FOODBORNE ILLNESS OUTBREAK INVESTIGATION & REPORTING - SCH

POLICY©

DOCUMENT SUMMARY/KEY POINTS

- Foodborne illness is acquired by ingestion of contaminated food or drink (by definition). Secondary cases can occur through close contact with infectious persons with transmission generally occurring via the faecal oral route.
- An outbreak of foodborne illness should be suspected when two or more inpatients or others who have consumed the same food, experience unexplained gastrointestinal symptoms (nausea, vomiting or diarrhoea) at about the same time. Individuals need not necessarily be from the same ward.
- When foodborne illness is suspected in patients, staff or others, the registrar of the team caring for the patient shall inform the Chief Resident Medical Officer (CRMO) who will contact the Public Health Unit urgently (within 24 hours of diagnosis[1]).
- Nursing staff from the ward shall inform the Infection Prevention and Control Nurse and the Food Services Manager. After hours, After Hours Nurse Manager shall be contacted
- The Food Services Manager will liaise with the NSW Food Authority to determine any requirements of the Authority for investigation and management of the potential foodborne illness outbreak.

CHANGE SUMMARY

- Due for mandatory review. No change in practice.
- Additional information included; role of the NSW Food Authority highlighted.
- Replaces SCH Infection Control Policy: “Food Poisoning- SCH”

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1st November 2013	**Review Period:** 3 years
Team Leader:	Staff Specialist	**Area/Dept**: Infectious Diseases - SCH

READ ACKNOWLEDGEMENT

- All staff must read and acknowledge they understand the content of this document.
- Local managers will maintain records of read receipts for subsequent compliance and other audits.

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Foodborne Illness

Foodborne illness (previously food poisoning) is transmitted by ingestion of contaminated food or drink (by definition). Secondary cases can occur through close contact with infected persons with transmission generally occurring via the faecal oral route. It is a very common cause of illness, with an estimated 5.4 million cases per year in Australia.[2]

Three main types of agents may cause illness from food:

- bacteria e.g., salmonella, Campylobacter and Listeria
- viruses e.g., norovirus and hepatitis A
- toxins in food (either naturally occurring or introduced to a food, e.g., Staphylococcus aureus or Bacillus cereus).

What are the symptoms?

Symptoms will vary, depending on the cause. They may include:

- diarrhoea
- vomiting
- nausea
- abdominal pain
- fever

Other symptoms may include:

- headache
- jaundice
- numbness

Symptoms can take between a few hours to a few days, or even longer, (see table below) to develop and usually last for a few days, sometimes longer.

Clinical manifestations [1]

Agent	Incubation period	Clinical Features
Bacillus cereus toxin	1 - 6 hours (vomiting) 6 - 24 hours (diarrhoea)	Malaise, vomiting and/or diarrhoea
Campylobacter	1 - 10 days	Fever, nausea, abdominal cramps and diarrhoea (sometimes bloody)
Clostridium perfringens toxin	6 - 24 hours	Abdominal cramps, diarrhoea and nausea
Toxigenic *Escherichia coli* (STEC/VTEC)	2 - 10 days more commonly 3 - 4 days	Diarrhoea (often bloody), abdominal cramps
Hepatitis A	2 - 7 weeks	Jaundice, fatigue, anorexia, nausea
Listeria monocytogenes	3 days - 6 weeks	Meningitis, sepsis, fever
Norovirus	24 - 48 hours	Fever, nausea, vomiting, abdominal cramps, diarrhoea and headache
Salmonella	6 – 72 hours	Headache, fever, abdominal cramps, diarrhoea and nausea
Staphylococus aureus toxin	0.5 – 8 hours	Abdominal cramps, vomiting and diarrhoea
Vibrio parahaemolyticus	4 – 30 hours	Nausea, vomiting, abdominal cramps & diarrhoea

How is it spread?

Foodborne illness is mainly spread to humans when they eat poorly cooked food derived from infected animals (that is, meat, poultry, eggs, and their by-products). Spread by 'cross-contamination' occurs when germs contaminate ready-to-eat food: for example, when food that will not be cooked further is cut with a contaminated knife or via the hands of an infected food handler. Foodborne illness can spread from person-to-person via the hands of an infected person. It can also be spread from animals to humans.

Hospital Foodborne Illness Outbreak

An outbreak of foodborne illness should be considered a possibility when two or more inpatients or others, who have consumed the same food, experience otherwise, unexplained gastrointestinal symptoms (nausea, vomiting, abdominal cramps or diarrhoea) at about the same time. Individuals need not necessarily be from the same ward.

Suspected Foodborne Illness

1. When an outbreak of foodborne disease is suspected in patients, staff or others, the registrar of the team caring for the patient shall inform the Chief Resident Medical Officer (CRMO) who will contact the Public Health Unit urgently (within 24 hours of diagnosis[1]). Nursing staff from the ward shall inform the Infection Prevention and Control Nurse and the Food Services Manager. After hours, After Hours Nurse Manager shall be contacted. If the suspected source of the contaminated food is other than POW Food Services, (e.g. Star Café), the manager of that food outlet should also be informed.
2. Contact between the ward, Food Services and Microbiology shall take place within 24 hours of the onset of symptoms in affected individuals. CRMO/Infection Prevention and Control Nurse will liaise between departments after the initial notification.

Medical Record Documentation

The ward nursing staff shall record specific patient details in the medical record.

- the date and time of onset of symptoms.
- document a history of ingestion of any food and the source of the food, in the previous 72 hours.

Reporting

After initial discussion with the Public Health Unit, the CRMO shall compile the following additional details and notify the Public Health Unit.

- the details of affected patients and their symptoms.
- the details of other symptomatic contacts.

Investigation

Clinical investigation

The appropriate specimens to be taken from the affected individuals (e.g. faecal specimen) will be determined by the primary medical team after consultation with Public Health Unit, CRMO and/or Infectious Diseases staff. These specimens shall be sent immediately to the Microbiology Department.

Epidemiological investigation

Following notification to the Public Health Unit by the CRMO, the Public Health Unit may determine that an epidemiological investigation needs to be conducted by the Unit, with the assistance of hospital staff. This would generally comprise obtaining a standard set of information from cases (or their parents) and non-cases to determine likely food sources of the illness.

In addition, the NSW Food Authority will need to be informed of the occurrence of a suspected foodborne illness outbreak; this notification may be made by anyone, but will generally be made by the Public Health Unit.

Environmental (food hygiene) investigation

If there is a need for suspect food samples to be submitted for investigations in order that the source be identified, the Food Services and the NSW Food Authority will liaise regarding the collection and transport of such samples. This is to ensure appropriate selection and transport of the samples. In addition, these two units will liaise with the hospital management.

If food prepared by Food Services is identified as a source of foodborne illness, the Food Services Management, in consultation with the NSW Food Authority, shall implement a review of food production and service according to the Hazard Analysis Critical Control Point (HACCP) program.

Isolation and Restriction[1]

Patients

Inpatient cases, if considered possibly infectious, should be cohorted (separated from non-infected patients) if possible. This should include separate hand washing, toilet and bathroom facilities.

Staff (including volunteers)

Staff cases should not attend work until at least 48 hours after symptoms cease.

Contact Management[1]

The need for identification and follow up of contacts will depend on the causative agent and the specific circumstances, and is in accordance with NSW Health guidelines used by Public Health Units. As with other types of hospital exposure, the primary responsibility for management of contacts rests with Sydney Children's Hospital, with the support of the Public Health Unit; a greater role for the Public Health Unit may be negotiated on a case by case basis.

Identification of contacts

Secondary cases may occur in persons exposed to the faeces or vomitus of infectious cases.

Treatment

No specific treatment is usually recommended to contacts, except for hepatitis A (see protocol). Foodborne Illness Outbreak[1].

Education

Provide information to others at risk of illness about the condition, and actions they should take if symptoms develop.

Isolation and restriction (Contacts)

Infants and children attending childcare or school should be excluded from attending for 24 hours after resolution of symptoms.

References

1. NSW Ministry of Health, Communicable Diseases Protocol, (July 2012) "Foodborne Illness Outbreak". http://www.health.nsw.gov.au/Infectious/controlguideline/Documents/foodborne.PDF
2. NSW Ministry of Health, Public Health factsheet, "Foodborne Disease" 2012 http://www0.health.nsw.gov.au/factsheets/infectious/foodborneillness.html
3. HealthShare Food Services Department, Prince of Wales and Sydney Children's Hospitals,