

Ontario Public Health Standards:
Requirements for Programs, Services and Accountability

Infectious Disease Protocol

Appendix 1:

Case Definitions and Disease-Specific Information

Disease: Food poisoning, all causes

Effective: May 2023

Food poisoning, all causes

Communicable

Virulent

[Health Protection and Promotion Act \(HPPA\)](#)¹

[Ontario Regulation \(O. Reg.\) 135/18 \(Designation of Diseases\)](#)²

Provincial Reporting Requirements

Confirmed case

Probable case

As per Requirement #3 of the "Reporting of Infectious Diseases" section of the *Infectious Diseases Protocol, 2018* (or as current), the minimum data elements to be reported for each case are specified in the following:

- [O. Reg. 569](#) (Reports) under the HPPA;
- The iPHIS User Guides published by Public Health Ontario (PHO); and
- Bulletins and directives issued by PHO.^{3,4}

Type of Surveillance

Case-by-case

Case Definition

Confirmed Case

Clinically compatible signs and symptoms, linked to food consumption with:

- Identification of a pathogenic organism that is not individually reportable, toxin or other agent in stool, or a suspected food item.

Probable Case

Clinically compatible signs and symptoms, linked to food consumption with:

- An epidemiological link¹ to one or more laboratory-confirmed cases of food poisoning.

Suspect Case

An incident in which one of two or more persons, who are neither confirmed nor probable cases, experience similar clinical illness after ingestion of a common food item, and epidemiologic analysis implicates the food as the source of their illness.

Outbreak Case Definition

The outbreak case definition varies with the outbreak under investigation. Please refer to the *Infectious Diseases Protocol, 2018* (or as current) for guidance in developing an outbreak case definition as needed.³

The outbreak case definitions are established to reflect the disease and circumstances of the outbreak under investigation. The outbreak case definitions should be developed for each individual outbreak based on its characteristics, reviewed during the course of the outbreak, and modified if necessary, to ensure that the majority of cases are captured by the definition. The case definitions should be created in consideration of the outbreak definitions.

Outbreak cases may be classified by levels of probability (*i.e.*, confirmed and/or probable).

¹ An individual who consumed the same food or food from the same source as the laboratory-confirmed case.

Clinical Information

Clinical Evidence

Clinically compatible signs and symptoms depend upon etiologic agent and may include vomiting, abdominal pain, malaise, fever, nausea, dizziness, headache and/or diarrhea.

Clinical Presentation

See Clinical Evidence section.

Laboratory Evidence

Given the variability of etiological organisms, consult with laboratory about appropriate specimens and testing methodologies.

For further information about human diagnostic testing, contact the [Public Health Ontario Laboratories](#).

Case Management

In addition to the requirements set out in the Requirement #2 of the "Management of Infectious Diseases – Sporadic Cases" and "Investigation and Management of Infectious Diseases Outbreaks" sections of the *Infectious Diseases Protocol, 2018* (or as current), the board of health shall investigate cases to determine the source of infection.³ Refer to Provincial Reporting Requirements above for relevant data to be collected during case investigation.

Investigate and obtain history of food items eaten during the suspected incubation period (based on symptoms presented) and the location where food was obtained.

Identify other persons with similar exposure. For ill persons, obtain information on symptoms, onset date and hour, duration of illness, and any medical treatment or tests performed.

Collect relevant stool specimens and food specimens for testing.

Advise symptomatic contacts and cases to seek appropriate medical consultation.

Educate cases on modes of transmission (if the agent can be transmitted further), and proper hand hygiene practices to prevent secondary spread.

Exclusion Criteria:

- Exclude symptomatic food handlers, healthcare providers, and day care staff and attendees until symptom free for 24 hours, OR symptom free for 48 hours after discontinuing use of anti-diarrheal medication.

Note: If the healthcare setting is a hospital, use the "[Enteric Diseases Surveillance Protocol for Ontario Hospitals](#)" (OHA and OMA Joint Communicable Diseases Surveillance Protocols Committee, 2017 or as current).⁵

The rationale for exclusion for 48 hours after discontinuing the use of **anti-diarrheal** medication is to ensure that diarrhea does not return after the anti-diarrheal medication has been discontinued. In the event **antibiotics** are used, the person should be excluded until symptom free for 24 hours.

Note: Treatment recommendations are under the direction of the attending health care provider.

If seafood (e.g., for scombroid and ciguatera fish poisoning) or a federally regulated food item is identified as the source of the illness, notify the Ministry of Natural Resources (MNR) or the Canadian Food Inspection Agency (CFIA), as appropriate.

If unusual toxins are suspected in a poisoning event, the Ontario Poison Centre (OPC) can be used as a tool for consultation by the attending physician to determine testing and treatment options.

Food poisoning agents may also be used as bioterrorism agents. If bioterrorism is suspected, the Provincial Emergency Operations Centre (PEOC) will be activated to coordinate and direct the province's response under the [Emergency Management and Civil Protection Act](#).⁶

Note: Given the potential for the appearance of food poisoning cases to signal a bioterrorism incident, investigation and follow-up may involve notification of law enforcement. If tampering, sabotage, or bioterrorism is suspected, the health unit shall immediately notify their local police service and the Health System Emergency Management Branch (HSEMB) Health Care Provider Hotline at 1-866-212-2272. . A bioterrorism event would trigger activation of the provincial emergency operations centre, including the HSEMB of the ministry and relevant health emergency response plans, as well as those additional ministries with responsibilities for security, law enforcement, or other relevant areas of concern, as identified in the [Emergency Management and Civil Protection Act](#) and associated Order in Council. The [Ministry Emergency Response Plan \(MERP\)](#) provides information on how the ministry would respond to a health emergency.^{6,7} Any requests for federal supplies of medical countermeasures for a food poisoning bioterrorism incident must be made through HSEMB. The Provincial Emergency Operations Centre (PEOC) can be contacted by email at EOCOperations.MOH@ontario.ca.

Contact Management

Assess household and other contacts for symptoms and if symptomatic advise to seek medical care. Management of symptomatic contacts is the same as for cases.

Outbreak Management

Please see the *Infectious Diseases Protocol, 2018* (or as current) for the public health management of outbreaks or clusters in order to identify the source of illness, manage the outbreak and limit secondary spread.³

Two or more cases linked by time, common exposure, and/or place are suggestive of an outbreak.

For more information regarding specimen collection and testing, please see the Public Health Inspector's Guide to the Principles and Practices of Environmental Microbiology, 5th Edition (or as current).⁸

Refer to [Ontario's Foodborne Illness Outbreak Response Protocol](#) (ON-FIORP) 2020 (or as current) for multi-jurisdictional foodborne outbreaks which require the response of more than two Partners (as defined in ON-FIORP) to carry out an investigation.⁹

Prevention and Control Measures

Personal Prevention Measures

Prevention Measures:

- Maintain good personal hygiene, including hand washing after using sanitary facilities and before handling food;
- Use foods from inspected/approved sources;
- Prevent cross-contamination between raw and ready-to-eat foods during food preparation, and storage;
- Store foods either at or below 4°C or at or above 60°C; and
- Cook and reheat food thoroughly to the appropriate temperatures. For temperatures, see the Ministry of Health (ministry)'s ['Food Safety: Cook' publication](#).¹⁰

For more food safety prevention measures, please see the [ministry's food safety frequently asked questions](#).

Infection Prevention and Control Strategies

Refer to [PHO's website](#) to search for the most up-to-date information on Infection Prevention and Control.

Disease Characteristics

Aetiologic Agent - Food poisoning, also called foodborne illness, is illnesses that are acquired through the consumption of contaminated food or water, but are not directly specified by *Regulation 135/18* as a Disease of Public Health Significance.² Food poisoning includes foodborne infections and intoxications caused by *Staphylococcus aureus*, *Bacillus cereus*, *Clostridium perfringens*, scombroid fish poisoning and ciguatera fish poisoning.¹¹ However, other agents such as heavy metals, chemicals, toxins, parasites, fungi, and viruses such as noroviruses and rotaviruses may also be reported here.

Modes of Transmission - Foodborne or waterborne.

Incubation Period – Typically short, (30 minutes to 24 hours), but may be longer, depending on the agent.

Period of Communicability - Varies, depending on the agent.

Reservoir - Not applicable.¹¹

Host Susceptibility and Resistance - General susceptibility.¹¹

Please refer to [PHO's Reportable Disease Trends in Ontario reporting tool](#) for the most up-to-date information on infectious disease trends in Ontario.

For additional national and international epidemiological information, please refer to the Public Health Agency of Canada and the World Health Organization.

Comments

Exclusionary Criteria for Meeting the Case Definition for Food Poisoning

- Food poisonings under investigation that are subsequently determined to be caused by a disease of public health significance specified under Designation of Diseases (*Ontario Regulations 135/18*) should be reported under their respective diseases (e.g. *Campylobacter* spp., *Salmonella* spp., *Shigella* spp., Verotoxin-producing *E. coli*, etc.).² All other identified pathogens should be reported as food poisoning cases.

References

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4. *Reports*, RRO 1990, Reg 569. Available from:
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5. Ontario Hospital Association. Communicable diseases surveillance protocols [Internet]. Toronto, ON: Ontario Hospital Association; [2019] [cited 2023 Mar 30]. Available from: <https://www.oha.com/labour-relations-and-human-resources/health-and-safety/communicable-diseases-surveillance-protocols>
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Document History

Revision Date	Document Section	Description of Revisions
April 2022	Entire Document	New template. Appendix A and B merged. No material content changes.
April 2022	Epidemiology: Occurrence section	Removed.
April 2022	ICD Codes	Removed.
March 2023	Case Management	Addition of consultation with OPC in unusual toxin event.
March 2023	Bioterrorism	Addition of bioterrorism guidelines.
May 2023	Case Management	Addition of contact information.