

Identification, Investigation and Management of Health Hazards Protocol

Preamble

The Ontario Public Health Standards (OPHS) are published by the Minister of Health and Long-Term Care under the authority of the Health Protection and Promotion Act (HPPA)¹ to specify the mandatory health programs and services provided by boards of health. Protocols are program and topic specific documents which provide direction on how boards of health must operationalize specific requirement(s) identified within the OPHS. They are an important mechanism by which greater standardization is achieved in the province-wide implementation of public health programs.

Protocols identify the minimum expectations for public health programs and services. Boards of health have the authority to develop programs and services in excess of minimum requirements where required to address local needs. Boards of health are accountable for implementing the standards including those protocols that are incorporated into the standards.

Purpose

The purpose of this protocol is to assist in the prevention and reduction of adverse health outcomes from health hazards in the environment by providing direction to boards of health on the delivery of comprehensive, local health hazard prevention and management programs including, but not limited to:

- Surveillance of the environmental health status of the community;
- Investigation and risk assessment where there is an elevated risk of illness associated with exposures in the community that are known or suspected to be associated with health hazards;
- Control measures to prevent or reduce exposure to health hazards in the environment; and
- Timely response to and management of health hazards in the environment.

It should be noted that where a health hazard pertains to a facility, the board of health shall refer to the *Risk Assessment and Inspection of Facilities Protocol, 2008* (or as current). Where a health hazard escalates into an emergency, the board of health shall refer to the *Public Health Emergency Preparedness Protocol, 2008* (or as current).

This protocol promotes consistent best practices for addressing health hazards in the environment across the province in order to prevent or reduce the burden of illness from such hazards. It is consistent with the framework for risk assessment and management utilized by Health Canada and other organizations. It also supports local collaboration and sharing of information and expertise, recognizing that boards of health are not always the lead agency in responding to health hazards in the environment.

Reference to the Standards

The table below identifies the OPHS standards and requirements to which this protocol relates.

Standard	Requirement
Health Hazard Prevention and Management	Requirement #1: The board of health shall conduct surveillance of the environmental health status of the community in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Infectious Diseases Protocol, 2008</i> (or as current); the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); the <i>Public Health Emergency Preparedness Protocol 2008</i> (or as current); and the <i>Risk Assessment and Inspection of Facilities Protocol, 2008</i> (or as current).

Standard	Requirement
	Requirement #5: The board of health shall ensure that the medical officer of health or designate is available on a 24/7 basis to respond to and manage health hazards in accordance with the Health Protection and Promotion Act; the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Public Health Emergency Preparedness Protocol, 2008</i> (or as current); and the <i>Risk Assessment and Inspection of Facilities Protocol, 2008</i> (or as current).
	Requirement #7: The board of health shall implement control measures to prevent or reduce exposure to health hazards in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current) and the <i>Risk Assessment and Inspection of Facilities Protocol, 2008</i> (or as current).
Public Health Emergency Preparedness	Requirement #1: The board of health shall identify and assess the relevant hazards and risks to the public's health in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); and the <i>Public Health Emergency Preparedness Protocol, 2008</i> (or as current).
Foundational	Requirement #7: The board of health shall interpret and use surveillance data to communicate information on risks to relevant audiences in accordance with the <i>Identification, Investigation and Management of Health Hazards Protocol, 2008</i> (or as current); the <i>Infectious Diseases Protocol, 2008</i> (or as current); the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current); the <i>Public Health Emergency Preparedness Protocol, 2008</i> (or as current); and the <i>Risk Assessment and Inspection of Facilities Protocol, 2008</i> (or as current).

Operational Roles and Responsibilities

1) Hazard management system

- a) The board of health shall develop and implement a health hazard management system to identify, assess and manage health hazards in the environment, in collaboration with the lead government agencies with primary responsibility for the environmental issue and/or other relevant agencies, experts and interested parties, as applicable.

2) Hazard identification and surveillance

The board of health shall:

- a) Identify health hazards in the environment through the following activities:
 - i) Identify and review relevant evidence-based information on environmental exposures and their relationship with potential adverse health outcomes;
 - ii) Liaise and maintain partnerships with the community and relevant local, provincial, and federal agencies with an interest in and mandate for prevention of health hazards in the environment through committees, meetings, and/or regular communications for the purpose of sharing expertise and information;
 - iii) Review and maintain relevant data on health hazards in the environment within the health unit, including available reports of adverse test results provided by federal, provincial, local, or other agencies; and
 - iv) Monitor and collect data on the health status of residents in the health unit, focusing on adverse health outcomes potentially related to health hazards in the environment.
- b) Conduct analysis and interpretation of the information collected to identify potential human health risks from health hazards in the environment and local priority environmental health issues.

3) Hazard investigation

- a) The board of health shall have an on-call system for receiving and responding to reports of potential health hazards in the environment in the health unit on a 24 hours per day, 7 days per week (24/7) basis and provide an initial response within 24 hours.

- b) Where a report of a health hazard in the environment is received and another Government of Ontario ministry has primary responsibility in the matter, the board of health shall refer to Section 11 of the HPPA¹
- c) For all complaints and reports received by the board of health related to potential health hazards in the environment, the board of health shall undertake a preliminary assessment to determine the level of potential impact.
- d) Where a report of a health hazard in the environment is received that pertains to a facility, the board of health shall address the request in accordance with the *Risk Assessment and Inspection of Facilities Protocol, 2008* (or as current).
- e) The board of health shall stay informed of available resources and expertise for investigating health hazards in the environment, including resources to support investigations where health hazards in the environment are linked to land use planning and development proposals.
- f) The board of health shall conduct investigations and risk assessments of reported health hazards in the environment in consultation with relevant community and government agencies and experts, as appropriate, to evaluate the possible risks to human health. Risk assessments shall be conducted through a review and analysis of scientific data and shall include, but are not limited to, the following activities:
 - i) Assessing the hazard to determine potential acute and chronic health effects;
 - ii) Assessing exposures by identifying potential sources of the hazard, exposure routes, levels of exposure, number of people potentially exposed, and susceptible sub-populations; and
 - iii) Characterizing the level of risk to human health by comparing available environmental test results with provincial, federal, or other exposure standards, where they exist for the particular contaminant.
- g) The board of health shall maintain records of investigation activities related to potential environmental health hazards in the health unit.

4) Health hazard prevention and management

- a) In collaboration with the lead government agencies with primary responsibility for the environmental health issue and/or other relevant agencies, experts and interested parties as applicable, the board of health shall manage identified health hazards in the environment by:
 - i) Developing options and implementing action plans, including strategies for corrective actions for controlling and, where possible, mitigating exposure based on a risk assessment approach. These options may include healthy public policy;
 - ii) Developing and implementing risk communication strategies for the public and stakeholders specific to the environmental health issues;
 - iii) Providing educational material and/or information to the public about health hazards in the environment and actions to minimize the hazards and/or reduce exposure;
 - iv) Monitoring corrective actions pertaining to identified health hazards in the environment; and
 - v) Addressing non-compliance with the HPPA¹ and taking action where appropriate.

5) Reporting

- a) The board of health shall record inspection data pertaining to the investigation of health hazards under its jurisdiction and provide information as required by the Ministry of Health and Long-Term Care.

Glossary

Emergency: A situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and that is caused by the forces of nature, a disease or other health risk, accident or an act whether intentional or otherwise.²

Environment: The physical environment, which includes the natural and built environment.

Health hazard: (a) A condition of a premises, (b) a substance, thing, plant or animal other than man, or (c) a solid, liquid, gas or combination of any of them, that is likely to have an adverse effect on the health of any person.¹

Health hazards in the environment: Health hazards in the physical environment that are not addressed in other programs under the Ontario Public Health Standards.

Health hazard management system: A framework for risk assessment and management based on Health Canada's decision-making framework for identifying, assessing, and managing health risks.³ It consists of issue identification (identify issue and its context), risk assessment (assess risks and benefits), and risk management (identify and analyze options, select a strategy, implement the strategy, and monitor and evaluate the results). This framework reflects the involvement of interested and affected parties throughout the process, including partners, the public, and other stakeholders.

Risk: The probability of an adverse health outcome resulting from exposure to a hazard.

Risk assessment: The scientific process that characterizes the potential risk of hazards to human health, consisting of four main steps: hazard identification, dose-response assessment, exposure assessment, and risk characterization.

Risk management: Decisions on hazard control that are made based on the results of a risk assessment, taking into consideration other factors such as technical feasibility. Risk communication is a component of risk management.

References

1. *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7.
Available from http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm.
2. *Emergency Management and Civil Protection Act*, R.S.O. 1990, c. E.9, s. 1.
Available from: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90e09_e.htm.
3. Health Canada. Health Canada decision-making framework for identifying, assessing and managing health risks. Ottawa, ON: Her Majesty the Queen in Right of Canada; 2000.
Available from http://www.hc-sc.gc.ca/ahc-asc/alt_formats/hpfb-dgpsa/pdf/pubs/risk-risques-eng.pdf.