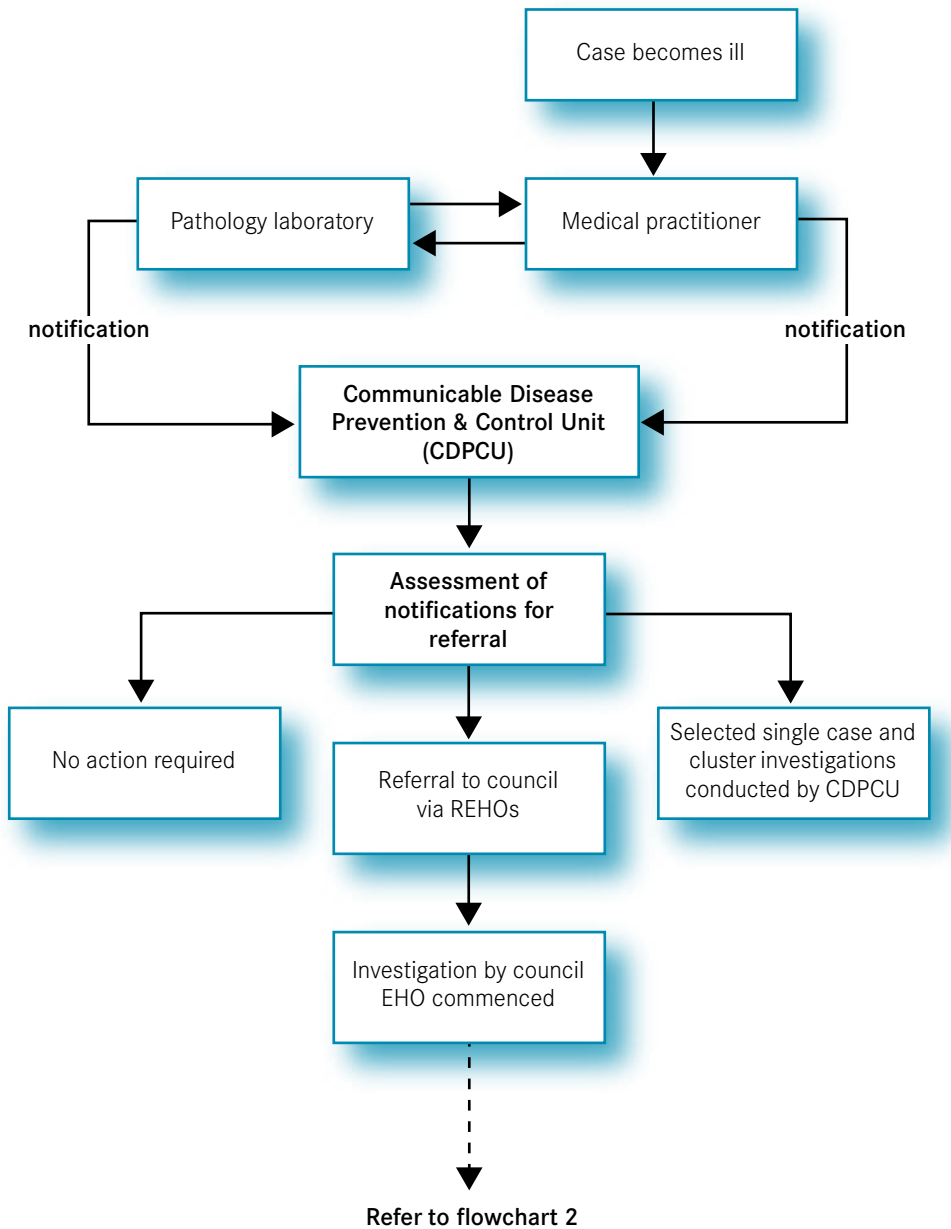
### 3.3 Non-referred cases

Cases of all other notifiable enteric diseases are not referred to local government; they are investigated by CDPCU officers. These diseases include Botulism, Cholera, Hepatitis A, Hepatitis E, Listeriosis, Paratyphoid, Shigellosis, Typhoid, Haemolytic uraemic syndrome (HUS) and STEC/VTEC.

During the investigations of these non-referred cases, assistance may be requested from the relevant region and local government. The tasks most likely to be requested are food sampling, environmental sampling, collection of faecal specimens and site inspections. A *sample and specimen collection request form* has been developed specifically for such requests (Appendix 1).

### Flowchart 1:

#### Notification and referral of single incidents of gastroenteritis



### 3.4 Why do we investigate single incident cases?

Most cases of infectious gastroenteritis occur as apparently sporadic cases of illness with no obvious association with each other. The routine investigation of sporadic single incident cases allows for:

- determination of the potential source of infection to prevent further cases
- prevention of the spread of illness from a known case to others
- identification of other cases amongst household and other close contacts of the index case
- identification of disease amongst high risk occupations (for example, food handlers, health care workers and child care workers) and possible exclusion from work
- provision of education for the case, doctor, other contacts and premises
- identification of broader health promotion opportunities to inform and educate the community about preventing the spread of infectious diseases.

The reason for referral is nominated on the referral form – the investigating EHO should address this reason when conducting the investigation and provide a summary of the findings.

### 3.5 Steps in the investigation

Referrals are generated by CDPCU and sent to council for investigation via the REHO. The reason for referral is nominated on the referral form – the investigating EHO should address this reason when conducting the investigation and providing a summary of the findings. In addition, the EHO should check if any of the risk factors summarised in the tables in section 3.5.3 apply to the case and, if so, should employ the risk management strategies as indicated.

Questionnaires have been developed for each disease to guide the investigation process and ensure that a minimum data set is collected for each case (Appendix 2). Additional key questions to be considered when carrying out any infectious disease investigation include:

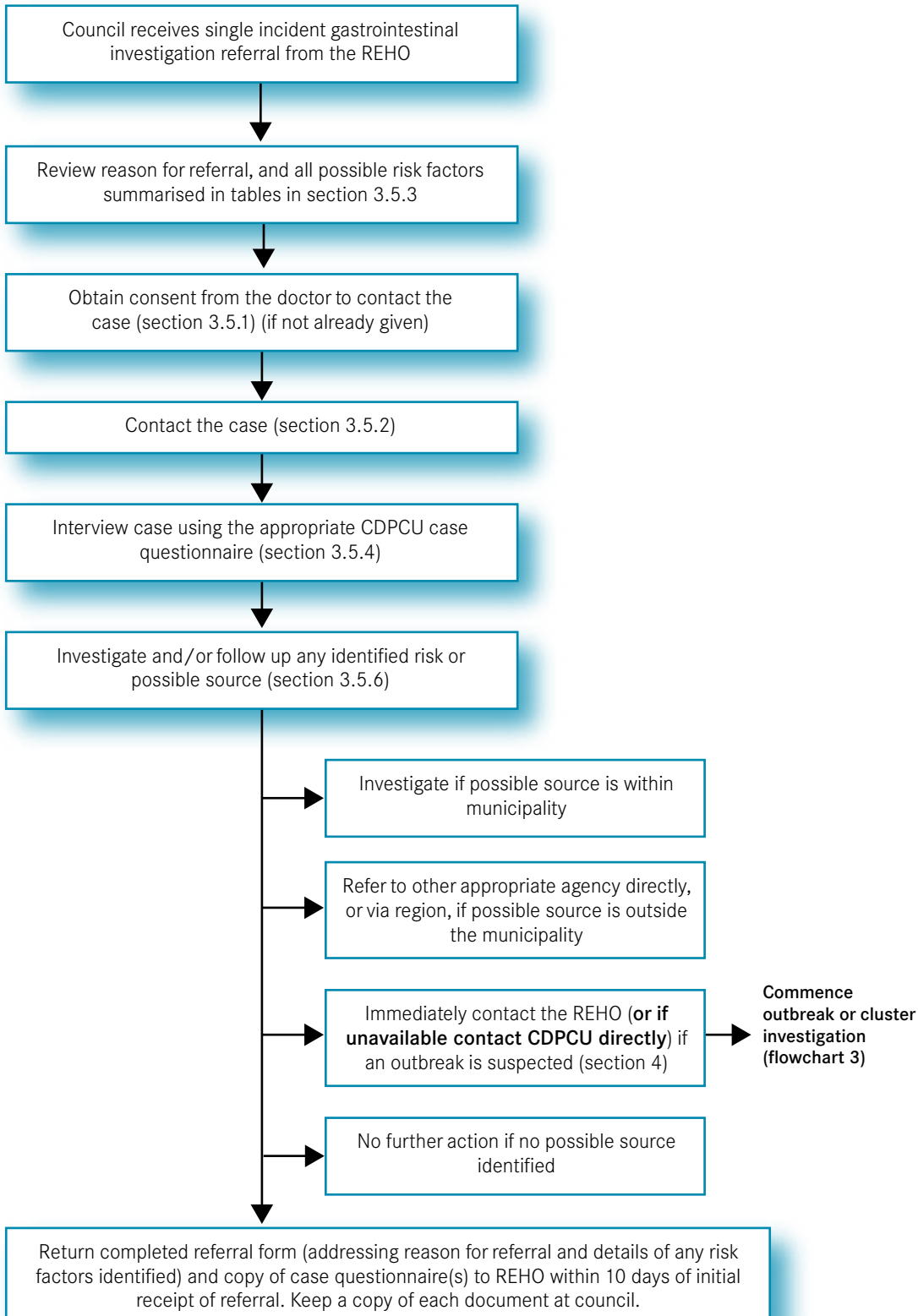
- What is the public health significance of this case?
- Does the illness of this case pose a risk to others?
- Is this case part of a cluster or outbreak?
- Are there any other cases, perhaps undiagnosed?
- Is there any evidence for a particular source of illness?
- Who else is at risk, and what is the susceptible population?
- Should this case be further investigated?
- Should there be any public health actions taken? If so, what?

All investigations should be conducted in a caring and professional manner, while ensuring that confidentiality is maintained throughout the investigation process (section 1.2 Privacy).



## Flowchart 2

### Single incident investigation by councils



### 3.5.1 Contact the doctor

The treating doctors can indicate their consent to contact the case on the notification form. Obtaining consent from the treating doctor is not mandatory; however, it is advised that every effort is made to do this to ensure that the case is aware of the diagnosis, and that opportunities for gathering additional information are not lost.

Contact the doctor and explain that the notification has been referred to you for further investigation. Explain that you seek additional information in relation to the case, and you would like to interview the case to complete the investigation. In some circumstances, the doctor may wish to contact the case prior to you contacting them, especially if the case has not yet been informed of their diagnosis. If a telephone number for the case has not been provided on the notification form, request this from the doctor once they have given consent to contact.

While speaking to the doctor, other key information to consider collecting includes:

- date the doctor last saw the case (as well as other previous consultation dates relating to this illness)
- date of onset of illness
- details of any medication prescribed
- occupation of the case
- any other illness in family members, work colleagues, friends
- if the case knows the diagnosis of their illness.

Some of these questions appear in section 1-4 of the standard gastroenteritis questionnaires and are marked with an asterisk (\*) as they should be asked of the doctor as well as the case.

#### **If you are experiencing difficulties obtaining consent to contact the case:**

- If the difficulty is in contacting the doctor or getting him/her to return your call, leave a message to advise that you will be contacting the case the next day unless the doctor informs you otherwise.
- If the doctor is on leave, or not expected to be at the clinic for several days, ask the practice manager or nurse if you can speak to another doctor in the clinic regarding the case.
- If the doctor does not give consent, **as an absolute last resort** you may wish to request the doctor to follow up the notification by conducting the interview with the case. You will need to provide the doctor with the appropriate questionnaire.
- If the doctor indicates that a patient should not be contacted, and is not willing to complete an interview with the case, report this to the REHO who will notify CDPCU that an interview with the case is not possible.

### 3.5.2 Contact the case

Interviews may be conducted in person (face-to-face) or by telephone, but the questionnaire should **never** be mailed to a case for completion. EHOs should assess who is the most appropriate person to interview (case, parent/guardian, carer, health care worker, next of kin) and arrange for an interpreter, if necessary. For cases younger than 16 years old, the parent or guardian should be interviewed. For cases aged 16–17 years old, parental/guardian consent should be obtained before conducting an interview with the case.

When you approach the case, it is important to explain why you are contacting them and how you obtained their details. Also assure them that the information they provide is kept confidential. If the case is concerned about privacy of their health information, refer them to the department privacy pamphlet on [www.health.vic.gov.ideas/notifying/privacy](http://www.health.vic.gov.ideas/notifying/privacy).

#### If you are experiencing difficulties contacting the case:

1. Try telephoning at different times of the day or on different days. You may need to try after business hours if the contact number you have is for a home telephone.
2. Contact the doctor again and request an alternative contact number for the case (mobile, work).
3. Deliver a calling card to the address with a request to contact you.
4. Send a letter by registered mail to the case on council letterhead, requesting that they call you.

If all these options fail, you may wish to return the referral to the REHO marked 'unable to contact case', however you should make a **minimum** of three reasonable attempts (at different times and on different days) before you consider doing this. All attempts to contact cases should be documented on the questionnaire.

**When leaving a message on voicemail, an answering machine or with an answering service, do not give confidential information. Leave your name and contact number and the hours you are available on that number.**

### 3.5.3 Undertake risk assessment and risk management

There are certain risk factors that indicate further investigation is required and health promotion opportunities may be appropriate. These risk factors can be broadly categorised as:

- Occupational
  - food handler
  - health care worker
  - child care worker
- Possible source
  - environmental
  - food
  - water
  - occupational
  - institutional
- Travel
  - overseas
  - interstate
  - intrastate

The following tables summarise each of these risk factors and how they can best be managed to prevent, control or minimise the risk of further cases. Before commencing an investigation, the EHO should consult the table appropriate to the reason for referral of the case, and review all other possible risk factors and risk management strategies.

Risk factor	Risk assessment	Risk management
<b>Food handler</b>	<ul style="list-style-type: none"> <li>• assess whether food handler was excluded in accordance with guidelines (Appendix 3)</li> <li>• assess whether proprietor has an exclusion policy and it is enforced</li> <li>• ascertain whether there are other workplace cases- check staff illness records</li> <li>• ascertain whether any foods consumed in the workplace are a likely source</li> <li>• assess food handling based on good food hygiene principles/food safety program</li> <li>• ascertain any other likely source</li> <li>• identify any other risk factor</li> </ul>	<ul style="list-style-type: none"> <li>• exclude any food handlers in accordance with guidelines and provide information on exclusions</li> <li>• sample any suspected food, water or implicated batches</li> <li>• implement appropriate clean-up and control measures</li> <li>• review food handling based on good food hygiene principles/food safety program</li> <li>• check for additional cases and interview them</li> <li>• provide information and educational resources for managers and staff</li> </ul>

Risk factor	Risk assessment	Risk management
<b>Health care worker</b>	<ul style="list-style-type: none"> <li>• assess whether health care worker was excluded in accordance with guidelines*</li> <li>• assess whether establishment has an exclusion policy and it is enforced</li> <li>• ascertain whether there are other cases amongst staff or clients</li> <li>• assess any other potential source of infection</li> <li>• assess food handling based on good food hygiene principles/food safety program</li> <li>• assess infection control procedures for effectiveness</li> <li>• identify any other risk factor</li> </ul>	<ul style="list-style-type: none"> <li>• exclude any health care worker in accordance with exclusion guidelines* and provide information on exclusions</li> <li>• sample any suspected food, water or implicated batches</li> <li>• implement appropriate clean-up and control measures</li> <li>• review food handling based on good food hygiene principles/food safety program</li> <li>• review infection control procedures as they relate to the work duties of the case</li> <li>• check for additional cases and interview them</li> <li>• provide information and educational resources for managers and staff</li> </ul>

\* Child care workers and health care workers should be excluded for the same periods as food handlers (see exclusion guidelines Appendix 3); however, hospitals, children's services, nursing homes may have their own staff exclusion policies.

Risk factor	Risk assessment	Risk management
<b>Child care worker</b>	<ul style="list-style-type: none"> <li>• assess whether child care worker was excluded in accordance with guidelines*</li> <li>• assess whether establishment has an exclusion policy and it is enforced</li> <li>• ascertain whether there are other cases amongst staff or clients</li> <li>• assess any other potential source of infection</li> <li>• assess food handling based on good food hygiene principles/food safety program</li> <li>• assess infection control practices for effectiveness</li> <li>• identify any other risk factor</li> </ul>	<ul style="list-style-type: none"> <li>• exclude any child care worker or children in accordance with exclusion guidelines* and provide information on exclusions</li> <li>• sample any suspected food, water or implicated batches</li> <li>• implement appropriate clean-up and control measures</li> <li>• review food handling based on good food hygiene principles/food safety program</li> <li>• review infection control procedures as they relate to duties of case</li> <li>• check for additional cases and interview them</li> <li>• provide information and educational resources for managers and staff</li> </ul>

\* Child care workers and health care workers should be excluded for the same periods as food handlers (see exclusion guidelines Appendix 3); however, hospitals, children's services, nursing homes may have their own staff exclusion policies.

Risk factor	Risk assessment	Risk management
<b>Two or more associated cases</b>	<ul style="list-style-type: none"> <li>• assess common link between cases</li> <li>• identify any potential source</li> <li>• identify others at risk</li> <li>• identify any other risk factor</li> <li>• check for additional cases, and interview them—advise the department if there are other related cases</li> </ul>	<ul style="list-style-type: none"> <li>• sample any suspected food, water or implicated batches</li> <li>• implement control measures to prevent ongoing spread from any potential source</li> <li>• implement appropriate risk management procedures where other risk factors are identified</li> <li>• provide information and educational resources for cases or families as appropriate</li> <li>• refer information to the local government where the suspected source is located</li> </ul>

Risk factor	Risk assessment	Risk management
<b>Implicated source</b> <b>(Food, water, environment)</b>	<ul style="list-style-type: none"> <li>• assess whether source implicated by case is likely to be the actual source</li> <li>• identify other potential sources</li> <li>• identify any other risk factors</li> <li>• check for additional cases and interview them</li> </ul>	<ul style="list-style-type: none"> <li>• sample any suspected food, water or implicated batches</li> <li>• implement control measures to prevent ongoing spread from any potential source</li> <li>• implement appropriate risk management procedures where other risk factors are identified</li> <li>• provide information and educational resources for case or family as appropriate</li> <li>• refer information to another local government if the suspected source may be from that municipality</li> <li>• liaise with the FSRAU if specific foods are implicated and EHU if water is implicated</li> </ul>
Risk factor	Risk assessment	Risk management
<b>Travel</b>	<ul style="list-style-type: none"> <li>• identify whether onset and incubation period is consistent with travel/departure timeframe</li> <li>• identify other potential source</li> <li>• ascertain whether there are any associated cases</li> <li>• identify other risk factors</li> <li>• assess whether case is in a high risk occupation and exclusions need to be enforced</li> </ul>	<ul style="list-style-type: none"> <li>• implement control measures if other risk factors determined</li> <li>• if source suspected from another jurisdiction in Victoria, refer information to other council and/or the REHO</li> <li>• if source suspected from elsewhere in Australia, CDPCU will refer to the appropriate state health department</li> <li>• provide information and educational resource materials to case and family as required</li> </ul>

Risk factor	Risk assessment	Risk management
<b>Case resides in a residential institution</b>	<ul style="list-style-type: none"> <li>• identify potential source</li> <li>• identify whether the illness may have been acquired at the facility</li> <li>• identify other risk factors</li> <li>• ascertain whether there are any other cases and gather information from them</li> <li>• assess whether any ill health care workers are/ were excluded in accordance with guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• sample any suspected food, water or implicated batches</li> <li>• implement control measures to prevent ongoing spread from any potential source</li> <li>• implement appropriate risk management procedures where other risk factors are identified</li> <li>• provide appropriate information and educational resources for case and family</li> <li>• refer information to another local government if the suspected source may be from that municipality</li> </ul> <p>Where infection is potentially care facility acquired:</p> <ul style="list-style-type: none"> <li>• notify the department</li> <li>• speak to an infection control professional if appropriate</li> <li>• review food handling based on good food hygiene principles/food safety program</li> <li>• review infection control procedures</li> <li>• obtain copy of most recent FSP audit report</li> </ul>



Risk factor	Risk assessment	Risk management
<b>Child in child care</b>	<ul style="list-style-type: none"> <li>• identify potential source</li> <li>• identify whether the illness may have been acquired at the child care centre</li> <li>• identify other risk factors</li> <li>• ascertain whether there are any other cases and gather information from them</li> <li>• assess whether cases have been excluded according to the exclusion requirements</li> <li>• assess whether ill child care workers have been excluded in accordance with the guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• sample any suspected food, water or implicated batches</li> <li>• implement control measures to prevent ongoing spread from any potential source</li> <li>• implement appropriate risk management procedures where other risk factors are identified</li> <li>• provide information and educational resources for case and family where appropriate</li> <li>• refer information to another local government if the suspected source may be from that municipality</li> </ul> <p>Where infection is potentially child care centre acquired:</p> <ul style="list-style-type: none"> <li>• notify the department</li> <li>• review food handling based on good food hygiene principles/food safety program</li> <li>• review infection control procedures across all rooms at the centre</li> <li>• obtain copy of most recent FSP audit report</li> </ul>

Risk factor	Risk assessment	Risk management
<b>Suspect hospital acquired</b>	<ul style="list-style-type: none"> <li>• identify potential source</li> <li>• identify whether source may have been hospital acquired</li> <li>• identify other risk factors</li> <li>• ascertain whether there are any other cases and gather information from them</li> <li>• assess whether any ill health care workers are/ were excluded in accordance with guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• sample any suspected food, water or implicated batches</li> <li>• implement control measures to prevent ongoing spread from any potential source</li> <li>• implement risk management procedures as appropriate where other risk factors are identified</li> <li>• provide information and educational resources for case and family where appropriate</li> <li>• refer information to another local government if suspected source may be from that municipality.</li> </ul> <p>Where infection is potentially hospital acquired:</p> <ul style="list-style-type: none"> <li>• notify the department</li> <li>• speak to an infection control practitioner</li> <li>• review food handling based on good food hygiene principles/food safety program</li> <li>• review infection control procedures</li> <li>• obtain a copy of most recent FSP audit report</li> </ul>

### 3.5.4 Interview the case

Identifying the source of an infection from the investigation of a single sporadic case can be very difficult, and is not always the most important objective.

Sporadic cases of illness could be part of an unrecognised cluster or outbreak and the investigation should be undertaken with this in mind. When interviewing a sporadic case, ask if they know of any family members/friends/colleagues with similar symptoms or the same infection, and complete all details of other possible cases on the questionnaire.

These suspected cases should also be interviewed. EHOs need to inform the department without delay if they identify additional cases from a single incident referral. Interviewing a number of sporadic cases may also be useful in generating hypotheses about a possible source amongst notified cases with the same infection who were previously thought to be unassociated. This may lead to the identification of clusters or outbreaks of gastrointestinal illness from a common source in the community.

Be wary of accepting the case's supposition that the take-away meal they consumed just before they became ill was the source of their illness. Before conducting the investigation, EHOs should refer to the department's *Blue Book* and familiarise themselves with symptom details, incubation periods and common sources of infection (if the pathogen is known), to assist in assessing the possibility that the food nominated by the case has caused the infection. While single and clustered cases of gastroenteritis can be due to pathogens spread in food or water, some gastrointestinal pathogens can also be spread from person to person as a result of close personal contact or contact with contaminated environmental sources or fomites, particularly when hygiene or cleaning is poor.

The appropriate disease questionnaire should be used to interview each ill person (Appendix 2), and as much detail as possible should be collected on the following:

- personal details
- nature and timing of clinical symptoms
- occupation/school/child care
- details of other known cases
- environmental exposures including any travel
- other risk factors
- food history during the incubation period (if known) – and abbreviated 2-week history of outings and events (if appropriate).

### 3.5.5 Health education opportunities

Investigation of cases of gastroenteritis provides an important opportunity to inform and educate the case and their family about the spread and prevention of illness.

Investigations can also provide opportunities to inform and educate the workforce about the spread and prevention of gastroenteritis and how this relates to food handling and infection control. A series of pamphlets on a range of gastroenteric diseases are freely available from CDPCU (or on the department website at [www.health.vic.gov.au/ideas/](http://www.health.vic.gov.au/ideas/)) to assist in the education process.

By following up cases of gastroenteritis, specific concerns within the municipality can be identified. For example, child care centres, aged care facilities or certain types of food premises may become the target of a specific health promotion intervention initiated by a municipality. Wider health promotion opportunities are also present, such as working with other local and regional agencies, health care professionals and community groups, to address issues relating to common endemic notifiable gastroenteritic pathogens.

### 3.5.6 Referral to other local government authorities

Cases to be investigated are referred to the local government area in which the case resides. If, during the investigation, further related cases are identified, the investigating officer should interview each of these cases regardless of where they reside. If a premises outside of that local government area is implicated, the investigating officer may need to refer investigation of that premises (for example, food premises, health care facilities, child care centres, hospitals or aged care facilities) to that municipality and this can be done via the REHO. This may result in the municipality conducting a site inspection, collecting food samples and reviewing the FSP. If further cases have been identified or a premises has been implicated, the council EHO must inform the department and regularly update on the progress of the investigation.

### 3.5.7 Completion of investigation

After the investigation has been finalised, return the completed questionnaires and referral form to the REHO within 10 days of the initial referral. The EHO should ensure that all questions on the questionnaires and referral form have been answered and that comments addressing the reason for referral and details of any risk factors identified or actions taken (for example, inspections of premises, referral of suspect food premises to other municipalities) have been completed. Councils should retain copies of these documents.

Only the completed referral sheet is forwarded by the REHO to CDPCU; the completed questionnaire is retained by the REHO. It is therefore essential that all pertinent investigation information is recorded on the referral form, including:

- comments on the reason for the referral
- any other risk factors or suspected sources of illness identified (if no source was suspected or identified – the EHOs should indicate ‘no source identified’ on the referral form)
- investigation conclusions.

It is the responsibility of the REHO to check that all referral forms and questionnaires have been completed correctly with no missing information. If additional details are required or if information is missing, the REHO is responsible for liaising with council to obtain this information.

**Single incident case investigation summaries should be returned to CDPCU within ten days of the initial referral date.**

### 3.5.8 Record keeping

During an investigation of a single incident of gastroenteritis it is critical that clear notes be kept detailing all steps taken in the investigation. These notes should include:

- a log of the investigative process (including attempts to contact the case)
- the completed questionnaire
- assessment of all potential risk factors
- details of any control measures implemented
- details of all other actions taken
- a summary of the findings.

Local government should keep a copy of all their records (including any questionnaires) relating to the case investigation for future reference as a sporadic case may become part of a wider investigation. Note that health records pertaining to investigations should be retained as specified in the Health Records Act and are accessible via the FOI process.

# 4. Gastroenteritis outbreak investigation

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## Flowcharts

### 3. Outbreak investigation

## 4 Gastroenteritis outbreak investigation

### 4.1 Introduction

An outbreak may be defined as the occurrence of a disease or health event in excess of the expected number of cases for a given time or place. Cases may be related to an apparent common source, or sometimes to a specific setting (for example, an aged care facility or a hospital). A suspected gastroenteritis outbreak in care facilities is defined as two or more residents/staff having onset of symptoms within 72 hours of each other (that cannot be explained by medication or other medical conditions) in a setting that makes epidemiological sense. It is not always easy to recognise outbreaks; some experience and judgement is required to distinguish sporadic cases of common notifiable diseases from a real increase in cases which may signal an outbreak.

Outbreaks are investigated to:

- prevent further disease transmission
- provide information that can be used to control the outbreak
- prevent similar occurrences in the future
- identify populations at risk of a disease
- evaluate the effectiveness of public health programs
- characterise modes of disease transmission
- train public health staff
- learn more about a disease, including the impact of control measures
- share knowledge and findings with other health professionals by documenting the outbreak investigations in reports or journal articles
- fulfil legal obligations and duty of care.

Most of the information and procedures in this section are directed towards the investigation of outbreaks involving a number of cases; however, the principles also apply to the more common occurrence of only one or two cases of 'gastro' or 'food poisoning', in which the public health response is typically more limited. Single and clustered cases of gastroenteritis may sometimes be due to pathogens spread in food or water, but gastrointestinal pathogens (particularly viruses) are often spread from person to person by close contact, via environmental sources or from contaminated fomites, particularly when hygiene or cleaning is poor.

Identifying the source of an outbreak of illness is often not straightforward. Some outbreaks may only become apparent through an increase in notifications in one or more geographical areas. Dispersed outbreaks, in which the cases have no immediately apparent association, such as a cluster of cases of the same serotype of *Salmonella*, are usually more difficult to investigate than point source or common event outbreaks. However, these cases may be due to a point source of infection, for example contaminated food from a particular food premises, or a widely distributed contaminated food item from a particular manufacturer.

**It is important that immediate action be taken to contain each outbreak (prevent further cases occurring).**

## 4.2 Types of outbreaks

The common event, or point source, outbreak occurs as a result of a common exposure at a defined time and place (for example, the occurrence of gastroenteritis among people who attended an event such as a wedding reception or party). Such outbreaks are commonly reported to local government or the department by guests who recognise illness in themselves or other attendees after the event.

Outbreaks of gastroenteritis in facilities (for example, aged care, hospitals, child care centres) are often caused by viruses such as norovirus, which are most commonly, but not exclusively, spread by person-to-person transmission. However, it is important not to assume from the outset that this is always the case in these types of settings, but rather to conduct the investigation following the standard protocols until sufficient evidence is collected regarding the cause of the outbreak. Outbreaks in facilities are usually notified directly to the department and occasionally to council.

Outbreaks of gastroenteritis allegedly related to food or a food premises, and outbreaks of infectious gastroenteritis in various care facilities, are the most common types of outbreaks reported to the department. Some of the apparently widespread outbreaks may ultimately be shown to have a common source (such as a widely distributed food), while others will represent community-wide outbreaks due to person-to-person spread of pathogens (usually viruses).

## 4.3 Investigating outbreaks

The way in which an outbreak is investigated will depend upon the nature of the outbreak. In practice, almost every outbreak will be unique in some way, requiring a degree of flexibility in the approach to recognition and investigation. If outbreaks are expected to be large, complex or to cross municipalities, meetings or teleconferences may be held to plan and implement an appropriate response. Local government and department officers (CDPCU and regions) should all be involved in any scheduled pre-investigation planning meeting.

Specific control and prevention strategies, according to the mode of transmission, are outlined in section 5 for EHOs and in the industry specific guides to be provided to premises/facilities (Supplements 1, 2 and 3).

### 4.3.1 Communication

Effective communication between all parties involved in an outbreak investigation is essential to ensure that each outbreak is contained quickly and efficiently. This may increase the likelihood that the cause of the outbreak will be identified, enabling controls to be implemented to prevent the same circumstances happening again. CDPCU will provide the REHO with all known details of every outbreak at the initiation of each investigation, and this information should then be forwarded to council for action. During each investigation the EHO should communicate all findings to the REHO without delay. If, for any reason, the REHO is not available during an investigation, the EHO should contact CDPCU directly so that possible further steps in the investigation are not impeded or delayed. EHOs are encouraged to contact their REHO, CDPCU, EHU or FSRAU if they have any queries or concerns regarding outbreak investigation.



### 4.3.2 Notification of outbreaks

If an outbreak is suspected it should always be notified to the DH within 24 hours. When the department is informed of an outbreak (for example, by a complainant, a facility, a premises or doctor), the officer will obtain as much of the following information as possible during the first conversation with the person reporting the outbreak:

- name and contact details of the person reporting the outbreak
- date, time and place of function or incident
- the number of people ill and number of persons 'at risk'
- symptoms and severity (for example, if any cases have been hospitalised)
- onset dates and times for cases
- duration of symptoms
- if the setting is a health care facility: type of accommodation (for example, wards, single rooms or shared rooms), bathrooms facilities (for example, en-suite, shared)
- illness in any person prior to the event or at the event or premises (for example, if anyone vomited in a public area)
- circumstances that allegedly implicate a particular source
- details of water supply and waste disposal (if known at this stage).

Additional details may need to be obtained as quickly as possible from any implicated premises/facility, such as:

- whether any staff were ill prior to or during the outbreak – and if they worked while symptomatic (if known)
- case lists
- names and phone numbers of any contact person or organisers, or contact details for exposed persons (for example, a guest list)
- if the outbreak aetiology is unknown or appears to be foodborne, obtain menus for at least three days prior to the onset of symptoms for the first case
- details of where food is prepared (on-site or off-site)
- copies of menus if a restaurant or function is implicated, or a list of foods consumed if known (for example, a list of food provided at a party and details of who provided each item, or the menu for a wedding reception).

This minimum dataset of information is collected using a standard *Outbreak Notification – Information Collection Form* (Appendix 4). Three standardised notification forms have been developed depending on the setting in which the outbreak is occurring: health care facility, child care facility or camp facility. All of the initial information collected at the time of the notification will be provided by CDPCU when notifying the outbreak to the REHO and the investigating council EHO.

If an outbreak is first notified directly to council or the REHO, they should make every attempt to obtain the details listed on the appropriate *Outbreak Notification – Information Collection Form*. If an outbreak is reported directly to council, the EHO should telephone

the department (usually the REHO) to notify the outbreak (Appendix 5 Contacts). If you are unsure if an outbreak has occurred, you should discuss the information you have collected with the department, so that a decision can be made without delay as to whether the incident needs to be investigated further.

### 4.3.3 Assessment of outbreaks

Upon receipt of a notification, CDCPU will assess each outbreak according to the initial information collected at the time of the notification. Assessment is made of the suspected pathogen responsible for the illness, and how the pathogen may be transmitted to, or between, people. If there is insufficient preliminary information available at the outset of an outbreak to make a confident decision on how a pathogen is being transmitted, the outbreak is hypothesised to be of unknown transmission.

Flowchart 3 summarises the assessment process. Each outbreak is categorised according to the suspected pathogen and mode of transmission, and the assigned hypothesised category informs the investigation procedure for that outbreak. The categories are:

#### 1.) Suspected viral, person-to-person outbreaks

Cause of the outbreak:	Pathogen is known or suspected to be a virus <b>and</b>
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Transmission of the pathogen:	Suspected person-to-person spread
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For suspected viral, person-to-person outbreaks, the following actions will be requested by CDPCU:

- Supervise clean-up
- Ensure that infection control practices have been implemented
- Review hygiene, cleaning and food handling procedures
- Ascertain if staff have been ill and advise on exclusions
- Obtain case lists
- Provide faecal specimen collection kits, if necessary, and deliver specimens to MDU

**Notify outbreaks by telephone, 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 answering machines.**

OR

## 2.) Unknown or suspected food- or waterborne outbreaks

Cause of the outbreak:	May be any pathogen (confirmed or unknown) <b>and</b>
Transmission of the pathogen:	Suspected food/waterborne or transmission is unknown

For unknown or suspected food/waterborne outbreaks, the following actions will generally be requested by CDPCU as a minimum:

- Supervise clean-up
- Review FSP and undertake food safety assessment
- Review hygiene, cleaning and food handling procedures
- Ascertain if staff have been ill and advise on exclusions
- Collect menu/food list
- Obtain three-day food history for ill cases
- Obtain guest/booking list
- Provide faecal specimen collection kits, if necessary, and deliver specimens to MDU

### **and if advised by CDPCU:**

- Sample food/equipment/water (**before** the clean-up is conducted)
- Swab the environment/equipment (**before** the clean-up is conducted)
- Conduct interviews and complete appropriate questionnaires (may need to be designed by CDPCU)

The cause and mode of transmission of all outbreaks should be continually reviewed by all involved during each investigation as new information comes to light. This may require additional information to be gathered or extra actions undertaken for some outbreaks.

### 4.3.4 Site visit

Once you have been notified of an outbreak, contact the operator of the premises where the outbreak has occurred, and advise them that you are investigating an outbreak. It is imperative that an EHO attends the premises as soon as possible. You may need to request that they stop selling or serving a product if, after discussions with the department, a particular food is suspected to be the cause of the outbreak.

#### 4.3.4.1 Supervising the clean-up

Cleaning and sanitising a premises is essential to reduce or eliminate the risk of spreading the infection. A clean-up should be supervised by a council EHO, the REHO or an infection control professional (for example, at a hospital). The person supervising the clean-up should explain to the cleaners why the use of a chlorine-based sanitiser is necessary, and how to make up the required chlorine concentration. In most situations it is not appropriate for an employee of the affected facility to undertake this supervisory role. If an EHO does not intend to remain on-site for the entire duration of the clean-up, he/she needs to be confident that the process will be undertaken effectively and according to these guidelines – and the EHO should indicate this on the GOOA.

Chlorine-based sanitisers must always be used in an outbreak situation. Most other disinfectants (such as quaternary ammonium compounds), while effective against some bacteria, have little effect on destroying viruses such as norovirus – and in most cases the pathogen causing the outbreak will not be known at the time cleaning commences. Instructions for making up various chlorine dilutions are included in Appendix 6. Chlorine solutions must be made up just prior to use as the effectiveness deteriorates over time.

Further details on cleaning are included in section 5.

**Chlorine-based sanitisers must always be used in an outbreak situation.**

#### 4.3.4.2 Implementing infection control measures

While at the premises, EHOs should give advice on immediate control measures to prevent further cases. Measures may include sanitation procedures, boiling or disinfecting water, removing particular foods from sale or use, changing the steps of a food process, isolating infected cases, restricting movement of staff and patients within a facility, and ensuring that ill staff do not work for at least 48 hours after symptoms have ceased.

Infection control practices applicable to particular outbreaks and settings are detailed in section 5. Infection control is important in containing the spread of person-to-person outbreaks in facilities where people live in close proximity and measures should be implemented quickly and effectively.

#### 4.3.4.3 Gathering further information

While on-site, council EHOs should attempt to gather as much additional information as possible, which may include any or all of the following:

- determining if all food processes occur on-site and, if not, details of where they occur
- obtaining case lists
- checking if any staff members have been ill – you may need to organise the collection of faecal specimens from ill staff (and occasionally, at the specific request of the department, all food handling staff regardless of whether or not they were ill)
- ensuring compliance with guidelines for exclusion of food handlers, health care workers and child care workers (Appendix 3)
- collecting details of any recent problems with sewage system or toilets

- checking arrangements for pest control and inspecting for signs of any pests
- obtaining a detailed map or plan of the premises or facility (this may be appropriate in some settings, for example camps, caravan parks, large facilities) or seating arrangements/floor plan of a function/event venue
- investigating other potential sources, for example swimming pools, other recent functions, informal eating areas and sporting or animal activities.

If the outbreak is unknown or suspected to be foodborne, you may also need to:

- obtain a copy of the menu or list of foods, if appropriate
- obtain details of the forms of food served, such as vitamised meals in aged care (this information can be collected on the food history report form (Appendix 7))
- obtain attendance or booking lists, depending on the setting
- determine type of water supply and sample non-mains water where necessary
- collect details of waste disposal (septic tank, main sewer, grey water and other treatment systems)
- conduct food safety compliance check/food hygiene inspection
- review the FSP and other food safety documents (for example, recent audit reports or council notices) and report any non-conformances to the department
- obtain samples of foods as requested by the department (section 6)
- obtain environmental swabs if appropriate – as requested by the department (section 6).

If a specific food or meal is suspected as the cause of the outbreak, you should also:

- collect details of the process steps to make the food, including dates and times of preparation
- collect suppliers details, frequency and quantity of supply, batch numbers, use-by-dates and purchase receipts for that food or ingredients in that food
- obtain samples of any leftover food, water or ice for analysis (section 7)
- discard possibly contaminated foods in consultation with the department.

#### 4.3.4.4 Providing information and advice

Check with the person in charge (proprietor, manager, director of nursing etc.) that they have a copy of the appropriate industry specific guide for outbreak management (Supplement 1, 2 or 3). Inform them that these guidelines and other information on gastroenteritis can also be accessed on the department website. Advise them that they can record the management of their outbreaks on the *Outbreak management checklist form* (Appendix 8). Before leaving the premises, EHOs should discuss all aspects of the outbreak guidelines with the person in charge and answer any queries they may have.

A range of department brochures covering general gastroenteritis, viral gastroenteritis or specific gastroenteric pathogens can also be provided. These are available in hard copy and online.

If applicable, you may also consider providing a copy of, or referring them to, the following appendices in the department's *Blue Book* ([www.health.vic.gov.au/ideas/](http://www.health.vic.gov.au/ideas/)):

- 3: Standard and additional precautions (pp. 247–251)
- 4: Procedure for managing an exposure to blood/body fluids/substances (or refer (pp. 253–255)
- 5: Procedure for managing spills of blood and body fluids/substances (pp. 257–258)
- 6: Cleaning and waste disposal procedures (pp. 259–261).

#### 4.3.4.5 Obtaining case lists/booking list/attendance list

For outbreaks in settings such as aged care facilities, hospitals and child care centres, EHOs should collect a list of people who have been ill or are currently ill with symptoms of gastroenteritis, including the date and time the symptoms began. This information should be provided on the appropriate standard case lists (Appendix 9) **and updated at least twice per week** as described in the case list instructions.

For a point source outbreak, where a discrete group of people has attended an event or premises (for example, a party, wedding or conference), a guest or attendance list, with contact details for all ill and not ill people, should be provided so that all attendees can be interviewed.

Where outbreaks have occurred in registered food premises, such as a restaurant, café or function centre, it is often necessary to obtain a copy of the booking list for the time period under investigation. This is so that other groups of people attending the venue can also be contacted to determine the extent of the outbreak.

In an outbreak situation, food premises, aged and health care facilities, child care centres and camps are requested to provide local government and the department with information pertinent to the investigation. If the proprietor is unwilling to provide the required details, a direction under current legislation could be issued, however, this should be discussed with the department.

#### 4.3.4.6 Faecal specimen collection

**Faecal specimens should be collected from five ill cases in all outbreaks** unless otherwise advised by the department. During some unknown or suspected foodborne outbreaks, you may be required to request faecal specimens from all those experiencing symptoms, including ill staff. EHOs should provide faecal specimen collection kits, where necessary, and instructions for collection (Appendix 10). They should also check that faecal specimen containers are labelled correctly and deliver them to MDU accompanied by a completed laboratory request form (section 6).

**During outbreak investigations, ALL faecal specimens are to be sent directly to the MDU.**

In an outbreak situation, ALL faecal specimens are to be sent directly to the Microbiological Diagnostic Unit (MDU), labelled with the name of the outbreak, and indicating that a copy of the results, as well as going to council, should also go directly to the coordinating CDPCU officer for that outbreak. However, some health care facilities may send faecal specimens to their own in-house laboratories or independent pathology laboratories. In this case, EHOs need to obtain the name of the laboratory they were sent to, and a list of cases from whom specimens have been collected. They should also request that results of laboratory testing be made available to council. These results should always be forwarded to CDPCU. In some cases, CDPCU may request that these faecal specimens be forwarded by the private laboratory to MDU for further testing.

MDU currently screens all outbreak faecal specimens for norovirus, and then tests all norovirus-negative specimens for bacterial pathogens. Specimens collected during outbreaks amongst groups of children are also screened for rotavirus, adenovirus, *Cryptosporidium* and *Giardia*. MDU forwards all faecal specimens submitted during outbreaks to the Victorian Infectious Disease Reference Laboratory (VIDRL), where they are tested for viral pathogens.

If large numbers of samples are being submitted, contact MDU by telephone so that they can schedule the processing of the samples. All samples should reach MDU no later than 4.00 pm, so that tests can be set up on the same day. If you are unsure if and how specimens should be collected, contact CDPCU or MDU for advice. Section 6 includes detailed information on laboratory sampling and testing.

#### **4.3.4.7 Food, water and environmental sampling**

Food, water and environmental samples are tested by MDU for bacterial pathogens and for some toxins where indicated. Testing for viruses in food samples or environmental swabs is not currently available. Detailed information on sampling is covered in section 6. Chain of custody and sealing issues should be considered when collecting samples.

#### **4.3.4.8 Obtaining menus/food lists**

When outbreaks are suspected to be food or water borne, or when transmission is unknown, it is necessary to obtain a copy of the menu or a list of foods served at the function, so that these can be included in the outbreak questionnaire. Ensure you collect all details of meals served, including appetisers and finger foods that may have been served before the main meal, 'specials' that may not be on a printed menu, items attendees may have brought to the function (a birthday cake for example), and details of individual items served on platters.

Some outbreaks may occur among people who have consumed a number of meals together over several days (for example, at a conference or a school camp). Comprehensive menus for all of these days will need to be collected, including any snacks served between meals. Where outbreaks occur in health/aged/child care facilities, menus may need to be obtained for several meals over a number of days, as advised by CDPCU. Remember that in these settings meals may be provided in several forms, such as vitamised, soft or peg fed, or made to meet specific nutritional or dietary needs, and this should be noted for each case.

### 4.3.5 Questionnaires and interviews

It may not always be appropriate or possible to conduct interviews and complete questionnaires, but they are an essential part of most investigations where detailed information on risk factors is required. Risk factors may include food or water consumed during the incubation period, exposure to animals, travel, contact with other ill people and, in some cases, activities such as water sports, hiking and activities that include contact with animals (particularly in camp settings).

When interviews are required, **all** people at risk of illness (whether they are ill or not) should be interviewed using the gastro outbreak questionnaire (Appendix 2), unless otherwise advised by the department. In outbreak situations, only structured questionnaires, where all the subjects are asked exactly the same questions, are likely to be of use.

For unknown or suspected foodborne outbreaks, CDPCU will usually develop a menu-based or activity-based questionnaire concentrating on specific exposures for that particular outbreak. These questionnaires are designed in a database format to enable CDPCU to conduct statistical analysis of the data collected. Consult with the department regarding any modifications to the questionnaire that you may think are necessary prior to commencing the interviews.

Outbreak questionnaires should always be completed while interviewing the subject, either face-to-face (in person) or by telephone. This enables the interviewer to fully discuss the circumstances surrounding the event and the foods consumed, assisting the recall process. Postal or self-administered questionnaires generally have a poor return rate and provide less useful, and sometimes incomplete or inaccurate, data. For these reasons they should only be used as an absolute last resort. EHOs experiencing problems completing a questionnaire should seek advice from their REHO or CDPCU.

If more than one person is involved in interviewing during an outbreak, ensure that all interviewers administer the questionnaire in a standardised fashion, so that interviewer bias is minimised. To this end, all interviewers should run through the full questionnaire together before commencing interviews.

Interviews may also be conducted with food handlers when a food premises is implicated in the outbreak, and with staff and carers if an outbreak occurs in a care facility, hospital, school or camp - CDPCU will advise if this is necessary.

In some residential aged/health/child care outbreaks, EHOs may be requested to complete a three-day food history for each case. This information will most likely be obtained by interviewing carers.

**As time passes, people affected in an outbreak may forget specific details of recent meals and gatherings. It is therefore crucial to conduct outbreak interviews as soon as possible.**



### 4.3.6 Gastro outbreak onsite assessment (GOOA)

A GOOA is to be completed for every outbreak investigated. EHOs should carefully read the GOOA explanatory notes (Appendix 11), which describes the information required in each section. It is important that EHOs understand these instructions and are familiar with the GOOA **before** they become involved in an outbreak investigation. The GOOA should be completed and returned (with all the appropriate attachments) to the REHO within two working days from when the outbreak was notified to council. However, if some of the required information is not available within 48 hours, the GOOA should be forwarded to the REHO with a note describing what is missing and when it will be available (for example: 'A guest list is being compiled and will be available within 24 hours').

The GOOA is made up of two sections. Section 2 may need to be completed if the outbreak is suspected to be food or water borne, if transmission is unknown, or later in the investigation if requested by CDPCU based on information provided in section 1 of the GOOA. EHOs should be aware that they may be required to undertake further investigation, under the direction of the department, after the initial investigation tasks and the GOOA have been completed.

The information collected in a GOOA (including the required attachments) is essential to inform any continued investigation process that may be necessary for each outbreak, and to assess if the initial hypothesis of the cause and transmission of the illness was correct. It is therefore imperative that all applicable sections of the GOOA are completed, the information is accurate, and the completed GOOA and attachments are returned urgently.

Before forwarding the completed GOOA and attachments to CDPCU, REHOs are responsible for checking all details and contacting investigating EHOs for clarification or additional information if necessary.

### 4.3.7 Interpreting laboratory results

Interpretation of laboratory results can be complex and care must be taken to ensure that information released to cases is accurate. Laboratory results should not be released to anyone until written confirmation has been received from the laboratory and all the results have been discussed with the department. EHOs should be clear on the meaning of the laboratory results before discussing them with cases. When interpreting laboratory results, consideration should be given to:

A positive result:

- from an epidemiologically implicated person or item, strongly suggests that the person or item was the source, vehicle or victim of infection
- from a person or item without epidemiological association, does not suggest or prove that the person or item was the source or vehicle.

A negative result:

- does not rule out an association
- indicates only that the pathogen was not found in the specific specimen collected at that particular time using the test specified.

Reasons for a negative result include:

- implicated item or batch is no longer available
- not all units/batches/parts were contaminated
- specimen source was not uniformly contaminated
- intermittent rather than uniform carriage of a product
- contamination level below the limit of detection
- specimen size was too small
- competitive micro-organisms outgrew pathogen
- item/source not tested for pathogen
- inappropriate processing, handling or storage diminished, injured or inactivated the pathogen
- laboratory methods were inappropriate or inadequate
- possibility of a false negative
- clerical error.

Laboratory investigations are:

- generally used to support a diagnosis or hypothesis, not to make it
- only as good as the specimens collected.

Some pathogens, such as *Clostridium perfringens*, *Bacillus cereus* and *Staphylococcus aureus*, may be found incidentally in faecal specimens without being the cause of the outbreak illness. In this situation it is essential to assess whether or not the epidemiology of the outbreak (symptoms, onset, duration) is consistent with the laboratory findings, and CDPCU will assist with this interpretation.

#### 4.3.8 Data analysis

For outbreaks where questionnaires have been completed, CDPCU will collate, analyse and interpret the data, along with any other descriptive, environmental and microbiological data. A computer statistical software package is used to analyse outbreak questionnaire data.

The results of epidemiological studies should not be considered in isolation. Evidence from epidemiological, laboratory and environmental investigations along with FSP compliance checks, should be considered to give the full picture. Conclusions about a source of illness should also take into account:

- whether symptoms experienced by patients were consistent with those commonly produced by the aetiological agent
- whether the organism/toxin was isolated from the cases
- whether the same organism or toxin was found in the implicated vehicle/source (for example food, utensils, animal)
- information on methods of food processing, preparation and storage and if these provided opportunities for contamination, survival and growth of the organism.

**It is essential that accurate, complete and timely documentation of every outbreak investigation is maintained at all times.**

In practice, most investigations will not have complete data in all these areas. However, the investigation should aim to ascertain as much detail as possible.

Results of an outbreak investigation may indicate the need to implement new control strategies, or confirm or modify precautionary measures that were initiated on the basis of preliminary hypotheses.

#### 4.3.9 Record keeping

All information gathered for each outbreak should be kept on an official file in accordance with council record-keeping policy. This file should include notes on any verbal information given or received.

Note that information in outbreak files may be subject to FOI requests (section 1.3) and may provide evidence for potential prosecutions.

It is essential that accurate, complete and timely documentation of every outbreak investigation is maintained at all times.

#### 4.3.10 Feedback to premises

The council EHO is responsible for providing feedback to an affected/implicated premises or facility at the conclusion of an outbreak investigation. This may include confirmation of case numbers, food sample results, faecal specimen results, suspected or confirmed pathogen and modes of transmission. Discussions with the premises should also highlight any processes that may need to be altered, and any other potential corrective actions that need to be implemented in the future. For complex food or water borne outbreaks, the EHO should discuss intended feedback to premises with the department to ensure messages are accurate and consistent. Details of these discussions should be recorded in the outbreak file.

#### 4.3.11 Feedback to affected individuals

Providing final feedback to affected individuals or groups is usually the responsibility of the investigating council. EHOs should discuss this first with the department to confirm the key messages, who should be contacted and the extent of the information to be released. For children in child care centres, copies of the laboratory results should be sent to the parents rather than the child care centre. In aged care facilities a copy of the laboratory reports for faecal specimens should be forwarded to the facility rather than the individual. When mailing results, enclose a covering letter, the appropriate disease pamphlet and privacy information. In large scale outbreaks, CDPCU may take the lead role in coordinating the dissemination of faecal specimen results to individuals.

#### 4.3.12 Ongoing monitoring

If processes, such as food preparation or cleaning, are amended as a result of an outbreak investigation, it is essential that ongoing monitoring is conducted by the local government EHO to ensure continued adherence to, and effectiveness of, these new processes. It cannot simply be assumed that new processes will be effective or adopted long term without further intervention. Ideally, a simple monitoring plan should be developed,

detailing time and frequency of monitoring, who will monitor and for how long, and what corrective actions will be taken if the new processes are not implemented or are found to be ineffective. All follow up visits, monitoring arrangements and any further actions taken should be clearly documented in the outbreak file.

#### 4.3.13 Debriefing

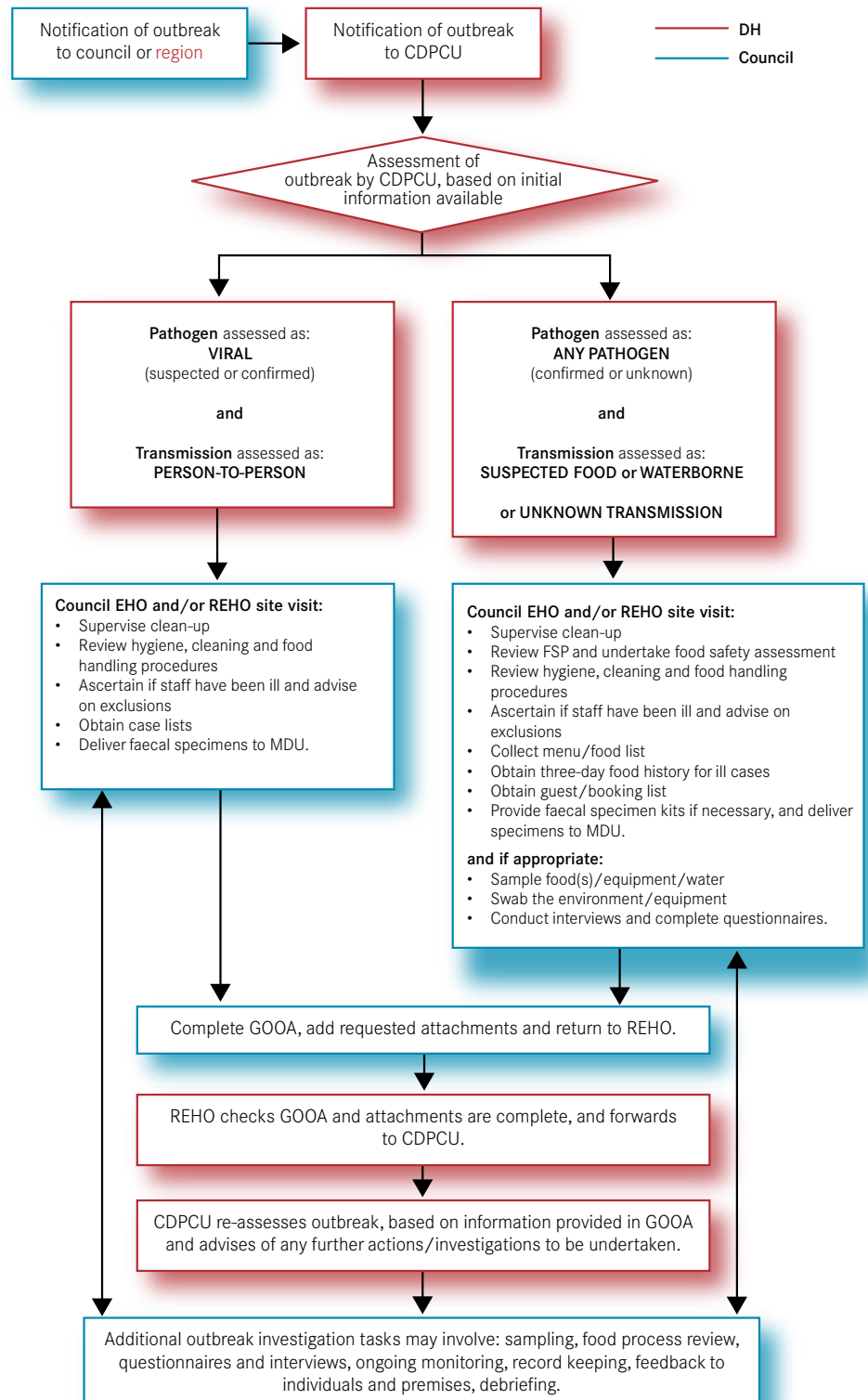
Debriefs are usually only conducted for large, high profile or complex investigations, or where there are issues with communication or other difficulties during the investigation. Within a reasonable time after the conclusion of the outbreak, CDPCU officers, council investigating officers, REHOs, as well as other department and laboratory staff involved in the outbreak, may meet to discuss issues which may have arisen during the outbreak investigation. Debriefs are part of an internal government process, allowing for a formal feedback process between involved parties and assisting in identifying opportunities for improvement. In certain circumstances the proprietor/staff of an affected premises/business may also be invited to participate in a debrief meeting.

For smaller, simpler outbreaks, REHOs and/or local government EHOs may hold their own internal debrief meetings. This ensures that all officers are informed of the outbreak investigation findings and have the opportunity to contribute towards improvement of procedures, if necessary.

#### 4.3.14 The media

The media may be made aware of an outbreak officially through a departmental media release, or unofficially through other sources (for example, the general public). If local government receives media enquiries in relation to outbreaks, they may wish to contact the department before releasing information to the media, to ensure its accuracy and consistency with departmental communications.

### Flowchart 3 Outbreak investigation





# 5 Controlling outbreaks of gastroenteritis

- 5.1 General cleaning and control to be conducted for all gastroenteritis outbreaks
- 5.2 Additional outbreak management for specific settings
  - 5.2.1 Food businesses
  - 5.2.2 Residential care facilities
  - 5.2.3 Children's centres
  - 5.3.4 Camp settings

Specific control measures may depend upon the type of outbreak, the pathogen known or suspected to be responsible, the mode of transmission of the pathogen and the setting where the outbreak has occurred.

## 5 Controlling outbreaks of gastroenteritis

Once the existence of an outbreak of gastroenteritis has been established, EHOs must ensure that cleaning and infection control measures are implemented immediately in order to reduce the risk of the infection spreading and the number of cases increasing. The control measures outlined in this section have been suggested to reduce the risk of:

- people contracting the illness from contaminated food or water (for example, by discarding contaminated foods)
- infected people passing the pathogen to others (for example, by implementing exclusion policies)
- the pathogen remaining in the environment and being able to infect others (for example, by cleaning).

Local government is primarily responsible for supervising and monitoring the implementation of all control measures and cleaning and sanitising procedures as described in this section, and EHOs should be confident in discussing them with proprietors, managers and staff of premises and facilities. The general outbreak clean-up procedures, infection control measures and hand washing procedures **must** be implemented without delay for **all** notified outbreaks (section 5.1). **In addition**, further cleaning, infection control and hand washing procedures may be required depending on the setting of the outbreak or the pathogen and the way it is transmitted; these are summarised in the tables in section 5.2.

In addition to the GOOH form, copies of the appropriate tables in sections 5.1 and 5.2 can be taken to the premises/facility during your on-site inspection as a summary of control measures and cleaning procedures that need to be checked.

All information in this section is also included in each of the three industry specific guides (supplements 1, 2 and 3). Proprietors, owners or managers of businesses should keep a copy of the appropriate guidelines at their premises at all times.

### 5.1 General cleaning and infection control to be conducted for all outbreaks

General cleaning and infection control measures should be commenced as soon as possible for **all** outbreaks, regardless of the pathogen, mode of transmission and setting. If the outbreak is suspected to be foodborne, all samples and environmental swabs should be collected prior to commencement of cleaning. Council EHOs play a key role in ensuring that cleaning and control measures are effective in containing the outbreak.





## 5.1.2 General cleaning and infection control to be conducted for all gastrointestinal outbreaks

For all gastrointestinal outbreaks regardless of pathogen, transmission and setting

### General clean-up procedures

**Note: Chlorine based sanitisers must be used for sanitising in outbreak situations, as other disinfectants (e.g. quaternary ammonium compounds) can be effective against some bacteria but have little effect in destroying viruses such as norovirus.**

The EHO is predominantly responsible for supervising the clean-up of a setting affected by a gastroenteritis outbreak, however, the REHO or/and infection control consultant may undertake this role. These steps should always be followed to ensure that the process is effective:

- Supervise cleaning in the **kitchen** of 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: Chlorine concentrations). Leave disinfectant on surfaces for ten minutes then rinse with cold water.
- Supervise the sanitation of **all kitchen food contact surfaces** (such as utensils, equipment, crockery and cutlery) 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.
- Supervise the cleaning of **all other areas** of the premises, including dining and bar areas. 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.
- Supervise cleaning in the **toilet/bathroom areas**, 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.
- Ensure that when a **faecal accident** has occurred (e.g. 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, and rinsed with cold water and dried.
- Ensure that when **vomiting** has occurred (e.g. 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, and 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).

**Note: The use of 1,000ppm of available chlorine on food contact surfaces is inadvisable.**

When outbreaks occur in food premises no food should be prepared or served from the kitchen until an EHO supervised/verified clean-up has been conducted. Additional cleaning may be requested due to ongoing illness or other issues of concern.

**In addition to the information in this section, further tasks may need to be undertaken as detailed in section 5.2.**

## For all gastrointestinal outbreaks regardless of pathogen, transmission and setting

### General infection control measures

- Depending on the setting, ensure that ill people are isolated from the general population where possible (for example, in aged care, hospitals or prisons).
- Review current hygiene, cleaning and food handling practices throughout the facility/premises (includes kitchen and accommodation areas) and give advice on any improvements necessary.
- Advise that staff are to be assigned specific duties during an outbreak, where possible, rather than multiple tasks in several areas, to reduce the risk of transmission (for example, carers of residents/patients/children should not also prepare or serve food; food handlers should not also assist with cleaning).
- Ascertain if any food handling staff have been ill with gastrointestinal symptoms (this includes all kitchen staff, waiting staff, serving staff/volunteers, and may also include nursing or child care staff) and ensure that they are sent home and do not return to work until 48 hours after their symptoms have stopped. It is also advisable to note if any family/household members of staff have had symptoms of gastroenteritis within the previous two weeks.
- 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).
- Check the supply of water to the business. If it is other than mains water, the EHO should request to see the most recent evidence of potability (a water sampling laboratory report).

### Hand washing

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/](http://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 number 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:**

- use 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 driers 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 disposable gloves
- after removing disposable gloves
- after any cleaning tasks and especially after cleaning toilets and bathroom areas
- after emptying garbage containers.

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, teachers, carers and assistants) and all visitors and patients/residents. They should all understand that thorough hand washing during outbreaks is necessary to reduce the risk of infecting themselves and passing the infection on to others, both at work and at home.

**Note:** 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.

### Laboratory testing (section 6)

**Faecal specimens:** Collect five faecal specimens for each outbreak, unless otherwise advised by CDPCU – for details see section 4.3.4.6 or section 5.2 for outbreaks in specific settings.

In addition to the information in this section, further tasks may need to be undertaken as detailed in section 5.2.

## **5.2 Additional outbreak management for specific settings**

In addition to the general cleaning, infection control and hand washing procedures described in section 5.1 for **all** outbreaks, the procedures described in the following tables may also apply, depending on the setting of the outbreak, the suspected pathogen and the way it is likely to be transmitted.



### 5.2.1 (a.) Food businesses – suspected viral, person-to-person outbreaks

**Businesses where provision of food is the main focus, such as restaurants, cafes, catering companies, function centres**

**Pathogen: Suspected viral  
and  
Transmission: Person-to-person**

**In addition to the general tasks described in section 5.1  
for all outbreaks, the following should also be applied:**

#### **Additional information required for further investigation**

- Collect a list of all people who attended the venue and/or may have consumed the suspect meals. This will most likely come from a restaurant booking list or an event organiser's attendance/guest list for other functions/events.
- Find out if anyone was ill while at the function/event venue.
- Obtain details of other possible common venues/events that exposed people may have also attended.
- Review the Food Safety Program illness register, and check if ill staff are excluded for 48 hours after symptoms cease.

#### **Additional laboratory testing (section 6)**

##### **Faecal specimens**

- Collect faecal specimens from ill customers and staff, and deliver to MDU (in some circumstances faecal specimens may be required from all food handling staff – CDPCU will advise of this).

##### **Food**

- It is unlikely that food sampling will be requested as there is currently no test for viruses in food, so any food samples collected would only be tested for bacterial pathogens.

#### **Further investigation may be required**

- Obtain a copy of the menu or the catering list of foods provided for the days/event implicated in the outbreak (CDPCU will advise on this).
- Ascertain if any foods were brought by the guests/attendees/visitors to share (such as a birthday cake).
- Obtain as much detail as possible regarding preparation of foods that are not cooked (salads, garnishes, desserts) and who prepared them for the implicated date/meal/event. EHOs may also be required to conduct menu-based questionnaires.

### 5.2.1 (b.) Food businesses

#### – outbreaks of unknown pathogen and/or transmission

#### Businesses where provision of food is the main focus, such as restaurants, cafes, catering companies, function centres

**Pathogen: Any pathogen (laboratory confirmed or unknown) and**

**Transmission: Unknown or suspected food or water borne**

**In addition to the general tasks described in section 5.1 for all outbreaks, the following should also be applied:**

#### Additional information required for further investigation

- Conduct food safety compliance check/inspection of site.
- Obtain a copy of the most recent food safety auditor's report and/or council's last inspection report.
- Obtain a copy of the menu or catering list of foods provided for the day/event/meal implicated in the outbreak (CDPCU will advise on this).
- Ascertain if any foods were brought by the guests/attendees/visitors to share (such as a birthday cake).
- Collect a list of all people who may have consumed the suspect meals – this will most likely come from a restaurant booking list or an event organiser's attendance/guest list for other functions/events.
- Ascertain if anyone was ill while at the function/event venue.
- Obtain details of other possible common venues/events that exposed people may have also attended.
- Review the FSP, particularly with regard to processes in place for the preparation of suspect foods and maintenance of records, and take up any concerns with the premises/facility.
- Refer issues with FSP templates and independent auditors to FSRAU.
- Advise if other cases of illness have been reported to the premises or if any complaints have been received by council.

#### Infection control

**Ensure that the business/premises/facility stops serving any suspect food or drink.**

- Supervise the disposal of any contaminated or implicated food (CDPCU can advise on what food should be discarded).
- Seize any equipment that is suspected to be contaminated (such as a blender used to blend raw ingredients) and deliver to MDU or swab equipment (discuss alternatives with CDPCU or MDU, section 6).

#### Additional laboratory testing (section 6)

##### Food

- Sample any implicated food or drink for laboratory analysis.
- Collect all appropriate food samples and environmental swabs (if requested by the department) before commencing cleaning procedures outlined in section 5.1.

##### Water

- Samples of non-mains water should be collected and arrive at MDU within 24 hours of collection.

##### Faecal specimens

- Collect faecal specimens from ill customers and staff and deliver to MDU (in some circumstances faecal specimens may be required from all food handling staff, and CDPCU will advise of this).

#### Further investigation may be required

- Conduct interviews with all exposed people (ill and not ill) using an outbreak questionnaire (CDPCU will design a menu/food-based questionnaire based on the information provided)
- Obtain as much detail as possible of the food process steps for preparing any implicated food
- Obtain a copy of the suppliers list for the business (this should be easily available as a part of their FSP)
- Require that food production of an implicated food ceases
- Trace-back of implicated food and possible recall by the FSRAU
- Possible closure of premises
- Ongoing monitoring of any process changes or improvements may need to be established where necessary.

## 5.2.2 (a.) Residential care facilities – suspected viral, person-to-person outbreaks

### Residential care facilities (such as aged care and hospitals)

#### Pathogen: Suspected viral and Transmission: Person-to-person

In addition to the general tasks described in section 5.1 for all outbreaks, the following should also be applied:

#### Additional cleaning

##### Note:

- All kitchen areas should be cleaned as per section 5.1 at the start of every outbreak investigation.
- All common and residential areas should be cleaned at least twice a day until the outbreak is over.
- A final clean-up of all areas needs to be completed at the end of every outbreak (when there have been no symptomatic cases for 48 hours).

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 (Appendix 6, Chlorine Concentrations), then rinsed with cold water (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).

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

- Mattresses and soft furnishings (including pillows, curtains and doonas) that have been contaminated by vomit and/or faeces should be steam cleaned or, 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.
- Vacuum-cleaning carpets and polishing floors should be avoided during an outbreak, as these can cause viruses to re-circulate and continue to infect people.

#### Additional infection control

##### Staff and residents

Ensure that:

- **only** food handling staff have access to the kitchen
- **all** ill staff are sent home, and requested not to 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 facility avoids transferring patients/residents to other facilities while the outbreak is in progress; however, if this is unavoidable, ensure that the receiving facility is informed of the outbreak so they can take appropriate precautions to prevent transmission of the illness in their facility
- all swimming, hydrotherapy and communal spas cease during the outbreak
- where possible, meals are served directly to patients/residents rooms, rather than in a communal dining area.

Advise that:

- there are dedicated staff to care for ill residents/patients and that these staff do not attend to well patients. If this is not possible ensure that **all** staff observe strict hand washing procedures
- protective clothing is used, such as disposable gloves (and hand washing when 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*).
- agency nursing, allied health, child care and medical staff are particularly instructed about the risks of transmission to other facilities where they may also be working
- wherever possible, ill residents/patients are isolated for at least 48 hours after symptoms have ceased. 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



- the movement of patients/residents and staff between units, sections and ward is restricted
- no **new** patients/residents are admitted 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. Residents of a nursing home 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 all non-essential and non-medical activities, treatments, services and social gatherings are suspended during the outbreak
- the facility avoids 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
- that toilet lids are closed before flushing to prevent faecal and/or vomit contaminated airborne droplets being generated
- the facility post signs at all entrances stating that a gastroenteritis outbreak is occurring. Signs advising of hand washing should also be posted above hand washbasins in all toilet, bathroom and kitchen areas.

## Visitors

### Advise 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.

## Additional hand washing

- 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 potentially soiled 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.

## Communication

Details of the outbreak and the control measures in place must be conveyed to **all** staff (including casual or agency staff) and staff should be updated as the outbreak progresses. The investigating EHO should ensure that the facility has a copy of their setting specific supplement (supplement 1) and the Department of Health and Ageing *Gastro-Info Outbreak Coordinator's Handbook*, and that the facility conducts staff briefings and provides clear instructions on all aspects of outbreak management.

**All staff should be informed that the outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case (no ongoing cases and no new cases occurring).**

## 5.2.2(b.) Residential care facilities –outbreaks of unknown pathogen and/or transmission

### Residential care facilities (such as aged care and hospitals)

**Pathogen: Any pathogen (laboratory confirmed or unknown)  
and**

**Transmission: Unknown or suspected food or water borne**

**In addition to the general tasks described in section 5.1 for all outbreaks, the following should also be applied:**

#### Additional information required for further investigation

- Conduct a food safety compliance check/inspection.
- Obtain a copy of the menus for all meals served in the week before onset of illness in the first case.
- Obtain as much detail as possible of the food process steps for preparing any implicated food, if known at the time (as requested by CDPCU). Specifically ask about any texture modified foods (e.g. vitamised) prepared at the facility.
- Collect details of three-day food history for all cases (this information will usually be best obtained from care staff).
- Obtain a copy of the suppliers list for the business (part of their FSP).
- Review the FSP, particularly with regard to processes in place for the preparation of suspect foods and maintenance of records, and take up any concerns with the facility.
- Refer issues with FSP templates and independent auditors to FSRAU.
- Obtain a copy of the most recent food safety auditor's report.

#### Additional cleaning

##### Note:

- **All kitchen areas should be cleaned as per section 5.1 at the start of every outbreak investigation.**
- **All common and residential areas should be cleaned at least twice a day until the outbreak is over.**
- **A final clean-up of all areas needs to be completed at the end of every outbreak (when there have been no symptomatic cases for 48 hours).**

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 (Appendix 6, Chlorine Concentrations), then rinsed with cold water (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).

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

- 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.
- Vacuum-cleaning carpets and polishing floors should be avoided during an outbreak, as these can cause viruses to re-circulate and continue to infect people.

#### Additional infection control:

##### Food

- Ensure that the business/premises/facility stops serving suspect food or drink.
- Seize equipment that is suspected to be contaminated (such as a blender used to blend raw ingredients) and deliver to MDU appropriately, or swab equipment – discuss alternatives with CDPCU or MDU (section 6).
- Supervise the disposal of any contaminated or implicated food (CDPCU can advise on what food should be discarded).

##### Water

- If the facility uses non-mains water they should be advised that all drinking water, and water used for food preparation and brushing teeth, must be 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 (liaise with CDPCU and EHU for advice and follow up monitoring assistance).

#### Other infection control

##### Staff and residents:

Ensure that:

- **only** food handling staff have access to the kitchen
- **all** ill staff are sent home and requested not to 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 facility avoids 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 they can take appropriate precautions to prevent transmission of the illness in their facility
- all swimming, hydrotherapy and communal spas cease during the outbreak
- where possible, meals are served directly to patients/residents rooms, rather than in a communal dining area.

Advise that:

- there are dedicated staff to care for ill residents/patients and that these staff do not attend to well patients; if this is not possible, ensure that **all** staff observe strict hand washing procedures
- protective clothing is used, such as disposable gloves (and hand washing when gloves are removed) and plastic aprons or gowns, when cleaning up after ill residents (for further information see Appendix 3: Standard and Additional Precautions in the *Blue Book*)
- agency nursing, allied health, child care and medical staff are particularly instructed about the risks of transmission to other facilities where they may also be working
- wherever possible, unwell residents/patients are isolated for at least 48 hours after symptoms have ceased. 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
- the movement of patients/residents and staff between units, sections and ward is restricted
- no **new** patients/residents are admitted 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. Residents of a nursing home 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
- all non-essential and non-medical activities, treatments, services and social gatherings are suspended during the outbreak
- the facility avoids 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
- that toilet lids are closed before flushing to prevent faecal and/or vomit contaminated airborne droplets being generated
- the facility post signs at all entrances stating that a gastroenteritis outbreak is occurring. Signs advising of hand washing should also be posted above hand washbasins in all toilet, bathroom and kitchen areas.

### Visitors

Advise 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.

### Additional hand washing

- 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 potentially soiled 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.

### Additional laboratory testing (section 6)

#### Food

- Sample implicated food or water for laboratory analysis.
- Collect all appropriate food samples and environmental swabs (if advised by CDPCU) **before** commencing cleaning procedures outlined in section 5.1.

#### Water

- Samples of non-mains water should be collected and arrive at MDU within 24 hours of collection.

#### Faecal specimens

- Request ill food handling staff to give faecal specimens (in some circumstances faecal specimens may be required from **all** food handling staff, and CDPCU will advise of this).
- In some instances, CDPCU may request that additional faecal specimens are requested from staff and residents/patients.

### Further investigation requested by CDPCU

- Interviews with all exposed people may be required. CDPCU will design a menu/food-based questionnaire to capture information gained during interviews.
- Collection of 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 individuals may have.
- Methods of service/distribution of meals may also be required.

### Communication

Details of the outbreak and the control measures in place must be conveyed to **all** staff (including casual or agency staff) and staff should be updated as the outbreak progresses. The investigating EHO should ensure that the facility has a copy of the setting specific supplement (supplement 1), and that the facility conducts staff briefings and provides clear instructions on all aspects of outbreak management.

**All staff should be informed that the outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case (no ongoing cases and no new cases occurring).**

### 5.2.3 (a.) Children's centres – suspected viral, person-to-person outbreaks

#### Children's centres (such as child care centres, kindergartens and play centres)

#### Pathogen: Suspected viral and Transmission: Person-to-person

In addition to the general tasks described in section 5.1 for all outbreaks, the following should also be applied:

#### Additional cleaning

##### Note:

- All kitchen areas should be cleaned as per section 5.1 at the start of every outbreak investigation.
- Cleaning should be conducted at least twice a day until the outbreak is over.
- A final clean-up of all areas needs to be completed at the end of every outbreak (when there have been no symptomatic cases for 48 hours).
- All items or fittings that are touched frequently must be washed with detergent and hot water, sanitised for ten minutes with 1,000ppm chlorine solution (Appendix 6: Chlorine Concentrations), then rinsed with cold water (this includes toilet seats, potties, cupboard handles, tables, cots, high chairs, booster seats and change tables) – always use disposable cleaning equipment.
- Any surfaces soiled with faeces and/or vomit must be cleaned immediately with detergent and hot water, followed by disinfecting with a 1,000ppm chlorine solution for ten minutes and rinsing with cold water (using disposable cleaning equipment) – this includes nappy changing tables.
- Cleaning of toys is important to reduce the spread of disease, especially during an outbreak. Toys should be washed regularly throughout the day with detergent and hot water, and then sanitised for ten minutes with 100ppm available chlorine, and rinsed in cold water. Some toys can be washed in a dishwasher at the end of each day; these will be effectively sanitised if the rinse cycle is 82° C or above.
- Remove any soiled toys from use until they can be washed, sanitised and dried.
- All rooms used for family groupings and combined group activities should be cleaned at the beginning and end of every day.
- All outdoor play equipment should be cleaned at the end of every day.

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

- Mattresses and soft furnishings (including pillows, curtains, couches, cushions 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 on 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.
- Avoid vacuum-cleaning carpets and polishing floors during an outbreak, as these can cause viruses to re-circulate and continue to infect people.

#### Additional infection control

##### Ensure that:

- all ill children are required to remain at home until 48 hours after symptoms have ceased
- parents of all children at the 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 a letter, a telephone call or a poster at the centre)
- all ill staff (carers, food handlers and cleaners) are sent home, and requested not to return to work until 48 hours after their symptoms have ceased
- all staff observe strict hand washing procedures and ensure that children's hands are washed thoroughly and often. You may also suggest the use of protective clothing, such as disposable gloves (and hand washing when gloves are removed), plastic aprons and/or gowns, when cleaning up after ill children
- children's hands are always washed after every nappy change
- soft toys, sandpits, wading pools and water play tables/areas are not used during an outbreak
- toys are not moved from room to room during outbreaks, unless they have been washed and sanitised first.

Advise that:

- the child should be isolated if onset of illness occurs while at the centre, and the parents should be contacted immediately and requested to take the child home as soon as possible
- faecal specimen kits be made available for parents of ill children to take home
- parents of children who have been ill at home (for example children who only attend the centre occasionally or casually) are informed that they should advise the child care centre if their child is or has been ill with gastroenteric symptoms at home (and these children must also stay at home until 48 hours after symptoms have stopped)
- staff take extra care when changing nappies and assisting with toileting. They should use disposable gloves and place all gloves, soiled disposable nappies and wiping cloths into a plastic bag for disposal, and soiled cloth nappies and clothing into a plastic bag for laundering by parents. Change tables should be cleaned after each nappy change
- consideration should be given to 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
- cookery activities with the children should be suspended completely during an outbreak, and children should not assist with meals
- combined activities between rooms and age groups may need to be suspended during an outbreak to further reduce the risk of disease transmission from one group of children to another
- they avoid serving ‘self-serve’ foods at the centre, such as fruit platters, cheese platters, biscuit containers, sandwich plates and lolly bowls, where children’s hands may contaminate the foods and therefore each other. Individually served portions are a safer alternative
- signs are posted at all entrances stating that a gastroenteritis outbreak is occurring. Signs advising of hand washing should also be posted above hand washbasins in all toilet, bathroom and kitchen areas.

### Additional hand washing

- After assisting children with the toilet or changing nappies (remember: children with no symptoms may be incubating the disease and could be infectious).
- After handling any potentially soiled bed linen or clothes.
- After cleaning up of any vomit or diarrhoeal accidents.
- After handling any dishes and cutlery used by children or staff.
- Before and after assisting children with meals.
- Always wash the child’s hands after changing their nappy.

### Additional laboratory testing (section 6)

- Councils need to provide faecal specimen collection kits to the children’s centre.
- Address issues of consent if staff at a children’s centre are to collect the faecal specimens from ill children – some parents may prefer to take their child to their GP for specimen collection.

### Communication

Details of the outbreak, and the control measures in place, must be conveyed to **all** staff (including casual or agency staff) and staff should be updated as the outbreak progresses. The investigating EHO should ensure that the facility has a copy of the setting specific supplement (supplement 2) and that the facility conducts staff briefings and provides clear instructions on all aspects of outbreak management. Staff need to clearly understand these points so that they can relay accurate information to parents and answer their questions correctly.

**All staff should be informed that the outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case (no ongoing cases and no new cases occurring).**

For further information regarding child care centres refer to NHMRC *Staying Healthy in Child Care-Preventing Infectious Diseases in Child Care*, 4th Edition 2006.

### 5.2.3 (b.) Children's centres – outbreaks of unknown pathogen and/or transmission

#### Children's centres (such as child care centres, kindergartens and play centres)

**Pathogen: Any pathogen (laboratory confirmed or unknown)  
and  
Transmission: Unknown or suspected food or water borne**

In addition to the general cleaning tasks described in section 5.1 for all outbreaks, the following should also be applied:

#### Additional information required for further investigation

- Collect a list of **all** people who may have consumed the suspect meals (including children and staff).
- Obtain a copy of the menus for all meals served in the week before onset of illness in the first case.
- Obtain as much detail as possible of the food process steps for preparing any implicated food. Specifically ask about any texture modified foods (e.g. vitamised, mashed) prepared at the facility.
- Obtain a copy of the suppliers list for the business (part of their FSP)
- Review the FSP, particularly with regard to processes in place for the preparation of suspect foods and maintenance of records.
- Refer all issues with FSP templates and independent auditors to FSRAU.
- Obtain a copy of the most recent food safety auditor's report and/or council's inspection report.
- Collect details of three-day food history for all cases (this information will usually be best obtained from care staff).

#### Additional cleaning:

##### Note:

- **All kitchen areas should be cleaned as per section 5.1 at the start of every outbreak investigation.**
- **Cleaning should be conducted at least twice a day until the outbreak is over.**
- **A final clean-up of all areas needs to be completed at the end of every outbreak (when there have been no symptomatic cases for 48 hours).**
- All items or fittings that are touched frequently must be washed with detergent and hot water, sanitised for ten minutes with 1,000ppm chlorine solution (Appendix 6: Chlorine Concentrations), then rinsed with cold water (this includes toilet seats, potties, cupboard handles, tables, cots, high chairs, booster seats and change tables) – always use disposable cleaning equipment.
- Any surfaces soiled with faeces and/or vomit must be cleaned immediately with detergent and hot water, followed by disinfecting with a 1,000ppm chlorine solution for ten minutes and rinsing with cold water (using disposable cleaning equipment) – this includes nappy changing tables.
- Cleaning of toys is important to reduce the spread of disease, especially during an outbreak. Toys should be washed regularly throughout the day with detergent and hot water, and then sanitised for ten minutes with 100ppm available chlorine, and rinsed in cold water. Some toys can be washed in a dishwasher at the end of each day; these will be effectively sanitised if the rinse cycle is 82° C or above.
- Remove any soiled toys from use until they can be washed, sanitised and dried.
- All rooms used for family groupings and combined group activities should be cleaned at the beginning and end of every day.
- All outdoor play equipment should be cleaned at the end of every day.

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

- Mattresses and soft furnishings (including pillows, curtains, couches, cushions 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 on 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.
- Avoid vacuum-cleaning carpets and polishing floors during an outbreak, as these can cause viruses to re-circulate and continue to infect people.

#### Additional infection control

##### Food

- Ensure that the centre stops serving suspect food or drink.
- Seize equipment that is suspected to be contaminated (such as a blender used to blend raw ingredients) and deliver to MDU appropriately or swab equipment (discuss alternatives with CDPCU or MDU).
- Supervise the disposal of contaminated or implicated food (CDPCU can advise on what food should be discarded).

##### Water

- If the facility uses non-mains water, they should be advised that all drinking water and water used for food preparation and brushing teeth must be 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 (liaise with CDPCU and EHU for advice and follow up monitoring assistance).

##### Other infection control

Ensure that:

- all ill children are required to remain at home until 48 hours after symptoms have ceased
- parents of **all** children at the 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 a letter, a telephone call or a poster at the centre)



- all ill staff (carers, food handlers and cleaners) are sent home and requested not to return to work until 48 hours after their symptoms have ceased
- **all** staff observe strict hand washing procedures and ensure that children's hands are washed thoroughly and often. You may also suggest the use of protective clothing, such as disposable gloves (and hand washing before gloves are put on and after they are removed), plastic aprons and/or gowns, when cleaning up after ill children
- children's hands are always washed after every nappy change
- soft toys, sandpits, wading pools and water play tables/areas are not used during an outbreak
- toys are not moved from room to room during outbreaks, unless they have been washed and sanitised first.

Advise that:

- the child should be isolated if onset of illness occurs while at the centre, and the parents should be contacted immediately and requested to take the child home as soon as possible
- faecal specimen kits be made available for parents of ill children to take home
- parents of children who have been ill at home (for example children who only attend the centre occasionally or casually) are informed that they should advise the child care centre if their child is or has been ill with gastroenteric symptoms at home (and these children must also stay at home until 48 hours after symptoms have stopped)
- staff take extra care when changing nappies and assisting with toileting. They should use disposable gloves and place all gloves, soiled disposable nappies and wiping cloths into a plastic bag for disposal, and soiled cloth nappies and clothing into a plastic bag for laundering by parents. Change tables should be cleaned after each nappy change
- consideration should be given to 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
- cookery activities with the children should be suspended completely during an outbreak and children should not assist with meals
- combined activities between rooms and age groups may need to be suspended during an outbreak to further reduce the risk of disease transmission from one group of children to another
- they avoid serving 'self-serve' foods at the centre, such as fruit platters, cheese platters, biscuit containers, sandwich plates and lolly bowls, where children's hands may contaminate the foods and therefore each other. Individually served portions are a safer alternative
- signs are posted at all entrances stating that a gastroenteritis outbreak is occurring. Signs advising of hand washing should also be posted above hand washbasins in all toilet, bathroom and kitchen areas.

### Additional hand washing

- After assisting children with the toilet or changing nappies (remember: children with no symptoms may be incubating the disease and could be infectious).
- After handling any potentially soiled bed linen or clothes.
- After cleaning up of any vomit or diarrhoeal accidents.
- After handling any dishes and cutlery used by children or staff.
- Before and after assisting children with meals.

Always wash the child's hands after changing their nappy.

### Additional laboratory testing (section 6)

#### Food

- Sample implicated food or drink for laboratory analysis.
- Collect all appropriate food samples and environmental swabs (if indicated) **before** commencing cleaning procedures outlined in section 5.1.

#### Water

- Samples of non-mains water should be collected and arrive at MDU within 24 hours of collection.

#### Faecal specimens

- Councils need to provide faecal specimen collection kits to the children's centre.
- Address issues of consent if staff at a children's centre are to collect the faecal specimens from ill children; some parents may prefer to take their child to their GP for specimen collection.
- Request ill food handling staff to give faecal specimens (in some circumstances faecal specimens may be required from **all** food handling staff, and CDPCU will advise of this).

### Further investigation requested by CDPCU

- Occasionally interviews with all exposed people may be required. CDPCU will design a menu/food-based questionnaire to capture information gained during interviews.

### Communication

Details of the outbreak, and the control measures in place, must be conveyed to **all** staff (including casual or agency staff) and staff should be updated as the outbreak progresses. The investigating EHO should ensure that the facility has a copy of the setting specific supplement (supplement 2) and that the facility conducts staff briefings and provides clear instructions on all aspects of outbreak management. Staff need to clearly understand these points so that they can relay accurate information to parents and answer their questions correctly.

**All staff should be informed that the outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case (i.e. no ongoing cases, and no new cases occurring).**

For further information regarding child care centres refer to NHMRC *Staying Healthy in Child Care-Preventing Infectious Diseases in Child Care*, 4<sup>th</sup> Edition 2006.

### 5.2.4 (a.) Camp settings – suspected viral, person-to-person transmission

#### Camp settings (such as recreational camps, school camps and boarding schools)

#### Pathogen: Suspected viral and Transmission: Person-to-person

In addition to the general tasks described in section 5.1 for all outbreaks, the following should also be applied:

#### Additional information required for further investigation

- Obtain from the camp organiser/owner, contact details of the current group and of other groups who stayed at the camp in the two weeks immediately before the affected group, and the dates for their stay. These groups may need to be contacted to ascertain if there has been any illness in these groups.
- Obtain or sketch a map showing the layout of the camp.

#### Additional cleaning

##### Note:

- **All kitchen areas should be cleaned as per section 5.1 at the start of every outbreak investigation.**
- **Cleaning should be conducted at least twice a day until the outbreak is over (including the kitchen).**
- **A final clean-up of all areas needs to be completed at the end of every outbreak (when there have been no symptomatic cases for 48 hours).**
- Clean any potentially contaminated areas by washing with hot water and detergent, disinfecting with 1,000ppm chlorine solution for ten minutes, then rinsing with cold water. This should include toilets, taps, sinks, drinking taps/fountains, hand rails, floors, tables, bed frames, walls, door handles and cupboard handles.
- It is important that all communal areas are cleaned and disinfected as above. This includes games rooms, staff rooms, halls, rehearsal rooms, dining areas, sick bays, first aid rooms, music rooms, playgrounds, outdoor equipment and accommodation facilities.
- Advise that disposable cloths and cleaning equipment should be used.
- Advise that protective clothing such as disposable gloves and plastic aprons should be used when cleaning up vomit and diarrhoea.
- The premises may need to close to enable an extensive and effective site clean-up to be conducted. This should be discussed with the department before instructing the proprietor of the premises, and taking into consideration the time interval between the affected group leaving and any new groups arriving at the facility.

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

- Mattresses and soft furnishings (including pillows, curtains and doonas) that have been contaminated by vomit and/or faeces should be steam cleaned (including carpets in accommodation rooms, dormitories and communal areas such as dining rooms and games rooms etc.).
- 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.
- Vacuum-cleaning carpets and polishing floors should be avoided during an outbreak, as these can cause viruses to re-circulate and continue to infect people.
- Bus companies or other transport used by the camp, or by the affected groups attending the camp, must be contacted to advise of the need for cleaning (as above) of any vehicles that may have been contaminated by cases (particularly where vomiting has occurred in a vehicle). It is essential that this is conducted before the vehicle is used again.



### Additional infection control

- Any persons with gastrointestinal symptoms are to be isolated in an appropriate room (for example sick bay, first aid room, a bedroom removed from others). Sleeping arrangements may need to be completely reorganised to minimise contact between those who are ill and with those who are not.
- Parents of ill children/students should be contacted immediately and requested to collect their child and take them home as soon as possible.
- Ill adults in the attending group (some of whom may be staff, for example teachers accompanying a school group) are to be isolated or advised to go home and not to return to work until 48 hours after symptoms have ceased.
- Check if any staff of the camp (food handling staff, cleaners, tour operators, activity supervisors etc.) have been ill, and exclude all ill camp staff from work until 48 hours after symptoms have ceased.
- Everyone who has been ill should be excluded from any food handling or kitchen/dining room duties/rosters.
- Advise staff/user groups that toilet lids should be closed before flushing to prevent faecal and/or vomit aerosols being generated. Ensure that the camp owner/manager informs the next groups booked to attend the facility that an outbreak has occurred. These groups should be advised of the control and clean-up measures being implemented, and given the opportunity to decide whether or not to attend the facility. However, they should not attend the camp until a full clean-up according to these guidelines has been completed.
- Consider the risks associated with any activities undertaken by the affected groups while at the camp, such as activities involving animal contact or water sports. EHOs should obtain a detailed list of these activities from camp management.
- Ensure that solids/soiling is removed from all soiled clothing, sleeping bags, bedding, pillows and toys, and these are double bagged individually and labelled, to be taken home with the student or staff member.
- Advise that students/camp attendees with symptoms travel home in a separate bus to those who are well (if necessary).

### Additional hand washing

- After handling any potentially soiled bed linen or clothes.
- After cleaning up of any vomit or diarrhoeal accidents.
- After handling any used dishes and cutlery.

### Communication

Details of the outbreak and the control measures in place must be conveyed to **all** staff (including casual staff, contractors, cleaners, transport companies) and staff should be updated as the outbreak progresses. The investigating EHO should ensure that the facility has a copy of the setting specific supplement (supplement 3) and that the camp conducts staff briefings and provides clear instructions on all aspects of outbreak management.

**All staff should be informed that the outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case, and there are no cases in subsequent groups attending the campsite.**

### 5.2.4(b) Camp settings – outbreaks of unknown pathogen and/or transmission

#### Camp settings (such as recreational camps, school camps and boarding schools)

**Pathogen: Any pathogen (laboratory confirmed or unknown)  
and**

**Transmission: Unknown or suspected food or water borne**

**In addition to the general tasks described in section 5.1  
for all outbreaks, the following should also be applied:**

#### Additional information required for further investigation

- Collect a list of **all** people who may have consumed the suspect meals or attended the venue (including children and staff).
- Obtain a copy of the menus for all meals provided in the week before onset of illness in the first case.
- Make a list of any additional foods (meals or snacks) that camp attendees brought with them to share.
- Obtain as much detail as possible of the food process steps for preparing any implicated foods.
- Obtain a copy of the suppliers list for the business (part of their FSP).
- Review the FSP, particularly with regard to processes in place for the preparation of suspect foods and maintenance of records, and take up any concerns with the facility.
- Obtain a copy of the most recent auditor's/council inspection report and refer any issues with independent auditors or FSP templates to FSRAU.
- Obtain from the camp organiser/owner, contact details of the current group and other groups who stayed at the camp in the two weeks immediately before the affected group, and the dates for their stay. These groups may need to be contacted to ascertain if there has been any illness.
- Obtain or sketch a map showing the layout of the camp.
- Obtain a list of activities conducted at the camp (for example, water sports, horse riding, excursions).

#### Additional cleaning

##### Note:

- **All kitchen areas should be cleaned as per section 5.1 at the start of every outbreak investigation.**
- **Cleaning should be conducted at least twice a day until the outbreak is over (including the kitchen).**
- **A final clean-up of all areas needs to be completed at the end of every outbreak (when there have been no symptomatic cases for 48 hours).**
- Check that any potentially contaminated areas are cleaned by washing with hot water and detergent, disinfecting with 1,000ppm chlorine solution for ten minutes, then rinsing with cold water. This should include toilets, taps, sinks, drinking taps/fountains, hand rails, floors, tables, bed frames, walls, door handles and cupboard handles.
- All communal areas should also be cleaned and disinfected as above. This includes games rooms, staff rooms, halls, rehearsal rooms, dining areas, sick bays, first aid rooms, music rooms, playgrounds, outdoor equipment and accommodation facilities.
- Advise that disposable cloths and cleaning equipment should be used.
- Advise that protective clothing, such as disposable gloves and plastic aprons, should be used when cleaning up vomit and diarrhoea.
- The premises may need to close to enable an extensive and effective site clean-up to be conducted. This should be discussed with the department before instructing the proprietor of the premises, and considering the time interval between the affected group leaving and any new groups arriving at the facility.

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

- Mattresses and soft furnishings (including pillows, curtains and doonas) that have been contaminated by vomit and/or faeces should be steam cleaned (including carpets in accommodation rooms, dormitories and communal areas such as dining rooms and games rooms etc.).
- 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.
- Vacuum-cleaning carpets and polishing floors should be avoided during an outbreak, as these can cause viruses to re-circulate and continue to infect people.

Bus companies or other transport used by the camp, or by the affected groups attending the camp, must be contacted to advise of the need for cleaning (as above) of any vehicles that may have been contaminated by cases (particularly where vomiting has occurred in a vehicle). It is essential that this is conducted before the vehicle is used again.

## Additional infection control

### Food

- Ensure that the business/premises/facility stops serving suspect food or drink.
- Seize equipment that is suspected to be contaminated (such as a blender used to blend raw ingredients) and deliver to MDU appropriately (section 6).
- Supervise the disposal of contaminated or implicated food (CDPCU can advise on what food should be discarded).

### Water

- If the facility uses non-mains water, it should be advised that all drinking water and water used for food preparation and brushing teeth must be 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 (liaise with CDPCU and EHU for advice and follow up monitoring assistance).

### Other infection control

- Any persons with gastrointestinal symptoms are to be isolated in an appropriate room (for example, sick bay, first aid room, a bedroom removed from others). Sleeping arrangements may need to be reorganised to minimise contact between those who are ill and with those who are not.
- Parents of ill children/students should be contacted immediately and requested to collect their child and take them home as soon as possible.
- Ill adults in the attending group (some of whom may be staff, for example teachers accompanying a school group) are to be isolated or advised to go home and not to return to work until 48 hours after symptoms have ceased.
- Check if any staff of the camp (food handling staff, cleaners, tour operators, activity supervisors etc.) have been ill and exclude all ill camp staff from work until 48 hours after symptoms have ceased.
- Everyone who has been ill should be excluded from any food handling or kitchen/dining room duties/rosters.
- Advise staff/user groups that toilet lids should be closed before flushing to prevent faecal and/or vomit aerosols being generated.
- Ensure that the camp owner/manager informs the next groups booked to attend the facility that an outbreak has occurred. These groups should be advised of the control and clean-up measures being implemented and given the opportunity to decide whether or not to attend the facility. However, they should not attend the camp until a full clean-up according to these guidelines has been completed.
- Consider the risks associated with any activities undertaken by the affected groups while at the camp, such as activities involving animal contact or water sports. EHOs should obtain a detailed list of these activities from camp management.
- Ensure that solids/soiling is removed from all soiled clothing, sleeping bags, bedding, pillows and toys, and these are double bagged individually and labelled to be taken home with the student or staff member.
- Advise that students/camp attendees with symptoms travel home in a separate bus to those who are well (if necessary).

## Additional hand washing

- After handling any potentially soiled bed linen or clothes.
- After cleaning up of any vomit or diarrhoeal accidents.
- After handling any used dishes and cutlery.

## Additional laboratory testing (section 6)

### Food

- Sample implicated food or drink for laboratory analysis.
- Collect all appropriate food samples and environmental swabs (if indicated) **before** commencing cleaning procedures outlined in section 5.1.

### Water

- Samples of non-mains water should be collected and arrive at MDU within 24 hours of collection.

## Communication:

Details of the outbreak and the control measures in place must be conveyed to **all** staff (including casual staff, contractors, cleaners, transport companies etc.) and staff should be updated as the outbreak progresses. The investigating EHO should ensure that the facility has a copy of the setting specific supplement (supplement 3) and that the camp conducts staff briefings and provides clear instructions on all aspects of outbreak management.

**All staff should be informed that the outbreak will not be declared to have ended until 48 hours after symptoms have ceased in the last case, and there are no cases in subsequent groups attending the campsite.**

# 6 Laboratory testing during outbreaks and sporadic case investigation

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- 6.2 Legal authority and process
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## Flowcharts

- 4. Collection of faecal specimens
- 5. Standard laboratory tests algorithm performed on outbreak faecal specimens

## 6 Laboratory testing during outbreaks and sporadic case investigation

### 6.1 Introduction

Laboratory testing is critical for outbreak investigations, and sometimes in the follow up of sporadic cases and their contacts. The purpose of testing specimens and samples (specimens are clinical, samples non-clinical) in outbreaks is to allow the causative pathogen for outbreaks to be identified; rather than for individual patient management. Such testing can assist with identification, confirmation and interruption of possible transmission pathways.

Samples and specimens to consider for collection include:

- food (including leftover meals, foods consumed within the incubation period, leftover food from the same batch, and ingredients used in implicated foods)
- environmental samples (for example, animal manure, drag swabs, surface swabs)
- water
- faeces.

On rare occasions, it may be advisable to collect:

- skin and nose swabs from food handlers (always discuss with CDPCU before proceeding; specimen collection should be organised with a medical practitioner or registered nurse)
- vomitus samples (this may very occasionally be useful for detection of noroviruses and toxins in a foodborne outbreak where other samples are not available; however, collection of vomitus samples should always be discussed with CDPCU or MDU before proceeding).

**All specimens and samples, accompanied by appropriate documentation (section 6.5), should be forwarded directly to MDU. Samples collected as part of a department-initiated infectious disease investigation are tested at no cost to councils.**

The department has an arrangement with the MDU and VIDRL for testing of faecal specimens, food, water, environmental and other samples in outbreak investigations. All specimens and samples, accompanied by appropriate documentation (section 6.5), should be forwarded directly to MDU. Samples collected as part of a department-initiated infectious disease investigation are tested at no cost to councils. EHOs should discuss sample collection with the department if unsure whether, or what, to sample. A specimen/sample collected as part of a department-initiated investigation is defined by the presence of the following identifiers on the MDU request form:

- the department outbreak number or
- the department outbreak name or
- the department NIDS number.

The EHO should also indicate on the laboratory request form who at the department should receive a copy of the results (usually the manager of CDPCU, but may be the specific CDPCU investigating officer).

Be aware that details of laboratory submission, testing and results can all be accessed by individuals via the Freedom of Information process (section 1.3). In addition, greater emphasis is now being placed on ensuring proper process has been followed to support the validity of any test results. All laboratory submissions relating to disease investigations must be collected with a clear understanding of the purpose of the collection and the legal requirements of collection if prosecution is being considered. Samples should always be handled according to Chain of Custody principles.

Sampling equipment is available from the regional offices or MDU.

## 6.2 Legal authority and process

When legal action (civil or compliance) is possible, samples should be collected, sealed (section 6.4), transported, stored and delivered under chain of custody (section 6.4.2). Chain of custody is necessary whenever legal action may follow under any Act (especially in food or water borne outbreaks), and needs formal, careful documentation. The chain of custody forms facilitate this documentation and are available from MDU.

When individual containers (rather than the submission as a whole) are individually formally sealed, then additional use of the MDU form FM1718 allows details of the seals to be described by the submitter and checked by MDU. This is the most legally robust method of packaging.

For food and water samples, use the MDU *Chain of custody form FM1541*. For clinical or environmental samples use the MDU *Chain of custody form FM979*. Both forms are available from MDU.

**It is important to understand and convey to the laboratory, on the form, the legislative authority under which testing is conducted. If in doubt, discuss with CDPCU or MDU.**

## 6.3 Collecting specimens and samples

### 6.3.1 Faecal specimen collection

#### – for department investigations where specimens are sent to MDU

<b>Agency responsible</b>	<ul style="list-style-type: none"> <li>EHOs in the municipality where the case resides (the Department of Health may coordinate this during large outbreaks covering several municipalities).</li> </ul>	
<b>What to collect</b> <i>Collected for public health purposes and not generally for individual patient management – so not all specimens will be tested in the same way</i>	<ul style="list-style-type: none"> <li>In outbreaks, request specimens from sick patients/residents/children/customers and staff.</li> <li>Collect <b>five</b> representative specimens, wherever possible, during outbreaks, unless CDPCU advises that more are required.</li> <li>Collect specimens from cases while they are symptomatic. EHOs may be requested to collect them for up to a week after the symptoms have ceased, and also from secondary cases if no diagnosis has initially been reached.</li> </ul>	
<b>Specimen containers and packaging</b>	<ul style="list-style-type: none"> <li>Faecal specimen collection kits include the faecal pot with built-in scoop, wooden spatula or plastic spoon, a zip-lock bag, a brown paper bag, and the instructions – available from MDU.</li> <li>Swabs in transport medium for <i>Shigella</i> (available from MDU).</li> <li>The labelled specimen container must be placed into an individual zip-lock plastic bag with the laboratory request form (transport this inside the brown paper bag).</li> </ul>	<b>Alternatively:</b> Some facilities have their own supply of specimen collection containers and packaging (for example hospitals and aged care facilities). If a faecal specimen collection kit is not available, use a labelled, clean, preferably sterile, leak-proof, screw top container of at least 50ml volume.
<b>Collection of faecal specimens</b> <b>Documentation required:</b> <i>Appendix 10 Instructions for the collection of faeces</i>	<ul style="list-style-type: none"> <li>Label pots with outbreak/cluster name if applicable.</li> <li>Deliver pots if necessary, and 'instructions for collection of faecal specimens' to the case/facility.</li> <li>Pick up specimen as soon as possible after it has been produced by the case.</li> <li>Check that specimen is appropriate, that container is properly closed, sealed and labelled fully and correctly.</li> <li>Do not wait for all specimens to be collected before taking them to MDU (this may sometimes be several days).</li> <li>Follow up with each case if you have provided them with a collection kit and have not been contacted by them to collect it within 24 hours.</li> <li>If a case refuses to provide a specimen, inform CDPCU or the REHO as appropriate, and give the reason for their refusal.</li> </ul>	<b>Alternatively:</b> <b>For facilities using their own in-house lab, or pathology laboratories other than MDU:</b> <ul style="list-style-type: none"> <li>EHOs will usually not be involved in specimen collection</li> <li>CDPCU may request details of all cases whose specimens have been submitted to laboratories other than MDU. Make a list of names and date of collection and include the name of the laboratory doing the tests.</li> <li>These specimens may need to be forwarded to MDU and/or VIDRL for reference testing.</li> </ul>

Faecal specimens	Procedures for collection
<p><b>Chain of custody</b>  <b>Documentation required:</b>  <i>Chain of custody form FM979</i>  <i>Form for sealed container FM1718</i></p>	<p>If an outbreak is confirmed to be foodborne, it is recommended that at least one faecal specimen is obtained and chain of custody documentation completed for this specimen (see also food sample collection, section 6.3.2)</p>
<p><b>Labelling faecal specimens</b>  <b>Documentation required:</b>  <i>Label on container</i></p>	<p>Labelling must include:</p> <ul style="list-style-type: none"> <li>• name of case</li> <li>• date of birth or age of case</li> <li>• date and time of collection</li> <li>• name of outbreak /cluster if applicable</li> </ul>
<p><b>Storing faecal specimens</b></p>	<ul style="list-style-type: none"> <li>• Store faecal specimens at 2–8°C in a normal fridge until transported to the lab.</li> <li>• <b>Do not</b> store faecal specimens in the freezer.</li> </ul>
<p><b>Transporting faecal specimens</b></p>	<ul style="list-style-type: none"> <li>• Specimens should reach MDU within 24 hours of production, preferably sooner.</li> <li>• Transport specimens in a clean, intact esky with an ice brick.</li> <li>• Inform MDU ahead of time if a large number of specimens are to be delivered to them.</li> <li>• Contact MDU to discuss procedures for delivering specimens outside of normal business hours.</li> </ul>
<p><b>Submitting specimens to MDU</b>  <b>Documentation required:</b>  <i>Faecal specimen (and other clinical specimens) laboratory collection form FM116</i></p>	<p>Complete a laboratory request form for faecal specimens. This must include:</p> <ul style="list-style-type: none"> <li>• name and date of birth or age of the case, name of outbreak /cluster, if applicable, and date and time of collection (as on the specimen container label)</li> <li>• who should be sent a copy of the results (include CDPCU. with name of actioning officer if known, for all outbreak investigations)</li> <li>• name of the incident /cluster investigation</li> <li>• name and signature of the person submitting the specimens to MDU.</li> </ul>
<p><b>Reporting specimen collection</b>  <b>Documentation required (if requested):</b>  <i>Sample and specimen collection request form in Appendix 1</i></p>	<p>If requested, councils may need to complete the <i>Sample and specimen collection request form</i>. This may be used if multiple councils are involved in the collection of faecal specimens for an outbreak.</p>



### 6.3.2 Food sample collection - for department investigations where samples are sent to MDU

<p><b>Agency responsible</b></p>	<ul style="list-style-type: none"> <li>EHOs in the municipality where the case resides or where the registered premises is located (the Department of Health may coordinate this during large outbreaks covering several municipalities).</li> </ul>
<p><b>What to collect</b></p> <p><i>Collected when transmission during an outbreak/cluster is unknown or suspected to be foodborne – as discussed with the department.</i></p>	<ul style="list-style-type: none"> <li>Collect food samples at the first available opportunity.</li> <li>Samples should be of foods known to have been eaten by the case within three days prior to onset of illness, or in a timeframe consistent with the incubation of the illness (if it is known).</li> <li>Samples of the actual meal or food source suspected if possible; otherwise samples of high risk foods or ingredients, or ready to eat foods without a kill step in the preparation process (e.g. raw egg products).</li> <li>Leftover or residual food, retained food samples (e.g. during a cook-chill process), discarded but retrievable food and frozen food samples should also be sought, along with the manufacturer’s packaging or wrapping.</li> <li>Samples of freshly cooked/prepared meals/products subsequent to the incident are of limited use, but may be appropriate in some situations – always discuss with the department before collecting this type of food sample.</li> <li>If unclear of what to sample, contact CDPCU to discuss (this can be done even when on-site).</li> <li>For additional sampling and/or unusual sampling advice, contact MDU for instructions.</li> </ul>
<p><b>Sample containers and packaging</b></p>	<ul style="list-style-type: none"> <li>Unopened food in the manufacturer’s original packaging may be submitted as is (include both the outer and inner packaging).</li> <li>Opened containers must be collected in the manufacturer’s original packaging (include all packaging and intact labels and close the packaging using staples, a rubber band, a bulldog clip or similar).</li> <li>Other food samples and samples of small items (such as seeds or grapes) should be in a sterile firmly closed, screw-top container /jar or zip-lock plastic bag if no containers are available.</li> <li>If a sterile container is unavailable, a clean container can be used, but a note that the container is not sterile <b>must</b> be made on the laboratory request form.</li> <li>A clean, unused takeaway container may be used if that is how the food is sold to customers.</li> <li>Place all containers and packages of food into individual zip-lock plastic bags to avoid cross-contamination.</li> </ul>
<p><b>Collection of food samples</b></p>	<ul style="list-style-type: none"> <li>Once notified of an outbreak where transmission is unknown or suspected to be foodborne, contact the facility/venue/premises immediately to ensure leftover food is retained.</li> <li>Always collect <b>at least 100g</b> of the food.</li> <li>Use clean implements (preferably single use gloves or bags, spoons, scoops or spatulas to avoid contamination of the food sample).</li> <li>If less than 100g of a food is available collect it all.</li> <li>Place the sample into the sample container and close firmly.</li> <li>Consider photographing samples to help inform the investigation.</li> </ul>

Food samples	Procedures for collection
<b>Chain of custody</b> <b>Documentation required:</b> <i>Chain of custody form FM1541</i> <i>Form for sealed container FM1718</i>	In outbreaks of unknown or suspected foodborne transmission, it is recommended that <b>all food</b> samples are sealed and that chain of custody documentation is completed. If an outbreak is confirmed to be foodborne, it is also recommended that at least one faecal specimen is obtained and chain of custody documentation completed for this specimen (see faecal specimen collection, section 6.3.1).
<b>Labelling food samples</b> <b>Documentation required:</b> <i>Label on container</i>	Labelling must include: <ul style="list-style-type: none"> <li>• name of person collecting sample</li> <li>• date and time of collection</li> <li>• name of outbreak/cluster (if appropriate)</li> <li>• an identifying number or description of the sample.</li> </ul>
<b>Storing food samples</b>	<ul style="list-style-type: none"> <li>• Chill food samples rapidly to 2–8°C in a normal fridge, or in an esky with an ice brick, until transported to the lab.</li> <li>• Unless otherwise advised or if the food is already frozen, <b>do not</b> store food samples in the freezer.</li> </ul>
<b>Transporting food samples</b>	<ul style="list-style-type: none"> <li>• Samples should reach MDU within 24 hours of collection, preferably sooner.</li> <li>• Transport food samples in a clean, intact esky with an ice brick.</li> <li>• Inform MDU ahead of time if a large number of samples are to be delivered to them.</li> <li>• Contact MDU to discuss procedures for delivering samples outside of normal business hours.</li> </ul>
<b>Submitting samples to MDU</b> <b>Documentation required:</b> <i>Food sample (and other clinical specimens) laboratory collection form FM118</i>	Complete a laboratory request form for food samples, which must include: <ul style="list-style-type: none"> <li>• description of the food sampled</li> <li>• date and time of collection</li> <li>• where the food has been sampled from (cases home, food premises name)</li> <li>• batch code and/or use-by date</li> <li>• who should be sent a copy of the results (include CDPCU, with name of actioning officer if known, for all outbreak investigations)</li> <li>• the circumstances of the incident/outbreak/cluster investigation</li> <li>• the name of the pathogen if this is already known for a given outbreak from previous specimens</li> <li>• name and signature of the person submitting the specimens to MDU.</li> </ul>
<b>Reporting food sample collection</b> <b>Documentation required:</b> <i>GOOA</i> <i>Sample and specimen collection request form</i>	<ul style="list-style-type: none"> <li>• Any food samples collected as part of an outbreak should be documented in the relevant section of the GOOA.</li> <li>• If requested, councils may also need to complete the <i>Sample and specimen collection request proforma</i>. This may be used if multiple councils are involved in the collection of food specimens for an outbreak or if food samples are required for another infectious disease investigation.</li> </ul>

### 6.3.3 Water sample collection - for department investigations where samples are sent to MDU

Water samples	Procedures for collection
Agency responsible	<ul style="list-style-type: none"> <li>EHOs in the municipality where the case resides or where the registered premises is located (the department may coordinate this during large outbreaks covering several municipalities).</li> </ul>
What to collect	<ul style="list-style-type: none"> <li>Collected for illness or an outbreak where transmission is unknown or is suspected to be waterborne, <b>and</b> water supply is other than mains water.</li> </ul>
Sample containers and packaging	<p>If water is not chlorinated:</p> <ul style="list-style-type: none"> <li>sample bottles can be obtained from MDU</li> <li>alternatively, council may purchase bottled water and discard the water before collecting the sample in the bottle.</li> </ul> <p>If water has been chlorinated:</p> <ul style="list-style-type: none"> <li>sample bottles must contain <b>sodium thiosulphate</b> (available from MDU).</li> </ul>
Collection of water samples	<ul style="list-style-type: none"> <li>When collecting water, always ensure that the lid is firmly closed and leave a <b>head space</b> in the bottle to allow adequate mixing of the sample by the laboratory.</li> <li>Collect a <b>minimum of 200ml</b> if testing water for potability.</li> <li>Collect a <b>minimum of 1 litre</b> if investigating possible contamination by enteric bacterial pathogens (e.g. <i>Salmonella</i>, <i>Campylobacter</i>).</li> <li>In some outbreaks larger volumes of water may be required (discuss collection of large volumes with MDU).</li> <li>If unsure, discuss water sampling with MDU, EHU and/or CDPCU.</li> </ul>
<b>Labelling water samples</b> <i>Documentation required:</i> <i>Label on container</i>	<p>Labelling must include:</p> <ul style="list-style-type: none"> <li>name of person collecting sample</li> <li>date and time of collection</li> <li>name of outbreak/cluster (if appropriate)</li> <li>an identifying number and/or description of the sample.</li> </ul>
Storing water samples	<ul style="list-style-type: none"> <li>Chill water samples rapidly to 2–8°C in a normal fridge where possible, or in an esky with an ice brick, until transported to the lab.</li> <li><b>Do not</b> store water samples in the freezer.</li> </ul>
Transporting water samples	<ul style="list-style-type: none"> <li>Water samples should be tested <b>within 6 hours</b> after collection (at the very most within 24 hours) as survival of bacteria is unpredictable.</li> <li>Transport water samples in a clean, intact esky with an ice brick (includes equipment and utensils if possible).</li> <li>Inform MDU ahead of time if a large number of samples are to be delivered to them.</li> <li>Contact MDU to discuss procedures for delivering samples outside of normal business hours.</li> </ul>

Water samples	Procedures for collection
<p><b>Submitting samples to MDU</b></p> <p><i>Documentation required:</i>  <i>Water sample (and other non-clinical specimens) laboratory collection form FM117</i></p>	<p>Complete a laboratory request form for water samples, which must include:</p> <ul style="list-style-type: none"> <li>• description of the sample</li> <li>• date and time of collection</li> <li>• where the water has been sampled from (cases home, food premises name)</li> <li>• details of the water source (tank, bore)</li> <li>• information on any treatment of the water</li> <li>• who should be sent a copy of the results (include CDPCU, with name of actioning officer if known for all outbreak investigations)</li> <li>• the circumstances of the incident/outbreak/cluster investigation</li> <li>• the name of the pathogen if this is already known for a given outbreak from previous specimens</li> <li>• name and signature of the person collecting the specimens (EHO).</li> </ul>
<p><b>Reporting environmental sample collection</b></p> <p><i>Documentation required:</i>  <i>GOOA</i></p>	<ul style="list-style-type: none"> <li>• Include details of water samples on the GOOA, or fax/email details to CDPCU and the REHO.</li> </ul>

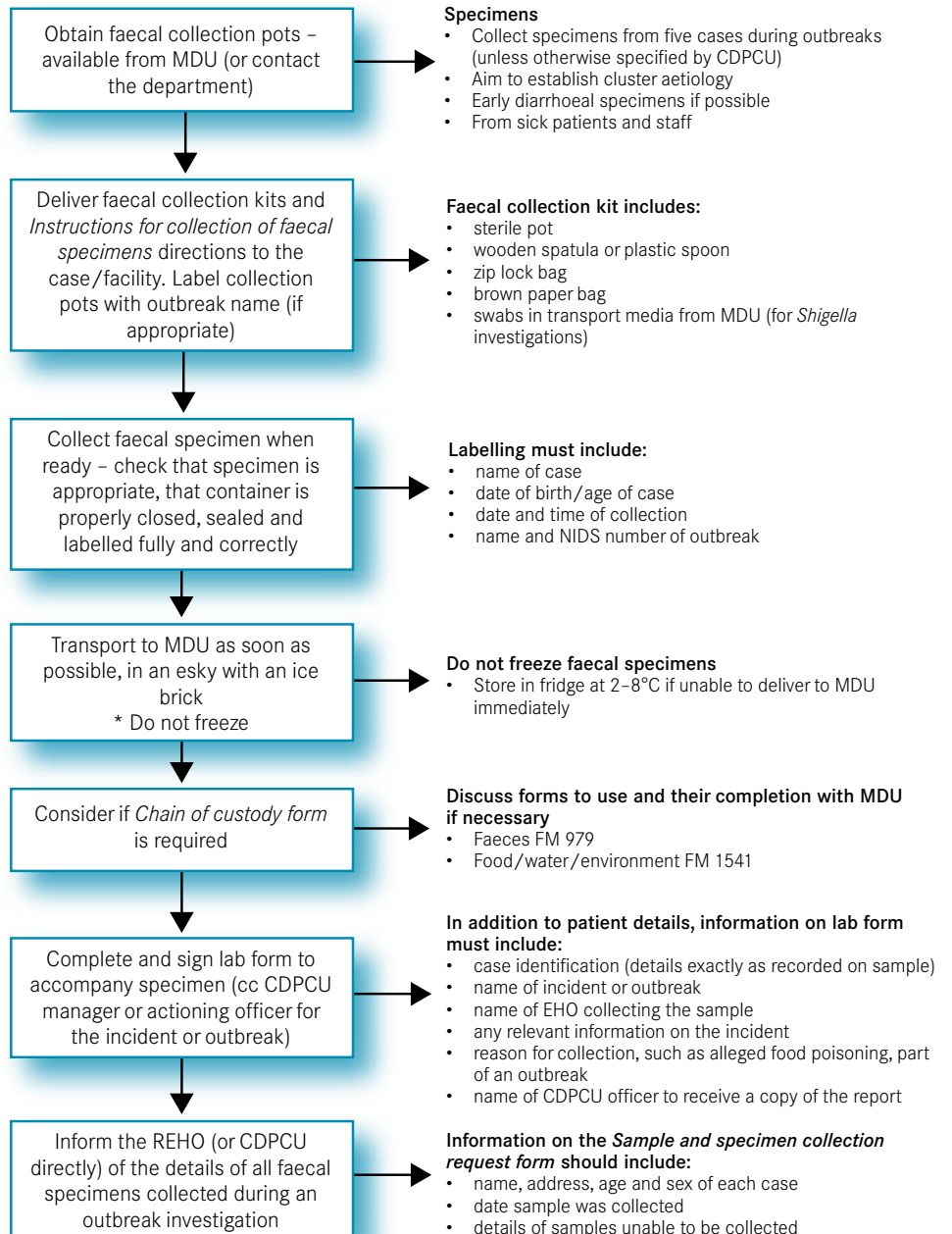
### 6.3.4 Environmental sample collection

Environmental samples	Procedures for collection
<b>Agency responsible</b>	<ul style="list-style-type: none"> <li>EHOs in the municipality where the case resides or where the registered premises is located (the department may coordinate this during large outbreaks covering several municipalities).</li> </ul>
<b>What to collect</b> <i>Kitchens and food premises are not sterile environments, and swabs of surfaces can be expected to yield a range of bacteria. So, in outbreak investigations environmental samples and swabs are generally only useful when a specific organism, known or suspected of causing the outbreak, is sought.</i>	<ul style="list-style-type: none"> <li>Environmental samples may include swabs of surfaces, equipment and utensils and samples such as animal faecal specimens or samples of animal feed.</li> <li>Environmental swabbing and sampling during outbreaks should be discussed prior to commencement with CDPCU, the REHO and/or MDU.</li> <li>Possible liaison may be required with the Department of Primary Industries (DPI) regarding environmental sampling.</li> </ul>
<b>Environmental containers and packaging</b>	<ul style="list-style-type: none"> <li>Swabs and sampling equipment, along with written instructions, can be obtained from MDU.</li> <li>Equipment or utensils to be taken for testing should be placed into a new, clean plastic bag, sealed and labelled.</li> <li>Zip-lock bags for containers/jars/pots.</li> </ul>
<b>Collection of environmental samples</b>	<ul style="list-style-type: none"> <li>Follow the MDU instructions for swabbing of surfaces, equipment or utensils (included in the swabbing kit).</li> <li>Equipment may sometimes need to be delivered to MDU intact (e.g. a blender used to process raw ingredients). This should be placed into a new, clean plastic bag, sealed and labelled. Leave a receipt with the proprietor for any equipment taken. Once tested, equipment in good repair may be cleaned and returned to the premises.</li> </ul>
<b>Labelling environmental samples</b> <b>Documentation required:</b> <i>Label on container</i>	Labelling must include: <ul style="list-style-type: none"> <li>name of person collecting sample</li> <li>date and time of collection</li> <li>name of outbreak/cluster (if appropriate)</li> <li>an identifying number and/or description of the sample.</li> </ul>
<b>Storing environmental samples</b>	<ul style="list-style-type: none"> <li>Chill environmental samples rapidly to 2–8°C in a normal fridge where possible, or in an esky with an ice brick, until transported to the lab.</li> <li><b>Do not</b> store environmental samples in the freezer.</li> </ul>
<b>Transporting environmental samples</b>	<ul style="list-style-type: none"> <li>Samples should reach MDU within 24 hours of collection, preferably sooner.</li> <li>Transport environmental samples in a clean, intact esky with an ice brick (includes equipment and utensils if possible).</li> <li>Inform MDU ahead of time if a large number of samples are to be delivered to them.</li> <li>Contact MDU to discuss procedures for delivering samples outside of normal business hours.</li> </ul>

Environmental samples	Procedures for collection
<p><b>Submitting samples to MDU</b></p> <p><i>Documentation required:</i>  <i>Environmental sample (and other non-clinical specimens)</i>  <i>laboratory collection form FM1885</i></p>	<p>Complete a laboratory request form for environmental samples (form FF1885 in Appendix 12) which must include:</p> <ul style="list-style-type: none"> <li>• description of the sample</li> <li>• date and time of collection</li> <li>• where the sample has been collected from (cases home, food premises name)</li> <li>• who should be sent a copy of the results (include CDPCU, with name of actioning officer if known for all outbreak investigations)</li> <li>• the circumstances of the incident/outbreak/cluster investigation</li> <li>• the name of the pathogen if this is already known for a given outbreak from previous specimens</li> <li>• name and signature of the person collecting the specimens (EHO).</li> </ul>
<p><b>Reporting environmental sample collection</b></p> <p><i>Documentation required:</i>  <i>GOOA</i></p>	<ul style="list-style-type: none"> <li>• Include details of environmental samples on the GOOA, or fax/email details to CDPCU and the REHO.</li> </ul>

## Flowchart 4

### Collection of faecal specimens



### 6.3.5 Other clinical or veterinary specimens

When other clinical (for example, nose and throat swab) or veterinary (for example, animal faeces) specimens are indicated, discuss with CDPCU prior to collection.

Vomitus may prove diagnostic via toxin detection when vomiting occurs within five hours of eating and is clearly related to the meal. Leftover food consumed by the case should also be collected in these circumstances if available. Discuss with CDPCU prior to collection of vomitus.

## 6.4 Sealing specimens and sample containers

Sealing ensures that specimen and sample containers are tamper proof or tamper evident. When legal proceedings may eventuate, careful consideration should be given to sealing individual specimen or sample containers or, at least, the transport container in which they are gathered and transported to the laboratory.

Sealing can be achieved with special bags, numbered tags or by judicious use of tape which is then strategically written upon, for example, with a signature. Such sealing requires forethought and special materials.

Sealing of individual containers is time consuming and is optional. The alternative is to only formally seal the transport container with the individual containers inside. This can only be done when there is no chance of specimen/sample mix-up or cross-contamination anywhere during the collection and transport process. Sealing documentation can then all be on the *Chain of custody form* (section 6.5.2) where there is sufficient space to describe one 'seal' or on form FM1718 which allows for the seals on each sample to be recorded.

When a single individual has every sample/specimen in their personal and immediate control from collection through transport and immediate delivery, then this fact should be noted as formal sealing can be avoided.

If in doubt about the need for sealing specimens and samples and how this should be done, discuss with the department or MDU.



## 6.5 Laboratory forms

The following laboratory forms are available from MDU:

	Request form	Chain of custody form	'Sealing' form (optional)
Food, food ingredients and packaging samples	FM118	FM1541	FM1718
Water samples	FM117	FM1541	FM1718
Faeces or other clinical specimens	FM116	FM979	FM1718
Environmental samples, swabs and equipment	FM1885	FM979	FM1718

### 6.5.1 Laboratory request forms

**The appropriate MDU laboratory request forms must accompany all specimens and samples, and are available from MDU.**

Laboratory request forms are very important as they authorise the laboratory to test, convey to the laboratory what is being sent, specify the tests requested and dictate to whom reports are to be issued. Request forms should be fully and accurately completed in ink, ballpoint or print (not pencil). All details on specimens and samples should be identically recorded on the request form. A laboratory request form must **always** accompany every specimen/sample delivered to MDU.

Correct completion of the form will convey:

- identity of the case and/or incident by name/s, NIDS number (if known), location, details of the illness and circumstances of the incident
- details of the sample, where it was collected, who collected it, the condition of storage of the sample prior to and after collection, and the date and time of collection
- who should be sent a copy of the results. For any specimens or samples relating to an outbreak always note on the laboratory request form that a copy of the results should be forwarded to Manager – Communicable Disease Prevention and Control (give the name of the CDPCU actioning officer if known). Any food, water or environmental samples for sporadic cases must also be copied to the department
- the name of the outbreak. If samples are collected as part of an outbreak, include the name of the outbreak and/or the department outbreak number (if known) on the laboratory request form
- the circumstances of the incident. If samples are collected as part of a sporadic case, complaint or cluster investigation, indicate the circumstances of the incident on the laboratory form, including the name of the pathogen infecting the case (if known)

- if a Food Act prosecution is being considered - refer to the specific requirements within the Act. MDU's Food and Water *Chain of custody form FM1541* provides guidance on the legislative requirements under this Act
- who collected the samples from the case or the premises. The name and signature of the person collecting the samples should be on all laboratory request forms.

### 6.5.2 Chain of custody and documentation

Documentation of the chain of custody of the samples or specimens is essential to discount the possibility of sample mix-up. Chain of custody refers to the ability to trace possession from time of collection and handling of sample or specimen through transport, storage, analysis and final disposition. In outbreaks of unknown or suspected foodborne transmission, it is recommended that all **food** samples are sealed and that chain of custody documentation FM1541 is completed. If an outbreak is confirmed to be foodborne, it is also recommended that at least one faecal specimen is obtained and chain of custody documentation FM979 completed for this specimen.

Documentation should be on either form FM1541 (food or water) or form FM979 (clinical specimen). Assistance in laboratory form completion is available from MDU, but they must be completed at and from the time of collection.

Specimens and samples should be sealed in such a manner as to detect any unauthorised access/tampering and the nature of this 'sealing' documented on form FM1718.

## 6.6 Transporting specimens and samples

Councils should arrange transport of all specimens and samples to MDU. Transport should be in compliance with AS4834-2007, packaging for surface transport of biological material that may cause disease in humans, animals or plants.

It is important that specimens and samples are transported in a secure manner to ensure there is no cross-contamination, no contamination from surroundings, no tampering, no mix-ups or confusion and no temperature abuse. When using couriers or other transport providers, the whole outer transport container should be adequately sealed with a tamper evident or tamper proof seal. Chain of custody procedures require handover documentation by each party every time the sample changes hands or enters or leaves storage. Contact MDU if you need advice on transporting samples.

**Chain of custody procedures require handover documentation by each party every time the sample changes hands or enters or leaves storage. Contact MDU if you need advice on transporting samples.**

## 6.7 Submitting samples and specimens

All samples or specimens should be submitted to MDU in the first instance, unless specialised testing (for example, for histamine) is required and prior arrangements have been made with CDPCU. EHOs should contact MDU to discuss procedures for delivery of samples or specimens outside of normal business hours.

The cost of laboratory testing will be met by the department if samples or specimens are collected as part of the department initiated infectious diseases/foodborne investigation. EHOs should discuss sample collection with the department if unsure whether sampling is necessary, or what should be sampled.

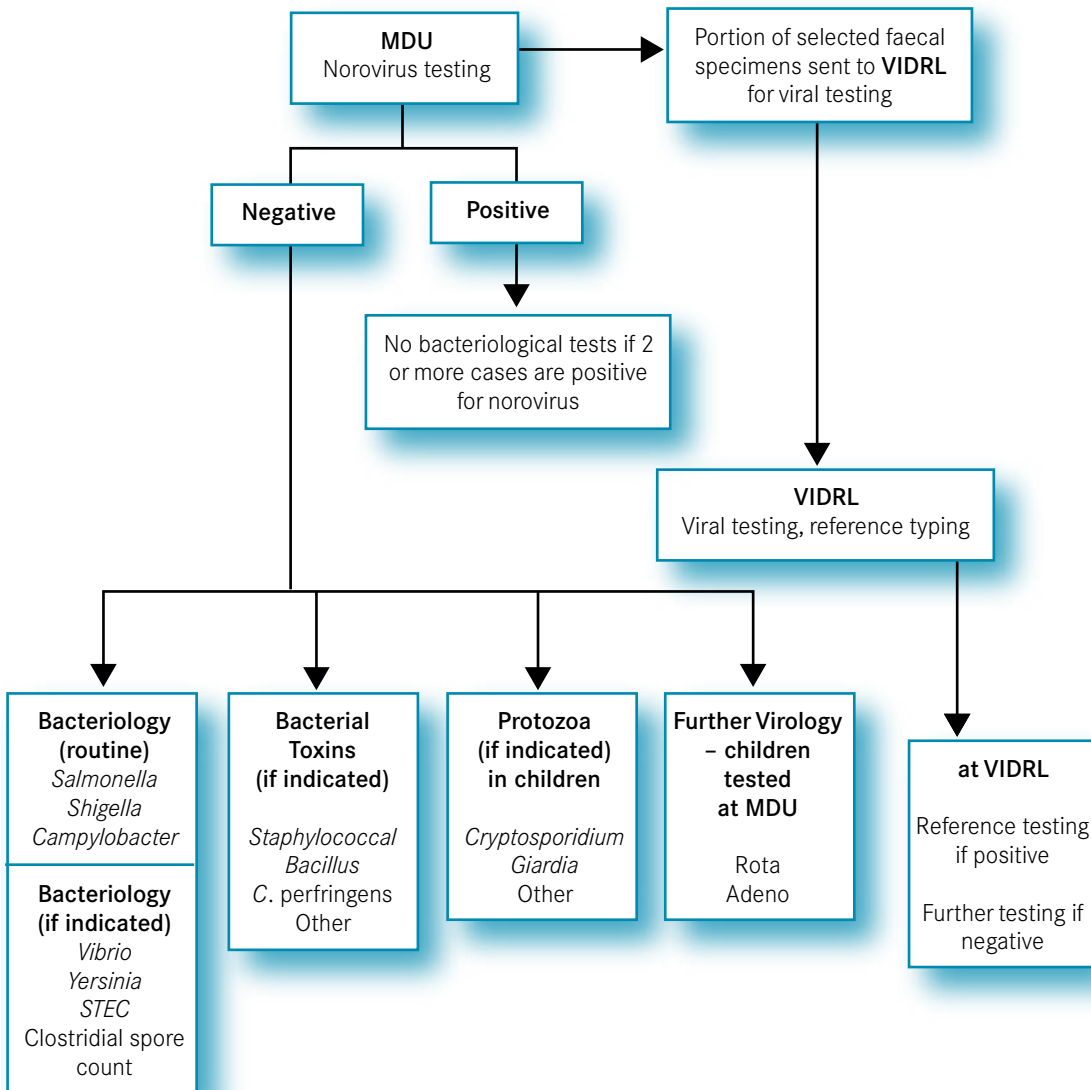
## 6.8 Analysis of samples and specimens

Faecal samples should, in the first instance, always be submitted to MDU unless specifically advised otherwise by CDPCU. Unless requested otherwise, all outbreak faecal specimens are screened for norovirus and bacterial pathogens, if indicated, and forwarded to VIDRL for further testing as necessary. The bacterial screen includes *Salmonella*, *Shigella* and *Campylobacter*, and may include tests for *Bacillus cereus* diarrhoeal enterotoxin, *Clostridium perfringens* enterotoxin, *Staphylococcal* enterotoxins, *E. coli* (including STEC), *Vibrio* spp and other pathogens depending on the symptoms and pattern of illness. Screening for *Cryptosporidium* and *Giardia* may also be carried out at MDU if requested by CDPCU due to the symptoms and setting nominated. Testing of adults for viruses such as rotavirus will be conducted at VIDRL using current methods (such as PCR and electron microscopy). For details of testing see flowchart 5.

Where an outbreak has occurred in a hospital, the hospital laboratory may undertake its own testing of faecal specimens for bacterial or viral pathogens. EHOs should discuss this with CDPCU; it may be acceptable if the appropriate tests are carried out and the results are made available to CDPCU in a timely manner. Specimens and samples may still need to be directed to MDU for further bacterial tests and to VIDRL for further viral testing, depending on the suspected cause of illness.

## Flowchart 5

## Standard laboratory tests algorithm performed on outbreak faecal specimens

**Outbreak pathogen confirmed:**

Where the cause of the outbreak has been confirmed (at least two specimens positive for a pathogen that is consistent with the symptoms and duration of illness) further samples will only be tested for the known pathogen, and then only when indicated.

## 6.9 Laboratory results

It is important to remember that results from food or environmental samples are indicative only, unless they have been collected from the same batch of food implicated in the outbreak or by the case. In some outbreak situations, negative results can be as informative as positive results. For example, in an outbreak where a bacterial toxin is suspected, negative results for viral pathogens will help support the investigation hypothesis.

Laboratory results relating to sporadic case investigations should not be released to anyone until the written report is received from MDU. Verbal results received from MDU should be used for internal purposes only. It is the responsibility of the submitting council to advise premises of food/water/environmental sampling results relating to sporadic case investigations.

Outbreak results should not be released to cases or facilities until they have been discussed with CDPCU. Faecal laboratory results pertaining to an outbreak should not be released until all results for all cases have been received and typing of the pathogen has been completed by MDU and reported in writing. Testing of individual specimens may vary depending on the stage of the investigation, and testing may not be done on later specimens if cluster aetiology has already been determined.

The timing and coordination of providing cases and/or premises with results should be discussed with CDPCU as other issues, such as FOI requests, coroner's investigations and advice to third parties, may also need to be considered.

Queries regarding what, or how many, samples or specimens to collect should be directed to CDPCU in the first instance, rather than directly to the laboratories. All outbreak queries, including questions about outbreak pathogens, should also be directed to the department.



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# Appendix 1

Sample and specimen collection request form

# Sample and specimen collection request form

- This form is to be used when DH requests local government to collect specimens or samples as part of an infectious disease investigation.
- Please fax or email the completed form to Communicable Diseases Prevention and Control Unit (CDPCU) on fax: **1300 651 170** or email: **cdeho@health.vic.gov.au**
- Ensure container is clearly labelled with all relevant details and the appropriate MDU forms are completed. Keep sample refrigerated at all times.

## Comments/instructions (to be completed by CDCPU)

Name of council

Outbreak/cluster name (if applicable)  NIDS Number:

Reason for sample/specimen collection:  outbreak/cluster investigation  
 follow-up/clearance specimen  
 contact screening (e.g. family/household/close contact)  
 other (pls specify):

Test requested (i.e. pathogen)

Other comments (if applicable)

DH officer to receive copy of results

Name of person for faecal specimen, or description of food sample	Address	DOB/age	Date submitted to MDU	Comments by EHO
<i>E.g. Feta cheese from deli case (brand unknown)</i>	<i>Supermarket A, Low Street, Cityside</i>	<i>N/A</i>	<i>30/6/09</i>	<i>Brown Cow Feta 250g, batch 12751, UBD 7/12/09</i>
<i>E.g. Joe Bloggs</i>	<i>10 High Street, Suburbia</i>	<i>1/1/09</i>	<i>1/7/09</i>	<i>Faecal specimen not refrigerated by case</i>



# Appendix 2

Questionnaires

**Typical symptoms**

Abdominal pain, fever and diarrhoea which may contain mucous or blood.

**Incubation period**

Usually two to five days, with a range of one to ten days.

**Duration of illness**

Symptoms usually last two to five days.

NIDS No: NIDS updated: **Is this:**

- Single case  
 Household contact of case

Case name: 

- Cluster investigation  
 Outbreak investigation

Outbreak name: **Reason referred to local government:**

- Resident in care facilities (e.g. aged care)  
 Two or more associated cases  
 Other, specify:

Date of interview: Interviewer: Person interviewed (if not the case): Interpreter used?  Yes  No

PRIVACY MESSAGE: The information you provide in this questionnaire is for the purpose of trying to prevent further cases of illness. We do this by trying to find out what is likely to have caused your illness and also by providing you with information to reduce the spread of illness to others. The data collected is kept confidential and identifying information will not be disclosed for any other purpose without your consent. You can access your information by contacting the Department of Health. A fact sheet is available ("Privacy Legislation & Notification of Infectious Diseases - Information for Patients") if you would like further information.  Information read?

**Case details**Surname/  
family name First name Street address Suburb Postcode Name of parent/guardian (if applicable) **Contact details**Daytime tel Evening tel Mobile tel Email Birth date Sex  Male  FemaleCountry of birth Year of arrival (if outside Australia) Language spoken **ATSI status (tick all that apply):**

- Aboriginal  
 Torres Strait Islander  
 Not indigenous  
 Not stated

Occupation 

OR

- child at home  student  
 child in child care  unemployed  
 pensioner  home duties

High risk group?  Yes  No

High risk groups are food handlers, health care workers, child care workers, children in child care, and residents of institutions (e.g. aged care).

If yes:

**Workplace/child care address and contact details:**
  
  

Date last attended before onset of illness Date returned to work/child care

## Treating doctor/hospital

Name of treating doctor

Address  Postcode

Telephone  Facsimile

Mobile tel  Email

Consent given by doctor to interview case  Yes  No Date consent provided

Did the case present to hospital?  Yes  No If yes, date presented to hospital

Was the case admitted to hospital?  Yes  No

Name of hospital  Address

Date of admission  Date of discharge/death

Hospital UR No

## Illness summary

Onset date of illness  Time of onset  am/pm Date of specimen collection

Type of specimen (*circle*) Faeces/blood/urine/other

Symptoms		Onset date of symptom	History of illness
Diarrhoea	<input type="checkbox"/> Yes: <input type="checkbox"/> watery <input type="checkbox"/> bloody Duration of diarrhoea (days) <input type="text"/> <input type="checkbox"/> No		
Nausea	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Abdominal pain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Lethargy	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other (specify)	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Total duration of illness \_\_\_\_\_ hours/days

## Treatment

Were antibiotics given to treat the illness?  Yes  No If yes, what antibiotics?

Are you still taking antibiotics?  Yes  No What date did you last take the antibiotics?

## Comments on treatment

## Contacts

In the two weeks before the onset of the illness, has the case:

- had contact with a family member with a similar illness?  Yes  No *If yes give details in table below*
- had contact with a friend or work/school colleague with a similar illness?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

In the two weeks after the onset of the illness in the case

- have any family members been ill with similar symptoms?  Yes  No *If yes give details in table below*
- have any friends or work/school colleagues been ill with similar symptoms?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A *food and water borne* questionnaire should be completed for identified ill cases

How well did the case recall the information (doctor's details, illness history and contacts)?  Very well  Well  Not well  Not at all

## Environmental risk factors

In the two weeks prior to onset of illness, did any of the following risk factors apply?

Risk factor	Details	
<b>Travel</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Domestic <input type="checkbox"/> International  Places visited <input type="text"/> Type of accommodation <input type="text"/> Airline <input type="text"/> Flight numbers <input type="text"/> Departure date <input type="text"/> Return date <input type="text"/>
<b>Close contact with farm animals</b> (including petting zoos etc)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type <input type="text"/> Date/s <input type="text"/> Location <input type="text"/>
<b>Lives or visited a rural property</b> (e.g. farm or hobby farm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type <input type="text"/> Date/s <input type="text"/> Location <input type="text"/>
<b>Has had contact with pets</b> (including fish and reptiles)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type <input type="text"/> Type of food <input type="text"/> Location <input type="checkbox"/> Home <input type="checkbox"/> Other      Has the pet been ill? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Drunk from a private water supply?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type <input type="text"/> Location <input type="text"/> Is water treated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
<b>Drunk from a public water supply</b> (tap water)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Drunk bottled water?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify brand/s <input type="text"/> How often <input type="text"/>
<b>Problems with sewage disposal at home?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify problem <input type="text"/> System type <input type="text"/>
<b>Gardening – contact with potting mix or manure?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type <input type="text"/>
<b>Participated in swimming or water sports?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Activity <input type="text"/> Location <input type="text"/> Date/s <input type="text"/>
<b>Other known risk factor</b> (e.g. occupational exposure)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify <input type="text"/>

How well did the case recall their environmental exposures?     Very well     Well     Not well     Not at all



## Food history

**Food history** – If a detailed food history for the incubation period cannot be recalled, request information on what is usually eaten at each meal. Collect as much detail as possible for each meal (e.g. for a salad sandwich list all ingredients; for a meal cooked at home list everything eaten) and the number of people that shared each meal.

<b>Day 1</b> (day before onset)		Day	<input type="text"/>	Date	<input type="text"/>
Breakfast		Brand and where purchased/eaten			
Lunch		Brand and where purchased/eaten			
Dinner		Brand and where purchased/eaten			
Other snacks and drinks		Brand and where purchased/eaten			
<b>Day 2</b> (2 days before onset)		Day	<input type="text"/>	Date	<input type="text"/>
Breakfast		Brand and where purchased/eaten			
Lunch		Brand and where purchased/eaten			
Dinner		Brand and where purchased/eaten			
Other snacks and drinks		Brand and where purchased/eaten			
<b>Day 3</b> (3 days before onset)		Day	<input type="text"/>	Date	<input type="text"/>
Breakfast		Brand and where purchased/eaten			
Lunch		Brand and where purchased/eaten			
Dinner		Brand and where purchased/eaten			
Other snacks and drinks		Brand and where purchased/eaten			
<b>Day 4</b> (4 days before onset)		Day	<input type="text"/>	Date	<input type="text"/>
Breakfast		Brand and where purchased/eaten			
Lunch		Brand and where purchased/eaten			
Dinner		Brand and where purchased/eaten			
Other snacks and drinks		Brand and where purchased/eaten			

<b>Day 5</b> (5 days before onset)		Day <input type="text"/>	Date <input type="text"/>
Breakfast	Brand and where purchased/eaten		
Lunch	Brand and where purchased/eaten		
Dinner	Brand and where purchased/eaten		
Other snacks and drinks	Brand and where purchased/eaten		

Has the case tried any new or different foods recently?  Yes  No If yes, specify

Has the case been on any specific diets lately?  Yes  No If yes, specify

**In the 2 weeks prior to illness did the case eat or buy food from:**

	Name and address details of premises	What was eaten?	Date/s
<b>Cafes or restaurants</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Takeaway outlets</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Parties or functions with family or friends</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Festivals or commercial public gatherings</b> (e.g. fetes, club social events, markets, Moomba etc.) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Continental deli or specialty grocer</b> (e.g. Asian supermarket) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Farms or growers</b> (farm gate sales or consumption of unprocessed products) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			

Were any other attendees at these meals/functions ill with gastro symptoms?  Yes  No  Unknown

If yes, provide details in the table below.

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A *food and water borne* questionnaire should be completed for identified ill cases

How well did the case recall their food history?  Very well  Well  Not well  Not at all

## Comments/conclusions

Food samples obtained for investigation?  Yes  No

Type of food	Date collected	Result of analysis

What does the case suspect was the cause of their illness?

Probable source of illness as assessed by the interviewer:

How was the reason for referral to local government addressed?

### Comments


## Education

Hygiene and preventing transmission of *Campylobacter* discussed?

Yes  No

Was the case provided with educational material (brochure or link to IDEAS website)?

Yes  No

If yes, date sent/provided

Privacy information requested by case?

Yes  No

## Exclusions

Is the case a resident of a care facility?

Yes → Continue below

No → Go to signature

<input type="checkbox"/> Child in child care	School/child care exclusion is/was required? Exclusion discussed with parent/guardian?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>Exclusion from school or child care is required until diarrhoea has ceased.</i>
<input type="checkbox"/> Child care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Food handler	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>All food handlers with diarrhoea are to be excluded from work until diarrhoea has ceased.</i>
<input type="checkbox"/> Health care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Resident of a care facility (e.g. aged care facility)	Isolation is/was required? Isolation discussed with primary carer?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be isolated from well residents (as far as practicable) until diarrhoea has ceased.</i>

## Signature

Name of interviewer (please print clearly)

Signature

Date

How long did this questionnaire take to complete?



# Cryptosporidiosis

## Typical symptoms

Common symptoms are diarrhoea and stomach cramps.

## Incubation period

Estimated to be one to twelve days, with an average of seven days.

## Duration of illness

Symptoms usually last four to twenty-one days.

NIDS No:

NIDS updated:

### Is this:

- Single case  
 Household contact of case

Case name:

- Cluster investigation  
 Outbreak investigation

Outbreak name:

### Reason referred to local government:

- Child care worker  
 Child in child care  
 Resident in care facility (e.g. aged care)  
 Possible source named  
 Two or more associated cases

Date of interview:

Interviewer:

Person interviewed (if not the case):

Interpreter used?  Yes  No

**PRIVACY MESSAGE:** The information you provide in this questionnaire is for the purpose of trying to prevent further cases of illness. We do this by trying to find out what is likely to have caused your illness and also by providing you with information to reduce the spread of illness to others. The data collected is kept confidential and identifying information will not be disclosed for any other purpose without your consent. You can access your information by contacting the Department of Health. A fact sheet is available ("Privacy Legislation & Notification of Infectious Diseases - Information for Patients") if you would like further information.  Information read?

## Case details

Surname/  
family name

First name

Street address

Suburb

Postcode

Name of parent/guardian (if applicable)

## Contact details

Daytime tel

Evening tel

Mobile tel

Email

Birth date

Sex  Male  Female

Country of birth

Year of arrival (if outside Australia)

Language spoken

**ATSI status (tick all that apply):**

- Aboriginal  
 Torres Strait Islander  
 Not indigenous  
 Not stated

Occupation

OR

- child at home  student  
 child in child care  unemployed  
 pensioner  home duties

High risk group?  Yes  No

*High risk groups are food handlers, health care workers, child care workers, children in child care, and residents of institutions (e.g. aged care).*

If yes:

**Workplace/child care address and contact details:**


Date last attended before onset of illness

Date returned to work/child care

## Treating doctor/hospital

Name of treating doctor

Address  Postcode

Telephone  Facsimile

Mobile tel  Email

Consent given by doctor to interview case  Yes  No Date consent provided

Did the case present to hospital?  Yes  No If yes, date presented to hospital

Was the case admitted to hospital?  Yes  No

Name of hospital  Address

Date of admission  Date of discharge/death

Hospital UR No

## Illness summary

Onset date of illness  Time of onset  am/pm Date of specimen collection

Type of specimen (*circle*) Faeces/blood/urine/other

	Symptoms	Onset date of symptom	History of illness
Diarrhoea	<input type="checkbox"/> Yes: <input type="checkbox"/> watery <input type="checkbox"/> bloody Duration of diarrhoea (days) <input type="text"/> <input type="checkbox"/> No		
Nausea	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Abdominal pain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Lethargy	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other (specify)	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Total duration of illness \_\_\_\_\_ hours/days

## Treatment

Were antibiotics given to treat the illness?  Yes  No If yes, what antibiotics?

Are you still taking antibiotics?  Yes  No What date did you last take the antibiotics?

## Comments on treatment

## Contacts

In the two weeks before the onset of the illness, has the case:

- had contact with a family member with a similar illness?  Yes  No *If yes give details in table below*
- had contact with a friend or work/school colleague with a similar illness?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

In the two weeks after the onset of the illness in the case

- have any family members been ill with similar symptoms?  Yes  No *If yes give details in table below*
- have any friends or work/school colleagues been ill with similar symptoms?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A questionnaire should be completed for identified ill cases

How well did the case recall the information (doctor's details, illness history and contacts)?  Very well  Well  Not well  Not at all

## Environmental risk factors

In the two weeks prior to onset of illness, did any of the following risk factors apply?

Risk factor	Details			
<b>Travel</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Domestic	<input type="checkbox"/> International	
	Places visited	<input type="text"/>		
	Type of accommodation	<input type="text"/>		
	Airline	<input type="text"/>	Flight numbers	<input type="text"/>
	Departure date	<input type="text"/>	Return date	<input type="text"/>
<b>Close contact with farm animals</b> (including petting zoos etc)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type	<input type="text"/>	
	Date/s	<input type="text"/>	Location	<input type="text"/>
<b>Lives or visited a rural property</b> (e.g. farm or hobby farm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type	<input type="text"/>	
	Date/s	<input type="text"/>	Location	<input type="text"/>
<b>Has had contact with pets</b> (including fish and reptiles)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type	<input type="text"/>	
	Type of food	<input type="text"/>		
	Location	<input type="checkbox"/> Home <input type="checkbox"/> Other	Has the pet been ill?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Drunk from a private water supply?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type	<input type="text"/>	Location <input type="text"/>
	Is water treated?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Drunk from a public water supply</b> (tap water)?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>Drunk bottled water?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify brand/s	<input type="text"/>	
	How often	<input type="text"/>		
<b>Problems with sewage disposal at home?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify problem	<input type="text"/>	
	System type	<input type="text"/>		
<b>Gardening – contact with potting mix or manure?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type	<input type="text"/>	
<b>Other known risk factor</b> (e.g. occupational exposure)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify	<input type="text"/>	
<b>Participated in swimming or water sports?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, complete the table below		
Type of activity	Date(s)	Type of water	Name and address of facility	If swimming pool, what pool? e.g. toddler, main
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

How well did the case recall their environmental exposures?  Very well  Well  Not well  Not at all



**Comments/conclusions**

What does the case suspect was the cause of their illness?

Probable source of illness as assessed by the interviewer:

How was the reason for referral to local government addressed?

**Comments**

**Education**

Hygiene and preventing transmission of *Cryptosporidium* discussed?  Yes  No

Was the case provided with educational material (brochure or link to IDEAS website)?  Yes  No

If yes, date sent/provided

Privacy information requested by case?  Yes  No

**Exclusions**

Is the case a child in care, a child care worker or a resident of a care facility?  Yes → Continue below  No → Go to signature

<input type="checkbox"/> Child in child care	School/child care exclusion is/was required? Exclusion discussed with parent/guardian?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>Exclusion from school or child care is required until diarrhoea has ceased.</i>
<input type="checkbox"/> Child care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Food handler	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>All food handlers with diarrhoea are to be excluded from work until diarrhoea has ceased.</i>
<input type="checkbox"/> Health care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Resident of a care facility (e.g. aged care facility)	Isolation is/was required? Isolation discussed with primary carer?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be isolated from well residents (as far as practicable) until diarrhoea has ceased.</i>

**Signature**

Name of interviewer *(please print clearly)*

Signature

Date  How long did this questionnaire take to complete?



**Symptoms**

Abdominal pain, fever and diarrhoea, vomiting, nausea, etc..

**Incubation period**

Dependent on pathogen.

**Duration of illness**

Dependent on pathogen.

NIDS No: NIDS updated: **Is this:**

- Single case  
 Household contact of case

Case name: \_\_\_\_\_

- Two or more associated cases

Date of interview: 

Interviewer: \_\_\_\_\_

Person interviewed (if not the case):  
\_\_\_\_\_Interpreter used?  Yes  No

PRIVACY MESSAGE: The information you provide in this questionnaire is for the purpose of trying to prevent further cases of illness. We do this by trying to find out what is likely to have caused your illness and also by providing you with information to reduce the spread of illness to others. The data collected is kept confidential and identifying information will not be disclosed for any other purpose without your consent. You can access your information by contacting the Department of Health. A fact sheet is available ("Privacy Legislation & Notification of Infectious Diseases - Information for Patients") if you would like further information.  Information read?

**Case details**Surname/  
family name First name Street address Suburb Postcode Name of parent/guardian (if applicable) **Contact details**Daytime tel Evening tel Mobile tel Email Birth date Sex  Male  FemaleCountry of birth Year of arrival (if outside Australia) Language spoken **ATSI status (tick all that apply):**

- Aboriginal  
 Torres Strait Islander  
 Not indigenous  
 Not stated

Occupation 

OR

- child at home  student  
 child in child care  unemployed  
 pensioner  home duties

High risk group?  Yes  No*High risk groups are food handlers, health care workers, child care workers, children in child care, and residents of institutions (e.g. aged care).*

If yes:

**Workplace/child care address and contact details:**
  
  

Date last attended before onset of illness Date returned to work/child care

## Treating doctor/hospital

Name of treating doctor

Address  Postcode

Telephone  Facsimile

Mobile tel  Email

Consent given by doctor to interview case  Yes  No Date consent provided

Did the case present to hospital?  Yes  No If yes, date presented to hospital

Was the case admitted to hospital?  Yes  No

Name of hospital  Address

Date of admission  Date of discharge/death

Hospital UR No

## Illness summary

Onset date of illness  Time of onset  am/pm Date of specimen collection

Type of specimen (*circle*) Faeces/blood/urine/other

	Symptoms	Onset date of symptom	History of illness
Diarrhoea	<input type="checkbox"/> Yes: <input type="checkbox"/> watery <input type="checkbox"/> bloody Duration of diarrhoea (days) <input type="text"/> <input type="checkbox"/> No		
Nausea	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Abdominal pain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Lethargy	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other (specify)	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Total duration of illness \_\_\_\_\_ hours/days

## Treatment

Were antibiotics given to treat the illness?  Yes  No If yes, what antibiotics?

Are you still taking antibiotics?  Yes  No What date did you last take the antibiotics?

## Comments on treatment

## Contacts

In the two weeks before the onset of the illness, has the case:

- had contact with a family member with a similar illness?  Yes  No *If yes give details in table below*
- had contact with a friend or work/school colleague with a similar illness?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

In the two weeks after the onset of the illness in the case

- have any family members been ill with similar symptoms?  Yes  No *If yes give details in table below*
- have any friends or work/school colleagues been ill with similar symptoms?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A *food and water borne* questionnaire should be completed for identified ill cases

How well did the case recall the information (doctor's details, illness history and contacts)?  Very well  Well  Not well  Not at all

## Environmental risk factors

In the two weeks prior to onset of illness, did any of the following risk factors apply?

Risk factor	Details	
<b>Travel</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Domestic <input type="checkbox"/> International  Places visited: <input type="text"/> Type of accommodation: <input type="text"/> Airline: <input type="text"/> Flight numbers: <input type="text"/> Departure date: <input type="text"/> Return date: <input type="text"/>
<b>Close contact with farm animals</b> (including petting zoos etc)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type: <input type="text"/> Date/s: <input type="text"/> Location: <input type="text"/>
<b>Lives or visited a rural property</b> (e.g. farm or hobby farm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type: <input type="text"/> Date/s: <input type="text"/> Location: <input type="text"/>
<b>Has had contact with pets</b> (including fish and reptiles)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: <input type="text"/> Type of food: <input type="text"/> Location: <input type="checkbox"/> Home <input type="checkbox"/> Other      Has the pet been ill? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Drunk from a private water supply?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: <input type="text"/> Location: <input type="text"/> Is water treated? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Drunk from a public water supply</b> (tap water)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Drunk bottled water?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify brand/s: <input type="text"/> How often: <input type="text"/>
<b>Problems with sewage disposal at home?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify problem: <input type="text"/> System type: <input type="text"/>
<b>Gardening – contact with potting mix or manure?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type: <input type="text"/>
<b>Participated in swimming or water sports?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Activity: <input type="text"/> Location: <input type="text"/> Date/s: <input type="text"/>
<b>Other known risk factor</b> (e.g. occupational exposure)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify: <input type="text"/>

How well did the case recall their environmental exposures?     Very well     Well     Not well     Not at all

## Food history

**Three day food history:** If a detailed three-day food history cannot be recalled, request information on what is usually eaten at each meal. Collect as much detail as possible for each meal (e.g. for a salad sandwich list **all** ingredients; for a meal cooked at home list **everything** eaten) and the number of people that shared each meal.

<b>Date of onset of illness</b> <input type="text"/>		Day <input type="text"/>	Time of onset <input type="text"/> am/pm
Breakfast	Brand and where purchased/eaten		
Lunch	Brand and where purchased/eaten		
Dinner	Brand and where purchased/eaten		
Other snacks and drinks	Brand and where purchased/eaten		
<b>Day 1</b> (1 day before onset)		Day <input type="text"/>	Date <input type="text"/>
Breakfast	Brand and where purchased/eaten		
Lunch	Brand and where purchased/eaten		
Dinner	Brand and where purchased/eaten		
Other snacks and drinks	Brand and where purchased/eaten		
<b>Day 2</b> (2 days before onset)		Day <input type="text"/>	Date <input type="text"/>
Breakfast	Brand and where purchased/eaten		
Lunch	Brand and where purchased/eaten		
Dinner	Brand and where purchased/eaten		
Other snacks and drinks	Brand and where purchased/eaten		
<b>Day 3</b> (3 days before onset)		Day <input type="text"/>	Date <input type="text"/>
Breakfast	Brand and where purchased/eaten		
Lunch	Brand and where purchased/eaten		
Dinner	Brand and where purchased/eaten		
Other snacks and drinks	Brand and where purchased/eaten		

Has the case tried any new or different foods recently?  Yes  No If yes, specify

Has the case been on any specific diets lately?  Yes  No If yes, specify

**In the 2 weeks prior to illness did the case eat or buy food from:**

	Name and address details of premises	What was eaten?	Date/s
<b>Cafes or restaurants</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Takeaway outlets</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Parties or functions with family or friends</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Festivals or commercial public gatherings</b> (e.g. fetes, club social events, markets, Moomba etc.) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Continental deli or specialty grocer</b> (e.g. Asian supermarket) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Farms or growers</b> (farm gate sales or consumption of unprocessed products) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			

Were any other attendees at these meals/functions ill with gastro symptoms?  Yes  No  Unknown

If yes, provide details in the table below.

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A *food and water borne* questionnaire should be completed for identified ill cases

How well did the case recall their food history?  Very well  Well  Not well  Not at all



## Comments/conclusions

Food samples obtained for investigation?  Yes  No

Type of food	Date collected	Result of analysis

What does the case suspect was the cause of their illness?

Probable source of illness as assessed by the interviewer:

How was the reason for referral to local government addressed?

### Comments


## Education

Hygiene and preventing transmission of *gastroenteritis* discussed?

Yes  No

Was the case provided with educational material (brochure or link to IDEAS website)?

Yes  No

If yes, date sent/provided

Privacy information requested by case?

Yes  No

## Exclusions

Is the case a child in care, resident of an institution or in a high risk occupation (food handler or health/child care worker)?

Yes → Continue below

No → Go to signature

<input type="checkbox"/> Child in child care	School/child care exclusion is/was required? Exclusion discussed with parent/guardian?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>Exclusion from school or child care is required until diarrhoea has ceased.</i>
<input type="checkbox"/> Child care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Food handler	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>All food handlers with diarrhoea are to be excluded from work until diarrhoea has ceased.</i>
<input type="checkbox"/> Health care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Resident of a care facility (e.g. aged care facility)	Isolation is/was required? Isolation discussed with primary carer?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be isolated from well residents (as far as practicable) until diarrhoea has ceased.</i>

## Signature

Name of interviewer (*please print clearly*)

Signature

Date

How long did this questionnaire take to complete?



Outbreak name: NIDS No: NIDS updated: Has the organism been isolated?  Yes  No

If yes, name: \_\_\_\_\_

Date of interview: 

Interviewer: \_\_\_\_\_

Person interviewed (if not the case):  
\_\_\_\_\_Interpreter used?  Yes  No

PRIVACY MESSAGE: The information you provide in this questionnaire is for the purpose of trying to prevent further cases of illness. We do this by trying to find out what is likely to have caused your illness and also by providing you with information to reduce the spread of illness to others. The data collected is kept confidential and identifying information will not be disclosed for any other purpose without your consent. You can access your information by contacting the Department of Health. A fact sheet is available ("Privacy Legislation & Notification of Infectious Diseases - Information for Patients") if you would like further information.  Information read?

**Case details**Surname/ family name  First name Street address Suburb  Postcode Name of parent/guardian (if applicable) **Contact details**Daytime tel  Evening tel Mobile tel  Email Birth date  Sex:  Male  FemaleCountry of birth  Year of arrival (if outside Australia) Language spoken 
**ATSI status (tick all that apply):**  Aboriginal  
 Torres Strait Islander  
 Not indigenous  
 Not stated
Occupation 
**OR**  child at home  student  
 child in child care  unemployed  
 pensioner  home duties
High risk group?  Yes  No*High risk groups are food handlers, health care workers, child care workers, children in child care, and residents of institutions (e.g. aged care).*

If yes:

**Workplace/child care address and contact details:**
  
  

Date last attended before onset of illness Date returned to work/child care

## Treating doctor/hospital

Name of treating doctor

Address  Postcode

Telephone  Facsimile

Mobile tel  Email

Consent given by doctor to interview case  Yes  No Date consent provided

Did the case present to hospital?  Yes  No If yes, date presented to hospital

Was the case admitted to hospital?  Yes  No

Name of hospital  Address

Date of admission  Date of discharge/death

Hospital UR No

## Illness summary

Onset date of illness  Time of onset  am/pm Date of specimen collection

Type of specimen (*circle*) Faeces/blood/urine/other

Symptoms		Onset date of symptom	History of illness
Diarrhoea	<input type="checkbox"/> Yes: <input type="checkbox"/> watery <input type="checkbox"/> bloody Duration of diarrhoea (days) <input type="text"/> <input type="checkbox"/> No		
Nausea	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Abdominal pain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Lethargy	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other (specify)	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Total duration of illness \_\_\_\_\_ hours/days

## Treatment

Were antibiotics given to treat the illness?  Yes  No If yes, what antibiotics?

Are you still taking antibiotics?  Yes  No What date did you last take the antibiotics?

## Comments on treatment

## Contacts

In the two weeks before the onset of the illness, has the case:

- had contact with a family member with a similar illness?  Yes  No *If yes give details in table below*
- had contact with a friend or work/school colleague with a similar illness?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

In the two weeks after the onset of the illness in the case

- have any family members been ill with similar symptoms?  Yes  No *If yes give details in table below*
- have any friends or work/school colleagues been ill with similar symptoms?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A questionnaire should be completed for identified ill cases

How well did the case recall the information (doctor's details, illness history and contacts)?  Very well  Well  Not well  Not at all









**Typical symptoms**

Acute gastroenteritis with fever, vomiting, nausea, abdominal pain, headache and diarrhoea.

**Incubation period**

usually 6–72 hours with an average of 12–36 hours

**Duration of illness**

Usually several days to several weeks.

NIDS No: NIDS updated: **Type of Salmonella**(if known): 

- Single case  
 Household contact of case

Case name: 

- Cluster investigation  
 Outbreak investigation

Outbreak name: **Reason referred to local government:**

- Food handler  
 Child in child care  
 Resident in institution (e.g. aged care)  
 Possible source named  
 Two or more associated cases  
 Child less than 6 months old

Date of interview: Interviewer: Person interviewed (if not the case): 

Interpreter used?

 Yes No

**PRIVACY MESSAGE:** The information you provide in this questionnaire is for the purpose of trying to prevent further cases of illness. We do this by trying to find out what is likely to have caused your illness and also by providing you with information to reduce the spread of illness to others. The data collected is kept confidential and identifying information will not be disclosed for any other purpose without your consent. You can access your information by contacting the Department of Health. A fact sheet is available ("Privacy Legislation & Notification of Infectious Diseases – Information for Patients") if you would like further information.  **Information read?**

**Case details**Surname/  
family name First name Street address Suburb Postcode Name of parent/guardian (if applicable) **Contact details**Daytime tel Evening tel Mobile tel Email Birth date Sex  Male  FemaleCountry of birth Year of arrival (if outside Australia) Language spoken **ATSI status** (tick all that apply):

- Aboriginal  
 Torres Strait Islander  
 Not indigenous  
 Not stated

Occupation 

OR

- child at home  student  
 child in child care  unemployed  
 pensioner  home duties

High risk group?  Yes  No

High risk groups are food handlers, health care workers, child care workers, children in child care, and residents of institutions (e.g. aged care).

If yes:

**Workplace/child care address and contact details:**
  
  

Date last attended before onset of illness Date returned to work/child care

## Treating doctor/hospital

Name of treating doctor

Address  Postcode

Telephone  Facsimile

Mobile tel  Email

Consent given by doctor to interview case  Yes  No Date consent provided

Did the case present to hospital?  Yes  No If yes, date presented to hospital

Was the case admitted to hospital?  Yes  No

Name of hospital  Address

Date of admission  Date of discharge/death

Hospital UR No

## Illness summary

Onset date of illness  Time of onset  am/pm Date of specimen collection

Type of specimen (*circle*) Faeces/blood/urine/other

Symptoms		Onset date of symptom	History of illness
Diarrhoea	<input type="checkbox"/> Yes: <input type="checkbox"/> watery <input type="checkbox"/> bloody Duration of diarrhoea (days) <input type="text"/> <input type="checkbox"/> No		
Nausea	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Abdominal pain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Lethargy	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other (specify)	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Total duration of illness \_\_\_\_\_ hours/days

## Treatment

Were antibiotics given to treat the illness?  Yes  No If yes, what antibiotics?

Are you still taking antibiotics?  Yes  No What date did you last take the antibiotics?

## Comments on treatment

## Contacts

In the two weeks before the onset of the illness, has the case:

- had contact with a family member with a similar illness?  Yes  No *If yes give details in table below*
- had contact with a friend or work/school colleague with a similar illness?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

In the two weeks after the onset of the illness in the case

- have any family members been ill with similar symptoms?  Yes  No *If yes give details in table below*
- have any friends or work/school colleagues been ill with similar symptoms?  Yes  No *If yes give details in table below*

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A *food and water borne* questionnaire should be completed for identified ill cases

How well did the case recall the information (doctor's details, illness history and contacts)?  Very well  Well  Not well  Not at all

## Environmental risk factors

In the two weeks prior to onset of illness, did any of the following risk factors apply?

Risk factor	Details	
<b>Travel</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Domestic <input type="checkbox"/> International  Places visited <input type="text"/> Type of accommodation <input type="text"/> Airline <input type="text"/> Flight numbers <input type="text"/> Departure date <input type="text"/> Return date <input type="text"/>
<b>Close contact with farm animals</b> (including petting zoos etc)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type <input type="text"/> Date/s <input type="text"/> Location <input type="text"/>
<b>Lives or visited a rural property</b> (e.g. farm or hobby farm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify type <input type="text"/> Date/s <input type="text"/> Location <input type="text"/>
<b>Has had contact with pets</b> (including fish and reptiles)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type <input type="text"/> Type of food <input type="text"/> Location <input type="checkbox"/> Home <input type="checkbox"/> Other      Has the pet been ill? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Drunk from a private water supply?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type <input type="text"/> Location <input type="text"/> Is water treated? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Drunk from a public water supply</b> (tap water)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Drunk bottled water?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify brand/s <input type="text"/> How often <input type="text"/>
<b>Problems with sewage disposal at home?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify problem <input type="text"/> System type <input type="text"/>
<b>Gardening – contact with potting mix or manure?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Type <input type="text"/>
<b>Participated in swimming or water sports?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Activity <input type="text"/> Location <input type="text"/> Date/s <input type="text"/>
<b>Other known risk factor</b> (e.g. occupational exposure)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify <input type="text"/>

How well did the case recall their environmental exposures?     Very well     Well     Not well     Not at all

## Food history

**Three day food history:** If a detailed three-day food history cannot be recalled, request information on what is usually eaten at each meal. Collect as much detail as possible for each meal (e.g. for a salad sandwich list **all** ingredients; for a meal cooked at home list **everything** eaten) and the number of people that shared each meal.

<b>Date of onset of illness</b>	<input style="width: 90%;" type="text"/>	Day	<input style="width: 95%;" type="text"/>	Time of onset	<input style="width: 90%;" type="text"/> am/pm
Breakfast	Brand and where purchased/eaten				
Lunch	Brand and where purchased/eaten				
Dinner	Brand and where purchased/eaten				
Other snacks and drinks	Brand and where purchased/eaten				
<b>Day 1</b> (1 day before onset)		Day	<input style="width: 95%;" type="text"/>	Date	<input style="width: 90%;" type="text"/>
Breakfast	Brand and where purchased/eaten				
Lunch	Brand and where purchased/eaten				
Dinner	Brand and where purchased/eaten				
Other snacks and drinks	Brand and where purchased/eaten				
<b>Day 2</b> (2 days before onset)		Day	<input style="width: 95%;" type="text"/>	Date	<input style="width: 90%;" type="text"/>
Breakfast	Brand and where purchased/eaten				
Lunch	Brand and where purchased/eaten				
Dinner	Brand and where purchased/eaten				
Other snacks and drinks	Brand and where purchased/eaten				
<b>Day 3</b> (3 days before onset)		Day	<input style="width: 95%;" type="text"/>	Date	<input style="width: 90%;" type="text"/>
Breakfast	Brand and where purchased/eaten				
Lunch	Brand and where purchased/eaten				
Dinner	Brand and where purchased/eaten				
Other snacks and drinks	Brand and where purchased/eaten				

Has the case tried any new or different foods recently?  Yes  No If yes, specify

Has the case been on any specific diets lately?  Yes  No If yes, specify

**In the 2 weeks prior to illness did the case eat or buy food from:**

	Name and address details of premises	What was eaten?	Date/s
<b>Cafes or restaurants</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Takeaway outlets</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Parties or functions with family or friends</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Festivals or commercial public gatherings</b> (e.g. fetes, club social events, markets, Moomba etc.) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Continental deli or specialty grocer</b> (e.g. Asian supermarket) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
<b>Farms or growers</b> (farm gate sales or consumption of unprocessed products) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			

Were any other attendees at these meals/functions ill with gastro symptoms?  Yes  No  Unknown

If yes, provide details in the table below.

Name	Relationship	Address and phone	Occupation/childcare/school	Onset date

**Note:** A food and water borne questionnaire should be completed for identified ill cases

How well did the case recall their food history?  Very well  Well  Not well  Not at all

## Comments/conclusions

Food samples obtained for investigation?  Yes  No

Type of food	Date collected	Result of analysis

What does the case suspect was the cause of their illness?

Probable source of illness as assessed by the interviewer:

How was the reason for referral to local government addressed?

### Comments


## Education

Hygiene and preventing transmission of *Salmonella* discussed?

Yes  No

Was the case provided with educational material (brochure or link to IDEAS website)?

Yes  No

If yes, date sent/provided

Privacy information requested by case?

Yes  No

## Exclusions

Is the case a child in care, resident of an institution or in a high risk occupation (food handler or health care worker)?

Yes → Continue below

No → Go to signature

<input type="checkbox"/> Child in child care	School/child care exclusion is/was required? Exclusion discussed with parent/guardian?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>Exclusion from school or child care is required until diarrhoea has ceased.</i>
<input type="checkbox"/> Child care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Food handler	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>All food handlers with diarrhoea are to be excluded from work until diarrhoea has ceased.</i>
<input type="checkbox"/> Health care worker	Work exclusion is/was required? Exclusion discussed with case?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be excluded from work until diarrhoea has ceased</i>
<input type="checkbox"/> Resident of a care facility (e.g. aged care facility)	Isolation is/was required? Isolation discussed with primary carer?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable	<i>It is recommended that the case be isolated from well residents (as far as practicable) until diarrhoea has ceased.</i>

## Signature

Name of interviewer (please print clearly)

Signature

Date

How long did this questionnaire take to complete?





# Appendix 3

Exclusions

## Exclusion guidelines for food handlers, health care workers and childcare workers

Gastrointestinal illness/pathogen	Exclusion period advised
Cholera, <i>Shigella</i> , STEC/VTEC	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.
Typhoid and Paratyphoid	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.
Other bacterial gastroenteritis (including <i>Campylobacter</i> , <i>Salmonella</i> , <i>Staphylococcus</i> , <i>Clostridium</i> , <i>Helicobacter</i> , <i>Vibrio</i> , <i>Listeria</i> , <i>Entamoeba</i> ). <i>Giardia</i> or <i>Cryptosporidium</i>	Until diarrhoea has ceased. Food handlers, health care workers and childcare workers to be counselled on personal hygiene before returning to work.
Hepatitis A or E	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.
Other viral gastroenteritis (including rotavirus and norovirus), or when the pathogen is unknown	Until 48 hours after symptoms have ceased.



# Appendix 4

Outbreak notification – information  
collection forms

- Aged, health and residential care facilities
- Child care centres
- Camps

# Outbreak notification – information collection form

## Care facility

CALL TAKEN BY	
Date:	Time:
Person:	
Position:	

### OUTBREAK NAME & NUMBER (For DH use only)

Name:
Number:

PERSON NOTIFYING OUTBREAK			
Name			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		

FACILITY			
Name			
Address			
Contact person			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		
Alternative contact	Name		
	Position		
	Tel:	Fax:	Mob:
	Email:		

### ILLNESS DETAILS

General symptoms:  Vomiting  Diarrhoea  Abdominal pain  Nausea  Fever

Duration of symptoms: \_\_\_\_\_ hrs/days

Ill residents/patients: No. ill: \_\_\_\_\_ out of (total): \_\_\_\_\_

Ill staff: No. ill: \_\_\_\_\_ out of (total): \_\_\_\_\_

Onsets	Date	No. of ill residents/patients	No. of ill staff
Day 1			
Day 2			
Day 3			
Day 4			
Day 5			

### ACCOMMODATION DETAILS

No. wards/wings/levels/buildings:	No. affected:
Accommodation details	Bedrooms: <input type="checkbox"/> Single <input type="checkbox"/> Twin <input type="checkbox"/> Shared <input type="checkbox"/> Other
	Bathrooms: <input type="checkbox"/> Ensuite <input type="checkbox"/> Shared <input type="checkbox"/> Other
Type of care	<input type="checkbox"/> Hospital <input type="checkbox"/> Rehab <input type="checkbox"/> Mental Health <input type="checkbox"/> Disability <input type="checkbox"/> SRS <input type="checkbox"/> SSA (CRU)
	<input type="checkbox"/> Aged care (please specify) _____
	<input type="checkbox"/> Nursing home <input type="checkbox"/> Hostel
	<input type="checkbox"/> High care <input type="checkbox"/> Low care
	<input type="checkbox"/> Dementia <input type="checkbox"/> Ageing in place <input type="checkbox"/> Independent living



# Outbreak notification – information collection form

## Child care facility

CALL TAKEN BY	
Date:	Time:
Person:	
Position:	

### OUTBREAK NAME & NUMBER (For DH use only)

Name:
Number:

PERSON NOTIFYING OUTBREAK			
Name			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		

CAMP DETAILS			
Name			
Address			
Contact person			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		
Alternative contact	Name:		
	Position:		
	Tel:	Fax:	Mob:
	Email:		

### ILLNESS DETAILS

General symptoms:  Vomiting  Diarrhoea  Abdominal pain  Nausea  Fever      Duration of symptoms: \_\_\_\_\_ hrs/days

Ill children: No. ill: \_\_\_\_\_ out of (total): \_\_\_\_\_      Ill staff: No. ill: \_\_\_\_\_ out of (total): \_\_\_\_\_

Onsets	Date	No. of ill children/attendees	No. of ill staff attendees
Day 1			
Day 2			
Day 3			
Day 4			
Day 5			

No. rooms/groups:	No. affected?:			
	Room/group number and name	Children in nappies	Children with assisted feeding	Days attending
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	





# Outbreak notification – information collection form

## Camp

CALL TAKEN BY		OUTBREAK NAME & NUMBER (For DH use only)	
Date:	Time:	Name:	
Person:		Number:	
Position:			

PERSON NOTIFYING OUTBREAK			
Name			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		

CAMP DETAILS			
Name			
Address			
Contact person			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		
Alternative contact	Name:		
	Position:		
	Tel:	Fax:	Mob:
	Email:		

SCHOOL/GROUP ATTENDING CAMP			
Name			
Address			
Contact person			
Position			
Contact details	Tel:	Fax:	Mob:
	Email:		

ILLNESS DETAILS			
General symptoms:		Duration of symptoms:	
<input type="checkbox"/> Vomiting <input type="checkbox"/> Diarrhoea <input type="checkbox"/> Abdominal pain <input type="checkbox"/> Nausea <input type="checkbox"/> Fever		<input type="text"/> hrs/days	
Ill attendees (students):	No. ill: ___ out of (total): ___	Ill attendees (staff):	No. ill: ___ out of (total): ___
		Ill camp staff:	No. ill: ___ out of (total): ___

Other details: e.g. illness prior to camp, illness on bus (please include bus company details if illness occurred on bus).

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ILLNESS DETAILS (continued)				
Onsets	Date	No. of ill children/attendees	No. of ill staff attendees	No. of ill camp staff
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
<b>Are camp attendees separated into groups?</b> (Please describe including number of groups)				
<b>Was there any illness in previous groups attending the camp?</b> (If yes, please specify the name and contact details of previous camp attendees)				

CAMP DETAILS	
<b>Describe the accommodation</b>	Bedrooms: <input type="checkbox"/> Dormitory style accommodation: ____ beds per room <input type="checkbox"/> Cabins: ____ beds per room <input type="checkbox"/> Single rooms <input type="checkbox"/> Twin rooms <input type="checkbox"/> Shared rooms <input type="checkbox"/> Other (pls specify) _____ Bathrooms: <input type="checkbox"/> Ensuite <input type="checkbox"/> Shared <input type="checkbox"/> Other
<b>Water supply</b>	Kitchen: <input type="checkbox"/> Mains/reticulated <input type="checkbox"/> Private Is it treated? <input type="checkbox"/> Yes <input type="checkbox"/> No Bathrooms: <input type="checkbox"/> Mains/reticulated <input type="checkbox"/> Private Is it treated? <input type="checkbox"/> Yes <input type="checkbox"/> No Other (e.g outside taps): <input type="checkbox"/> Mains/reticulated <input type="checkbox"/> Private Is it treated? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Describe any recent activities undertaken by camp attendees</b>	
_____ _____ _____	

MEALS		
<b>Are meals prepared in an onsite kitchen?</b> (If no, please specify below the name and contact details of caterer, if external to camp facility)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Are other camps/premises catered for?</b>	<input type="checkbox"/> Yes, (please specify):	<input type="checkbox"/> No
<b>Do staff consume meals from the kitchen?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Do camp attendees assist in the kitchen?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Where are the meals served?</b> (e.g. communal dining room)		
<b>Were any meals served off site?</b> (e.g. off site expedition, please describe)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
_____ _____ _____ _____ _____		





# Appendix 5

Contacts

## Contact details

	Telephone	Fax	After hours	Email
<b>Department of Human Services, 50 Lonsdale St Melbourne</b>				
Communicable Disease Prevention and Control Unit	1300 651 160	1300 651 170	1300 651 160	infectious.diseases@health.vic.gov.au cdeho@health.vic.gov.au
Food Safety & Regulatory Activities Unit	1300 364 352	9096 9166	1300 790 733	foodssafety@health.vic.gov.au
Environmental Health Unit	1300 761 874	1300 768 874	1300 761 874	environmental.healthunit@health.vic.gov.au water@health.vic.gov.au radiationsafety@health.vic.gov.au lrmp@health.vic.gov.au
After hours Medical Officer			1300 790 733	
<b>Regional Environmental Health Officers</b>			1300 790 733	
Barwon South West	5226 4582 0429 396 489	5226 4610		bsw.eho@health.vic.gov.au
Grampians	5333 6057 0419 449 785	5333 6093		grampians.ehealth@health.vic.gov.au
Loddon Mallee	5434 5538 0417 579 635	5434 5592		eho.loddon@health.vic.gov.au
Hume	5722 0654 0419 881 948	5722 0550		eho.hume@health.vic.gov.au
Gippsland	5177 2557 0417 524 996	5177 2570		eho.gippsland@health.vic.gov.au
North and West Metro	9412 5408 0411 236 270 9412 2757 0411 017 442	9412 2630		northandwest.publichealth@health.vic.gov.au
Eastern Metro	9843 6120 0419 107 447	9843 6225		eho.easternregion@health.vic.gov.au
Southern Metro	8710 2834 0419 102 571	8710 2860		smr.publichealth@health.vic.gov.au
<b>Public Health Laboratories</b>				
Microbiological Diagnostic Unit (MDU)	8344 5701	8344 7833	1300 790 733	publichealth.lab@mdu.unimelb.edu.au
Victorian Infectious Diseases Reference Laboratory (VIDRL)	9342 2600	9342 2660	9342 2600	vidrl@mh.org.au



# Appendix 6

Chlorine concentrations



## 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)

Add following amounts of Milton to the water to give the required concentration			
Volume of warm water to which chlorine is added	100ppm	200ppm	1000ppm
5 litres	50 ml	100 ml	500 ml
10 litres	100 ml	200 ml	1000 ml
50 litres	500 ml	1000 ml	5000 ml

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

Add following amounts of bleach to the water to give the required concentration			
Volume of warm water to which chlorine is added	100ppm	200ppm	1000ppm
5 litres	12.5 ml	25 ml	125 ml
10 litres	25 ml	50 ml	250 ml
50 litres	125 ml	250 ml	1250 ml

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

Add following amounts of liquid pool chlorine to the water to give the required concentration			
Volume of warm water to which chlorine is added	100ppm	200ppm	1000ppm
5 litres	5 ml	10 ml	50 ml
10 litres	10 ml	20 ml	100 ml
50 litres	50 ml	100 ml	500 ml

#### 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.

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

Add following amounts of granular chlorine to the water to give the required concentration			
Volume of warm water to which chlorine is added	100ppm	200ppm	1000ppm
5 litres	0.8 g	1.5 g	8 g
10 litres	1.5 g	3 g	15 g
50 litres	8 g	15 g	77 g

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

5ml = 1 teaspoon. A standard bucket holds approximately 9-10 litres



# Appendix 7

Food history report form

# Appendix 7

Food history report form

# Food history support form

Outbreak name

Date

Name of person completing this form

Tel

Case name	Vitamised meals Y/N	Soft meals Y/N	Assistance to eat Y/N (If yes, who assists and type of assistance)	Where most meals are eaten	Any known foods disliked	Any special diets Y/N
<i>Joe Bloggs</i>	<i>Y</i>	<i>N</i>	<i>Y - Mary (carer) full assisted feeding</i>	<i>Dining room</i>	<i>Red meat</i>	<i>N</i>



# Appendix 8

Outbreak management checklist

# Outbreak management checklist

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.

	Date	Signature of person responsible
<b>Outbreak detected</b> – more than expected numbers of cases with gastro symptoms that cannot be explained by medication or other medical conditions	___/___/___	
<b>Name of outbreak coordinator:</b>		
<b>Outbreak notified</b> – notify DH	___/___/___	

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

PROVIDE DH and/or COUNCIL WITH:	Date provided or n/a	Signature of person responsible
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:	Person responsible
Outbreak cleaning procedures conducted regularly	
Update case lists regularly and forward to council/DH	
Continued communication with all staff	
Other:	





# Appendix 9

Outbreak case lists

- Aged, health and residential care facilities
- Child care centres
- Camps

# Outbreak case list

## Care facility – ill residents/patients/staff

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**

<b>Fax to:</b> DH Officer: <hr/> Communicable Disease Prevention & Control Unit, Department of Health <b>Fax: 1300 651 170</b>	<b>and:</b> <span style="float: right;">Please print clearly</span> Council EHO: <hr/> Council: <hr/> <b>Fax:</b>
---	--

### Fax from

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

### Dates case list faxed

	Comments:	Faxed by:	No. pages faxed (incl coversheet):
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			

Premises/outbreak name:

Resident/patient/staff name [and] Room/ward/position worked	Case		Birth date			Sex		Symptoms started			Symptoms				Symptoms ended			Faecal specimen collected			Hospitalised			Died on																								
	circle	staff	date	day	month	year	circle	male	female	date	day	month	year	time	circle	vomiting	diarrhoea	fever	nausea	abdominal pain	date	day	month	year	circle	no	yes	date	day	month	year	circle	no	yes	date	day	month	year										
(example) James Brown 24 West	(p)	s	22/1/1933				(m)	f	22/01/2009	20:15					(v)	(d)	(f)	(n)	(a)					(n)	(y)								(y)						25/1/09									
(1)	(p)	s					(m)	f																(n)	(y)																							
(2)	(p)	s					(m)	f																(n)	(y)																							
(3)	(p)	s					(m)	f																(n)	(y)																							
(4)	(p)	s					(m)	f																(n)	(y)																							
(5)	(p)	s					(m)	f																(n)	(y)																							
(6)	(p)	s					(m)	f																(n)	(y)																							
(7)	(p)	s					(m)	f																(n)	(y)																							
(8)	(p)	s					(m)	f																(n)	(y)																							
(9)	(p)	s					(m)	f																(n)	(y)																							
(10)	(p)	s					(m)	f																(n)	(y)																							

# Outbreak case list Child care facility – ill children/staff

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 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).**

### Fax to:

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

### and:

Please print clearly

Council EHO: \_\_\_\_\_  
Council: \_\_\_\_\_  
**Fax:** \_\_\_\_\_

### Fax from

Premises/outbreak name: \_\_\_\_\_

Contact person: \_\_\_\_\_ Position: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

### Dates case list faxed

	Comments:	Faxed by:	No. pages faxed (incl coversheet):
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			

Premises/outbreak name:

Child/staff name [and] Room + parent contact/position worked <i>(example) James Brown Room.2 - Mary Brown,0432 123 456</i> <i>(example) Sue Smith Room.2 - teacher</i>	Case		Birth date			Sex		Symptoms started			Symptoms				Symptoms ended			Faecal specimen collected			Hospitalised																
	child	staff	day	month	year	circle	male	female	date	time	vomiting	diarrhoea	fever	nausea	abdominal pain	day	month	year	time	no	yes	circle	no	yes	circle	day	month	year									
	<input checked="" type="radio"/>	<input type="radio"/>	03	03	2006	<input checked="" type="radio"/>	<input type="radio"/>	22	01	2009	20:15	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	23	01	2009	20:15	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	23	01	2009	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	24	01	2009
(1)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
(2)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
(3)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
(4)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
(5)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
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(7)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
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(9)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
(10)	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			

# Outbreak case list

## Camp facility – ill attendees/staff

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

- Update the information on the case list (making a notation of any hospitalisations) and adding new cases where applicable. There is no need to rewrite the whole list each time it is updated.
- 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).
- Fax this coversheet and case list to your council EHO and DH twice per week (or as requested).**

<p><b>Fax to:</b></p> <p>DH Officer: _____</p> <p>Communicable Disease Prevention &amp; Control Unit, Department of Health</p> <p><b>Fax: 1300 651 170</b></p>	<p><b>and:</b> <span style="float: right;">Please print clearly</span></p> <p>Council EHO: _____</p> <p>Council: _____</p> <p><b>Fax:</b> _____</p>
--	---

### Fax from

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

### Dates case list faxed

	Comments:	Faxed by:	No. pages faxed (incl coversheet):
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			
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<b>Date:</b> <input type="checkbox"/> New cases added <input type="checkbox"/> Existing cases updated <input type="checkbox"/> No new cases <input type="checkbox"/> Final list			

Premises/school name: \_\_\_\_\_

Camp attendee/camp staff name [and] Parent contact/position worked	Case			Birth date			Sex		Symptoms started				Symptoms					Symptoms ended			Faecal specimen collected								
	student	teacher	attende (other)	camp staff	day	month	year	male	female	date	hour	minute	time	circle all that apply	diarrhoea	vomiting	fever	nausea	abdominal pain	day	month	year	no	yes	circle	day	month	year	
(example) <i>Jamex Brown</i> Mum: <i>Mary Brown 0432 123 456</i>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4/06/1998			<input checked="" type="radio"/>	f	22/01/2009	20:15			<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>				n	<input checked="" type="radio"/>		23/01/2009			
(1) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(2) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(3) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(4) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(5) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(6) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
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(8) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(9) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					
(10) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				m	f					<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				n	<input type="radio"/>					



# Appendix 10

Instructions for the collection of faeces

## 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 patient's 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 two 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
- Swab and transport medium container (if required).



# Appendix 11

Gastro outbreak onsite assessment (GOOA)  
and explanatory notes

# Gastro outbreak onsite assessment (GOOA)

This document should be forwarded to the REHO within two working days of the time the outbreak is notified to council. Please read the explanatory notes prior to completing.

## Section 1: All outbreaks

### Outbreak identification

Outbreak name (as advised by DH)	<input type="text"/>		
Outbreak number (as advised by DH)	<input type="text"/>		
Date outbreak reported to council	<input type="text"/>	Date GOOA completed	<input type="text"/>
Name of investigating EHO(s) (council)	<input type="text"/>		
EHO contact details: Office	<input type="text"/>	Mobile	<input type="text"/>
Fax	<input type="text"/>	Email	<input type="text"/>

### Location/premises

Name of premises/facility/setting	<input type="text"/>		
Address	<input type="text"/>		
Date of site visit	<input type="text"/>	Time of site visit	<input type="text"/>
Is there another visit planned?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Name of EHO(s) attending	<input type="text"/>		

### Outbreak control measures

**General**

Is the EHO satisfied with general cleaning and hygiene practices conducted in accommodation/common/public areas and kitchen?  Yes  No

Is the EHO satisfied with general food handling practices in the kitchen?  Yes  No

If **no**, to either of the above questions – please specify reason or provide comments:

--

**Cleaning**

Was the clean up supervised?  Yes  No

Is the EHO satisfied that a clean up was undertaken according to the guidelines?  Yes  No

Name of EHO supervising/verifying clean up:

Was a chlorine-based sanitiser used?  Yes  No

Have food contact surfaces been sanitised using 100/200ppm?  Yes  No

Have all other surfaces been sanitised using 1000ppm?  Yes  No

**Infection control**

Are staff using soap and water for hand washing?  Yes  No

**Note: Thorough washing with soap and running water reduces the number of viruses on the hands to a safer level**

Have any issues been identified with other outbreak control measures as specified in the gastro guidelines?

(e.g. isolation of residents, staff exclusions/movements).  Yes  No If yes, please specify:

Empty box for specifying outbreak control issues.

**Demographics**

Form for demographic data: Total number of people at risk of exposure, Number of clients (residents/patients/patrons/children), Number of kitchen/food staff (food handlers/waiters/dishwashers), Number of other staff (carers/nurses/cleaning staff etc.).

Form for case list information: Has a case list, booking list or attendance list been obtained and attached?  Yes  No. If yes, indicate which type of list has been obtained:  Case list (Facility to fax on-going case list to council and CDPCU),  Booking/reservation (e.g. people eating at a restaurant),  Guest/attendance list (e.g. people who attended a party).

Number of deaths (if applicable) [ ]

**Faecal specimen collection**

Form for faecal specimen collection: Have faecal specimens been collected?  Yes. Number collected? [ ]. Have they been sent to MDU?  Yes ... If yes, date sent [ ].  No ... If no, name of pathology service [ ].  No. Has collection been arranged?  Yes,  No ... if no, specify reason/comment [ ].

**Note: Faecal specimens for outbreak investigations should be sent to MDU**

**General comments**

Have any other issues been identified?  Yes  No If yes please specify: [ ]

General comments/further actions: [ ]

**If you have any additional information or comments relating to this outbreak please attach to this report.**

## Section 2: Unknown and suspected food/water borne outbreaks

### Food safety

Classes:  1  2  3  4

FSP:  standard  non-standard  N/A

Are all food processes (hazards) undertaken at the premises documented in the FSP?

Yes  No  N/A

Were any deficiencies identified during the food safety assessment?

Yes  No

Are food safety records complete and accurate?

Yes  No  N/A

If any deficiencies identified please state below or attach appropriate note. (Deficiencies include issues with temperature control, cross-contamination, cleaning and sanitising, personal hygiene, staff illness, FSP not on site, inadequate records etc).

**Note: Structural items that do not impact on food safety are not to be included in this report.**


Were any foods discarded?

Yes  No  Not required

Does the premises serve texture modified foods? e.g. vitamised, pureed

Yes  No

If yes, is this step described in the FSP and followed?

Yes  No

Water supply is:

mains  tank  bore  other (specify)

--

*If other than mains water supply, please attach details of supply and any treatment conducted*

### Food history details

Has food history information been obtained and attached?

Yes  No  Not applicable

*Please include all foods served including any specials not on the regular menu, pre/post-dinner nibbles and drinks supplied.*

### Food process details

Have details of food process been obtained?

Yes  No  Not applicable

*If yes, please attach a copy of the process details to this report.*

### Food/water samples

Food/water samples collected and sent to MDU?

Yes (Complete table overleaf)

No

If **no**, please specify reason samples were not collected:


If **yes**, please specify the name of the EHO who collected food samples:

--





## Gastro outbreak onsite assessment – explanatory notes

These notes should assist the investigating EHO(s) to collect the information needed to thoroughly investigate an outbreak. Please note that not all questions/sections are listed in this document as some are relatively straight forward and do not require further explanation.

### Section 1

#### Outbreak control measures

- *Is the EHO satisfied with general cleaning and hygiene practices conducted in accommodation/common/public areas and kitchen?*
- *Is the EHO satisfied with general food handling practices in the kitchen?*

The above questions aim to establish if there are any issues with the premises/facility in relation to cleaning and/or food handling practices which may result in illness. This may be based on past history or issues identified during the site visit.

- *Was the clean-up undertaken as per the guidelines?*

Clean-up during an outbreak should be in accordance with Section 5 of the guidelines.

- *Name of EHO supervising/verifying clean up*

An EHO is required to supervise a clean up so that he or she is satisfied that it is undertaken as per the guidelines. Sometimes a clean up may have already commenced and/or it may be not possible to supervise the entire clean up. In this instance the EHO is to verify that the clean up was/is being undertaken as per the guidelines. This may involve asking the cleaning staff how the clean up was undertaken, what areas have been cleaned, what sanitiser is being used, querying the dilution factors with the cleaning staff and making an assessment if, in the EHO's opinion, the clean up is being undertaken effectively.

Please note that for an outbreak where transmission is unknown or suspected food-/water borne the EHO will be required to supervise the clean up. An EHO may not always be able to be present for the entire clean up. So it may be necessary to return and ensure all areas have been cleaned appropriately.

- *Are staff using soap and water for hand washing?*

Effective hand washing is the most important measure in preventing the spread of infection, and should be practised by all staff at all times. Staff may generally use alcohol wipes or antibacterial gels, 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. EHOs should explain this and ensure that hand washing is conducted.

- *Have any issues been identified with other outbreak control measures as specified in the gastro guidelines?*

Section 5 of the guidelines have outlined a number of outbreak control measures. If any of these or any other issues have been identified they should be listed here.

#### Demographics

- *Total number of people at risk of exposure*

This information is for statistical reporting and also to ascertain the number of people that could possibly be affected. It is also an indicator of possible resources that may be required to investigate the incident.

- *Has a case list, booking list or attendance list been obtained and attached*

The case list should be provided as per the recommended template. It is important that it is updated regularly by the facility.

A booking list, is a list of bookings from a restaurant for a particular meal day or days. The name of the person making the reservation/ booking, and a telephone number should be provided. A photocopy of the pages of a reservations book is acceptable.

An attendance list, is a list of people who may have been exposed to illness, and includes a guest/attendance list from a wedding, a conference or function, a list of names of people who ate a specific meal together before becoming ill, or a list of children and teachers at a school camp. All attendees (ill and not ill) should be listed with their telephone contact details.

### Section 2

#### Food safety

- *Are all food processes undertaken at the premises documented in the FSP?*
- *Were any deficiencies identified during the food safety assessment?*
- *Are food safety records complete and accurate?*

The premises should have a document that accurately describes and records the food processes undertaken at the premises. The EHO should be satisfied that this document is adequate for the premises. The EHO should also undertake a food safety assessment of the kitchen to identify any food safety deficiencies that may have contributed to the outbreak. These should not include structural items that do not impact on food safety. A missing or not operational wash hand basin would be considered a food safety issue as this demonstrates that staff are not able to maintain good personal hygiene. If the premises is not keeping adequate records this would be considered a deficiency as the proprietor can not verify their procedures.

- *Does the premises serve texture modified foods? e.g. vitamised, pureed*

It is important to know whether a premises prepares texture modified foods as this involves an extra process step and may place the food into a higher risk category. Detailed information should be collected on how these foods are handled.

- *Were any foods discarded?*

In certain circumstances it is important to throw out high risk foods and opened packages. Consult with CDPCU or the REHO if this is required.

- *Water supply*

If the water supply is anything other than mains water, please attach additional details of the supply, and include details of any treatment of the water (e.g. how treated, what chemicals used, where treated, how often, and when last treated)

#### Food/water samples

- *Food/water samples collected and sent to MDU?*

Sampling during an outbreak should be in accordance with Section 6 of the guidelines.

#### Food history details

- *Has food history information been obtained and attached?*

This may be the menu for a nursing home covering all foods served during at least one week before the first person became ill, or the menu for a restaurant (including any specials that may not appear on the regular menu pre/post-dinner nibbles and drinks supplied) or a list of foods served at a function, event or party. This will also include food that a group may have brought to function e.g. cake/sweets.

- *Has the 3 day food history for all people involved in the outbreak been attached?*

It is important to record what each person actually consumed, but if the person cannot remember then this should be noted. In an aged care facility for example, the menu has options and some residents may consume texture modified foods (vitamised/soft option).

#### Food process details

- *If details of specific food processes have been requested by CDPCU*

If specific food processes have been requested it is critical that the information collected is accurate and comprehensive. The EHO will be required to ask the person preparing the meal for the date in question to step through how the meal was prepared. This will commence from a list of ingredients, how they were stored, followed by any preparation steps and finally when the food was served. This information should be cross referenced with any documents on site and food safety records required to be kept. If the premises uses a recipe (standard operating procedure) for the meal in question then the information provided by the facility should be cross referenced with the recipe. Refer to the attached food process example.

## Food process example

### Menu item: *Roast beef and vegetables*

#### Ingredients:

- Beef eye of silverside – four 1.5kg pieces
- Potatoes – one 10kg bag
- Pumpkin – two 5kg bags
- Gravy powder – 12 tablespoons (1.5 litres of water)
- Salt, pepper, olive oil

*Note: Include brand names, batch numbers and/or use by dates where appropriate.*

Process step – date and time	Records
<b>Receive ingredients 14/01/2009 @ 10:00am</b> Supplier: Excellent Food Services Delivered by: PC Foods	Beef 4°C Records updated, vegetables and dry goods OK
<b>Storage of ingredients</b> Beef stored in cool room Vegetables kept in dry store	Cool room temps 3.5°C – 5.0°C Records updated
<b>Cooking of beef 15/01 @ 1:00pm–2:30pm</b> Placed in 180°C oven and cooked for 1.5 hours.	Temp probe 85°C Records updated
<b>Prep of beef post cooking 15/01 @ 2:30pm–3:00pm</b> Removed from oven left to stand at room temperature for 15mins. Beef was cut into slices and placed in shallow trays and covered with plastic wrap. Strained 500ml of meat juice, drain and place in jar	Not applicable
<b>Cooling of beef and meat juice 15/01 @ 3:00m–9:00pm</b> Sliced beef and meat juice was placed in cool room. Temperatures checked at 5pm (18°C) and again at 9pm (4.5°C). <i>Note: 2-4 hour rule was achieved</i>	Temp probe @2hrs (18°C) and @4hrs (4.5°C) Records updated
<b>Preparation of fresh vegies 16/01 @ 10:30am–11:00am</b> Wash and cut vegetables, place in oiled baking dish, add salt and pepper	Not applicable
<b>Baking of vegetables 16/01 @ 11:00am–12noon</b> Roast vegetables in 180°C moderate oven until golden brown	Not applicable
<b>Reheating of slices beef 16/01 @ 11:00am–12noon</b> Sliced beef was removed from cool room and placed in steamer oven set at 160°C and rapidly reheated. Temperature checked within 15 minutes (80°C)	Temp probe 80°C. Records updated
<b>Preparation of gravy 16/01 @ 11:45am–12noon</b> Mix gravy powder with boiling water and meat juice. <i>(Note: Meat juice rapidly brought to the boil)</i>	Not applicable
<b>Display of normal meals 16/01 @ 12noon–12:45pm</b> Hot hold, beef, vegetables and gravy in Bain Marie until individually served to residents	Temp probe 62°C. Records updated
<b>Process for vitamised meals 16/01 @ 12noon–12:25pm</b> <b>Vitamising 12:00–12:15</b> Required amounts of beef and vegetables removed from oven and vitamised separately  <b>Reheating 12:15–12:25pm</b> Vitamised beef, vegetables reheated in microwave oven  <b>Display of vitamised meals 12:25–12:45pm</b> Hot hold vitamised beef and vegetables in Bain Marie until individually served to residents	Not applicable  Temp probe 70°C. Records updated  Temps records as per display for normal meals
<b>Service of meals 12noon–12:45pm</b> Meals served to residents as required. Unit 1 served (12noon–12:15pm) Unit 2 served (12:15–12:30pm) Unit 3 served (vitamised meals) (12:30–12:45pm)	Not applicable

# Appendix 12

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 parents**

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

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

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





## **Attention staff**

Our centre 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 staff and visitors**

Our camp currently has visitors 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 and visitors**

This water may not be safe to drink.

Please do not drink this water  
until further notice.

Thank you for your cooperation.





## **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.





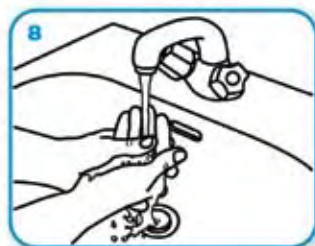


## Attention

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.

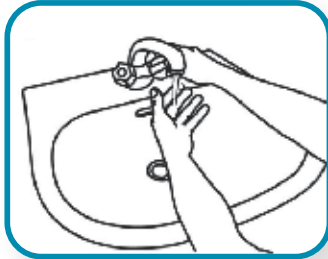




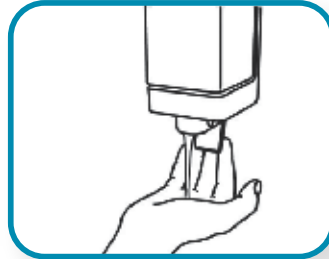
# How to wash and dry hands with liquid soap and water



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



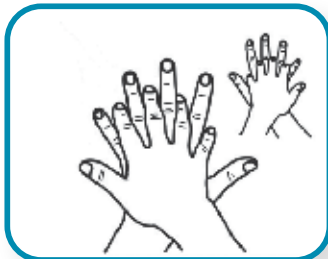
Wet hands with water



apply enough soap to all hand surfaces



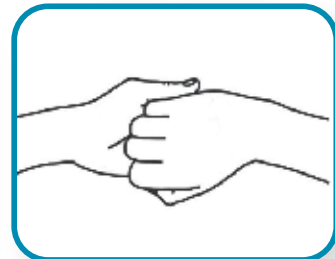
rub hands palm to palm



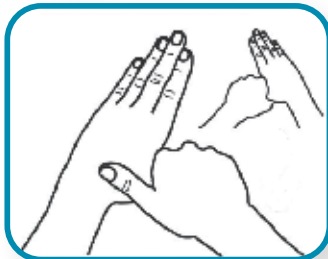
right palm over left dorsum with interlaced fingers and vice versa



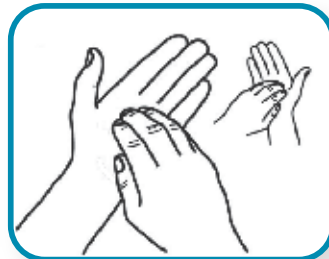
palm to palm with fingers interlaced



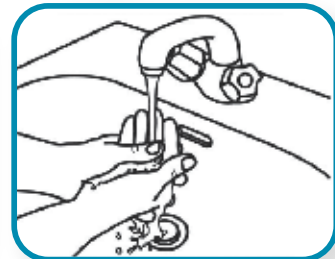
backs of fingers to opposing palms with fingers interlocked



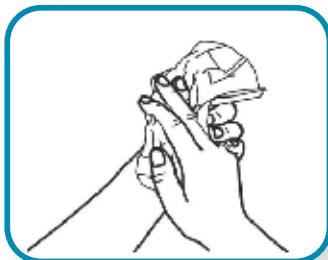
rotational rubbing of left thumb clasped in right palm and vice versa



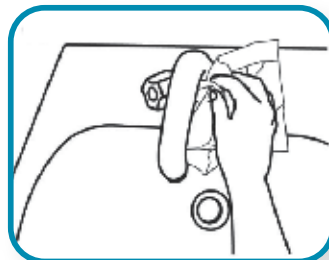
rotational rubbing, backwards and forwards with clasped fingers of right hand in palm and vice versa



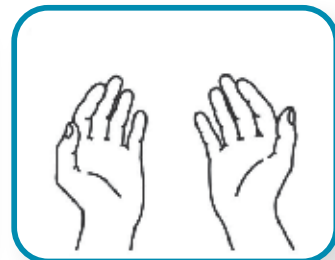
rinse hands with water



dry thoroughly with single use towel



use towel to turn off faucet



...and your hands are safe.