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 provide boards of health with direction with respect to the prevention and management of infectious diseases of public health importance. In particular, it is intended to provide direction regarding minimum, common operational roles and responsibilities for interpreting, communicating and acting upon surveillance information and findings to reduce the burden of infectious diseases of public health importance.

The protocol provides direction regarding:

- The establishment of baseline rates of infectious diseases of public health importance and factors that influence their occurrence;
- The identification of emerging trends and changes in baseline infectious disease rates;
- The identification of trends and changes in factors that influence the rate of infectious diseases;
- The provision of timely communications with respect to infectious disease incidence in excess of expected levels;
- The assessment of population health status with respect to infectious diseases;
- The planning of evidence-based public health policies, programs, interventions and services to prevent and control infectious diseases in the community and in high-risk settings; and
- The evaluation of public health policies, programs, interventions and services related to the control and prevention of infectious diseases.

Reference to the Standards

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

<table>
<thead>
<tr>
<th>Standard</th>
<th>Requirement</th>
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<tr>
<td>Foundational</td>
<td>Requirement #7: The board of health shall interpret and use surveillance data to communicate information on risks to relevant audiences in accordance with the Identification, Investigation and Management of Health Hazards Protocol, 2008 (or as current); the Infectious Diseases Protocol, 2008 (or as current); the Population Health Assessment and Surveillance Protocol, 2008 (or as current); the Public Health Emergency Preparedness Protocol, 2008 (or as current); and the Risk Assessment and Inspection of Facilities Protocol, 2008 (or as current).</td>
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<tr>
<td>Infectious Diseases</td>
<td>Requirement #1: The board of health shall report infectious disease data elements in accordance with the Health Protection and Promotion Act and the Infectious Diseases Protocol, 2008 (or as current).</td>
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| Vaccine Preventable Diseases | Requirement #1: The board of health shall assess, maintain records and report on:  
- The immunization status of children enrolled in licensed child care programs as defined in the Day Nurseries Act;  
- The immunization status of children attending schools in accordance with the Immunization of School Pupils Act; and  
- Immunizations administered at board of health-based clinics as required in accordance with the Immunization Management Protocol, 2008 (or as current) and the Infectious Diseases Protocol, 2008 (or as current). |
| | Requirement #2: The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the Infectious Diseases Protocol, 2008 (or as current), and the Population Health Assessment and Surveillance Protocol, 2008 (or as current). |
| Food Safety | Requirement #6: The board of health shall ensure that the medical officer of health or designate is available on a 24/7 basis to receive reports of and respond to:  
- Suspected and confirmed food-borne illnesses or outbreaks;  
- Unsafe food-handling practices, food recalls, adulteration, and consumer complaints; and  
- Food-related issues arising from floods, fires, power outages, or other situations that may affect food safety in accordance with the Health Protection and Promotion Act; the Food Safety Protocol, 2008 (or as current); the Infectious Diseases Protocol, 2008 (or as current); and the Public Health Emergency Preparedness Protocol, 2008 (or as current). |
| Safe Water | Requirement #2: The board of health shall conduct surveillance of drinking-water systems and of drinking water illnesses of public health importance, their associated risk factors, and emerging trends in accordance with the Drinking Water Protocol, 2008 (or as current), the Infectious Diseases Protocol, 2008 (or as current) and the Population Health Assessment and Surveillance Protocol, 2008 (or as current).  
Requirement #10: The board of health shall ensure that the medical officer of health or designate is available on a 24/7 basis to receive reports of and respond to:  
- Water-related adverse events, such as reports of adverse drinking water on drinking-water systems governed under the Health Protection and Promotion Act or the Safe Drinking Water Act; |
Infectious Diseases Protocol

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- Reports of water-borne illnesses or outbreaks;
- Water-related issues arising from floods, fires, power outages, or other situations that may affect water safety; and
- Water-related issues relating to recreational water use including public beaches
  in accordance with the Health Protection and Promotion Act; the Beach Management Protocol, 2008 (or as current); the Infectious Diseases Protocol, 2008 (or as current); and the Public Health Emergency Preparedness Protocol, 2008 (or as current) and the Recreational Water Protocol, 2008 (or as current).

**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 Identification, Investigation and Management of Health Hazards Protocol, 2008 (or as current); the Infectious Diseases Protocol, 2008 (or as current); the Population Health Assessment and Surveillance Protocol, 2008 (or as current); the Public Health Emergency Preparedness Protocol 2008 (or as current) and the Risk Assessment and Inspection of Facilities Protocol, 2008 (or as current).

**Requirement #8:** The board of health shall develop a local vector-borne management strategy based on surveillance data and emerging trends in accordance with the Infectious Diseases Protocol, 2008 (or as current).

**Operational Roles and Responsibilities**

**1) Interpretation, Use and Communication of Infectious Disease Surveillance Data**

a) The board of health shall, in compliance with privacy laws, communicate public health surveillance information and findings pertaining to infectious diseases of public health importance and factors related to the acquisition of such diseases to relevant audiences, which shall include but not be limited to:
   i) Populations at risk of exposure to infectious diseases;
   ii) The general public;
   iii) The Ministry of Health and Long-Term Care (the “ministry”);
   iv) Public health practitioners, government organizations and other individuals and organizations responsible for the implementation and/or management of infectious disease control and prevention measures;
   v) Health care providers;
   vi) Community partners such as social service agencies, boards of education, public works departments and other non-government agencies; and
   vii) The media.

b) The board of health shall develop a strategy for reporting and communicating infectious diseases surveillance information and findings that outlines:
   i) The target audience for each communication;
   ii) The communication format;
   iii) The frequency of communication; and
   iv) The characteristics and limitations of the source data and information.

c) The board of health shall undertake timely monitoring, analysis, interpretation and communication of information pertaining to infectious diseases, and factors influencing their occurrence. The timing and frequency of these activities shall be determined by one or more of the following factors:
   i) Temporal/seasonal patterns of exposure or infectious diseases occurrence;
   ii) Likelihood of detecting meaningful change in the rate of infectious disease between communication intervals;
   iii) The availability of data;
   iv) The urgency with which preventive and control measures must be implemented;
   v) The potential influence on decision-making; and
   vi) The characteristics of the target audience.
d) The board of health shall review annually its infectious diseases communication strategy to ensure that key messages are relevant, current and appropriate for its target audience(s), and that the communication channels used and the frequency of communication are appropriate.

e) The board of health shall develop and disseminate information products on infectious diseases, their risk factors, and appropriate personal preventive measures in a format that is understandable and useable by target audiences. Information products may include but not be limited to:
   i) Publications such as public health bulletins, advisories or alerts, health status reports, fact sheets and pamphlets;
   ii) Electronic channels such as board of health website(s), e-mail and facsimile;
   iii) Broadcast and print media; and
   iv) Public forums including briefings, hearings and conferences.

f) The board of health shall consider employing media communications such as news conferences and other public releases when the information to be communicated is critical, time sensitive and must be communicated as broadly as possible.

g) The board of health shall consider disseminating information about infectious diseases and prevention and control measures in collaboration with other boards of health, government agencies, regulatory bodies, non-governmental organizations and community partners as appropriate.

2) Reporting of Infectious Diseases

a) The board of health shall provide instructions as often as is necessary to persons required under the HPPA to report information to the medical officer of health with respect to reportable diseases, reportable events and deaths from such diseases and events. These instructions shall specify:
   i) The diseases and events that must be reported;
   ii) The method or process for reporting;
   iii) Required information as specified in O. Reg. 569 under the HPPA; and
   iv) The time or times when, or the period or periods of time within which to report.

b) The board of health shall forward reports to the ministry with respect to:
   i) Reportable diseases and deaths from such diseases;
   ii) Any other infectious diseases that the ministry may specify from time to time; and
   iii) Reportable events that may be related to the administration of an immunizing agent as defined in the HPPA.

c) Reports as specified in b) above shall be made using the integrated Public Health Information System (iPHIS) or any other method specified by the ministry and shall comply with the minimum data elements identified in:
   i) O. Reg. 569 under the HPPA;
   ii) Disease-specific User Guides published by the ministry; and
   iii) Bulletins and directives issued by the ministry.

d) The ministry may request additional information with respect to reports of reportable diseases, reportable events and deaths from such diseases and events.

e) The board of health shall forward reports to the ministry with respect to immunization coverage in accordance with the Immunization Management Protocol, 2008 (or as current). These reports shall be made using the Immunization Records Information System (IRIS) or any other method specified by the ministry.

f) The board of health shall comply with ministry requests for immunization data and board of health-based immunization clinic data.

g) The board of health shall comply with ministry requests for vector surveillance and non-human host surveillance data using a method and format specified by the ministry.

h) A report made to the ministry using iPHIS, IRIS or any other method specified by the ministry shall comply with Enhanced Surveillance Directives (ESD) that are active at the time that the report is being made.
i) A report made using iPHIS or any other method specified by the ministry shall comply with the case classifications set out in the Ontario surveillance case definitions and the disease-specific User Guides published by the ministry.

j) A report made using iPHIS or any other method specified by the ministry shall comply with the timely entry of case requirements set out in *iPHIS Bulletin* Number 17: “Timely Entry of Cases,” or as current.

3) Interpretation and Application of Surveillance Data

a) The board of health shall use infectious diseases surveillance data, immunization data and vector surveillance data to:
   1. Establish baseline rates for infectious diseases of public health importance and factors that influence their occurrence;
   2. Identify emerging trends, changes in baseline infectious disease rates and changes in factors that influence the rate of infectious diseases;
   3. Identify trends and changes in immunization coverage rates;
   4. Identify trends and changes in disease vector and host surveillance data;
   5. Identify infectious disease incidence in excess of expected levels by comparing data to baseline rates;
   6. Assess health status with respect to infectious diseases;
   7. Identify populations at risk of exposure to infectious diseases;
   8. Plan evidence-based public health policies, programs and services to prevent and control infectious diseases in the community and in high-risk settings; and
   9. Evaluate public health policies, programs and services related to the control and prevention of infectious diseases.

b) The board of health shall analyze and interpret infectious diseases data, and data related to factors influencing their occurrence in an annual report to its target audience that describes at a minimum the following:
   1. The incidence (morbidity and mortality) of reportable diseases;
   2. The distribution of demographic and disease-specific factors influencing infectious disease incidence;
   3. Populations at risk of exposure to infectious diseases in the community and in specific settings including, but not limited to long-term care homes, hospitals and licensed day nurseries; and
   4. Trends over time in the incidence of diseases of public health importance.

c) The board of health shall use standard definitions of variables and health indicators where available and appropriate to conduct data analysis and interpretation of infectious diseases data and information. Standard definitions for population health assessment and surveillance indicators developed by the Association of Public Health Epidemiologists in Ontario (APHEO), Statistics Canada, the Canadian Institute for Health Information (CIHI) and the ministry shall be used where available.

d) The board of health shall review annually its infectious diseases surveillance activities to assess their effectiveness to prevent and manage infectious diseases.

e) The board of health shall use information from inspection reports of premises associated with risk of infectious diseases to plan further inspections of these premises, to assess disease transmission risks and required interventions, and to tailor infection control training or messages to these premises.

4) Public Health On-Call System

a) The board of health shall have a 24 hours per day, 7 days per week (24/7) public health on-call system in the health unit for receiving and responding to reports with respect to:
   1. Confirmed and suspected outbreaks of infectious diseases of public health importance occurring in institutions or facilities;
   2. Confirmed and suspected outbreaks of infectious diseases of public health importance occurring in the community;
   3. Confirmed or suspected cases of, and exposures to reportable diseases reported by persons required under the HPPA to report information to the medical officer of health with respect to such diseases;
   4. Suspected exposures to, and reports of infectious diseases among emergency service workers that occur during the course of work;
   5. Confirmed or suspected cases of, and exposures to infectious diseases reported by a member of the public;
vi) Health hazards that have, or that are likely to have, an adverse effect on the health of any person;
vii) Food or other product recalls issued by the ministry, the Canadian Food Inspection Agency or other provincial or national regulatory agencies and manufacturers;
viii) Public complaints with respect to the risk of transmission of infectious diseases; and
ix) Applications in accordance with the Mandatory Blood Testing Act.4

b) The board of health shall ensure that persons required under the HPPA1 to report information to the medical officer of health with respect to reportable diseases are informed of the public health on-call system, and how to access it.

c) The board of health shall assess reports with respect to infectious diseases and factors influencing their occurrence that originate through the public health on-call system, within 24 hours of receipt.

d) The board of health's initial response to reports with respect to infectious diseases, and factors influencing their occurrence, that originate through the public health on-call system, shall include the following:
i) Review and assessment of the information provided as well as appropriate action, based on the initial assessment, to prevent, control or manage exposure to, or transmission of the infectious disease;
ii) Contacting the reporting person, facility/institution or organization to obtain additional information for the purpose of undertaking further assessment of the risk of exposure to, or transmission of, the infectious disease;
iii) Contacting the case(s) and/or contact(s) named in the report to obtain additional information for the purpose of making an assessment pertaining to the risk of exposure to, or transmission of the infectious disease; and
iv) Conducting a site visit or an inspection where appropriate.

e) The board of health public health on-call system shall reference standard policies and procedures for responding to health hazards including health hazards associated with the risk of exposure to, and transmission of infectious diseases.

f) The board of health shall transfer reports received through its public health on-call system that are not in the health unit of the board of health receiving such reports, to the appropriate board of health.

g) The public health on-call system shall be documented and reviewed at least annually, and shall include:
i) An up-to-date schedule that specifies board of health staff responsible for receiving and responding to reports received through the public health on-call system;
ii) Contact information of board of health staff, which shall be updated quarterly;
iii) Contact information of community partners, regulatory bodies and government agencies involved in the control and prevention of exposures to, and transmission of infectious diseases, which shall be updated quarterly;
iv) Contact information of the lead government body, regulatory body or other agencies involved in the response to specific types of reports received through the public health on-call system, which shall be updated quarterly;
v) Contact information of all medical officers of health for the purpose of transferring reports received through the public health on-call system that are not in the health unit of the board of health receiving such reports. This contact list shall be updated quarterly;
vi) Contact information for the Public Health Division on-call system, which shall be updated quarterly;
vii) A distribution mechanism for mass notification of board of health staff, the ministry, community partners, other government ministries, regulatory bodies and other government agencies involved in the control and prevention of exposures to and transmission of infectious diseases;
viii) A back-up communications capability for mass notification of board of health staff, the ministry, community partners, regulatory bodies and other government agencies or ministries involved in the control and prevention of exposures to and transmission of infectious diseases;
ix) The process for transferring reports received through the public health on-call system that are not in the health unit of the board of health receiving such reports;
x) Information on the time frame within which the board of health shall provide an initial response or forward an out of jurisdiction report; and
xi) A process for reporting back to persons or organizations that make reports through the public health on-call system, where required.
5) Management of Infectious Diseases – Sporadic Cases
   
a) The board of health shall provide public health management of cases and contacts of diseases of public health importance in accordance with this protocol.

b) The public health management of cases and contacts of diseases of public health importance shall comprise of, but not be limited to:
   
i) Case management including, and where applicable: the determination of potential exposures and the provision of disease prevention counselling, administration of chemoprophylaxis, immunization or immuno-globulin (where appropriate) and/or advice to seek medical care and submit clinical samples;
   
ii) Contact identification, tracing and notification;
   
iii) Contact management including, and where applicable: the provision of disease prevention counselling, (where appropriate) administration of chemoprophylaxis, immunization or immuno-globulin and/or advice to seek medical care and submit clinical samples;
   
iv) Investigation of suspected sources of infection;
   
v) Notification of the ministry as specified in this protocol;
   
vi) Maintenance of ongoing surveillance for further cases;
   
vii) Where warranted, inspection of institutions, premises or facilities where cases and/or disease transmission is suspected; and
   
iviii) Reporting of cases of infectious diseases to the ministry using iPHIS or any other method specified by the ministry, and in accordance with the reporting criteria for reportable diseases set out in this protocol.

6) Management of Infectious Disease Outbreaks
   
a) The board of health shall provide public health management of confirmed or suspected outbreaks of infectious diseases of public health importance in accordance with this protocol.

b) The public health management of confirmed or suspected outbreaks of diseases of public health importance shall comprise of, but not be limited to:
   
i) Verification of the outbreak;
   
ii) Consideration of declaration of an outbreak by the medical officer of health or designate;
   
iii) Creation of an Outbreak Management Team (OMT), where required;
   
iv) Development of an outbreak case definition;
   
v) Case management including the determination of exposure history and the provision of disease prevention counselling, administration of chemoprophylaxis, immunization or immuno-globulin (where indicated) and/or advice to seek medical care and submit clinical samples where applicable;
   
vi) Contact identification, tracing and notification;
   
vii) Contact management including the provision of disease prevention counselling, administration of chemoprophylaxis, immunization or immuno-globulin (where indicated) and/or advice to seek medical care and submit clinical samples where applicable;
   
viii) Epidemiological analysis including but not limited to analyses to determine population(s) at risk, the time period at risk and most likely source(s) of infection;
   
ix) Outbreak notification and communication of outbreak information to the ministry, regulatory bodies and other government agencies involved in the prevention and control of exposures to and transmission of the outbreak disease;
   
x) Outbreak notification and communication of outbreak information to the population at risk, including persons in settings associated with an outbreak;
   
xi) Outbreak notification and communication of outbreak information to community partners with an identified role in the diagnosis and treatment of infectious diseases, and in the control and management of infectious diseases outbreaks, including but not limited to physician offices, hospitals, the public health laboratory, and facilities and institutions such as day nurseries and long-term care homes;
   
xii) Maintenance of ongoing surveillance for new cases and/or implementation of enhanced or active surveillance to identify new cases;
   
xiii) Implementation of prevention and control measures, taking into consideration the etiologic agent and the epidemiology of the outbreak;
xiv) Issuance of public health alerts or bulletins where prevention and control efforts require public compliance with implemented and/or recommended control measures;

xv) Issuance of public health alerts or bulletins where necessary to advise unidentified contacts of potential exposures and the appropriate follow-up action that is required;

xvi) Investigation of sources of infection including but not limited to collection of exposure histories, inspection of institutions, premises or facilities that have been epidemiologically linked to the outbreak, environmental and clinical sampling and product trace-back; and

xvii) Coordination of and/or collection of clinical specimens and environmental samples in a timely manner to verify diagnosis as well as the exposure source.

c) The board of health shall develop a written outbreak protocol that specifies the composition of the OMT and their roles and responsibilities.

d) The board of health shall comply with all active Enhanced Surveillance Directives (ESD) and other directives with respect to ongoing provincial or multi-jurisdiction outbreaks that are issued by the ministry as per iPHIS Bulletin Number 18: “Enhanced Surveillance Directives.”

e) The board of health shall notify the ministry as soon as possible of any evidence of increased virulence based on unusual clinical presentation, the possibility of multi-jurisdictional involvement, suspicion of a novel or emerging strain, or other novel outbreak findings. Where, in the opinion of the medical officer of health or designate, a delay would not pose a risk of harm to individuals, the board of health shall notify the ministry in advance of any notification of the media.

f) The board of health shall report outbreaks of infectious diseases and/or cases that are linked to an outbreak to the ministry using iPHIS or any other method specified by the ministry within one business day of receiving notification of an outbreak or determining that an outbreak is occurring/has occurred that has not been reported.

g) The board of health shall close reported outbreaks using iPHIS or any other method specified by the ministry within 30 days of declaring them over.

h) A report made using iPHIS or any other method specified by the ministry shall comply with the data reporting criteria for reportable diseases set out in this protocol.

i) The ministry may request additional information with respect to reports of outbreaks of infectious diseases and related deaths.

j) The medical officer of health or designate in collaboration with the OMT, where one has been established, shall determine when to declare an outbreak over, taking into consideration the etiologic agent and the epidemiology of the outbreak.

7) Prevention and Management of Vector-Borne Diseases

a) The board of health shall develop and implement an integrated vector-borne diseases management strategy based on local risk assessment and other scientific evidence with respect to effective and efficient prevention and control measures.

b) The board of health shall conduct local West Nile Virus risk assessments, on a yearly basis, in accordance with the ministry West Nile Virus Preparedness and Prevention Plan, as amended from time to time.

c) The board of health shall develop an integrated vector-borne management plan which shall be comprised of:

   i) Vector surveillance;
   ii) Non-human host surveillance;
   iii) Human surveillance;
   iv) Public education on personal preventive measures; and
   v) Vector control programs including larviciding and adulticiding where required.
d) The board of health shall review annually its vector-borne management strategy to ensure that the components of the strategy reflect changes in the epidemiology of vector-borne diseases.

e) The board of health shall promptly notify the Canadian Blood Services (CBS) and Trillium Gift-of-Life of any positive human results with blood/organ histories of a vector-borne disease.

Glossary

**Enhanced Surveillance Directive:** Public Health Division may issue enhanced surveillance directives for reportable diseases in response to a variety of circumstances, including but not limited to:

- Increased case reports of reportable disease(s);
- Reports of emerging disease(s);
- Diseases with seasonal variation (e.g., West Nile Virus); and
- Food contamination alerts.

Each enhanced surveillance directive will include the following:

- Situation background and current status;
- Start and end dates (if known);
- Detailed data requirements;
- Step-by-step guide for data entry into iPHIS;
- Data field definitions;
- Screenshots of data field locations; and
- Information on whom to contact for assistance.

**Facility:** In this protocol, facility has the same meaning as defined in the *Risk Assessment and Inspection of Facilities Protocol, 2008* (or as current) which describes facilities in the following two categories:

- Facilities that are under the authority of the HPPA and/or its regulations, including:
  - O. Reg. 568/90 (Recreational Camps);
  - O. Reg. 554/90 (Camps in Unorganized Territories); and
  - HPPA, Section 10.(2) (Premises used or intended for use as a boarding house or lodging house).
- Other facilities that are not regulated under the HPPA, as follows:
  - Ice arenas;
  - Seasonal farm workers' housing;
  - Schools;
  - Day nurseries and other childcare facilities;
  - Long-term care homes;
  - Group homes; and
  - Other facilities as instructed by the Ministry of Health and Long-Term Care.

**Health Hazard:** In this protocol, health hazards have the same meaning as Section 1 of the HPPA. “Health hazard” means,

- (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 has or that is likely to have an adverse effect on the health of any person; (“risque pour la santé”)

**Infectious diseases of public health importance:** Infectious diseases of public health importance include, but are not limited to, those specified reportable diseases as set out by O. Reg 559/91 (as amended) under the Health Protection and Promotion Act and include zoonotic diseases. Emerging infectious diseases may be considered of public health importance based on a variety of criteria, including their designation as an emerging disease by international, federal, and/or provincial health authorities; their potential for preventability or public health action; and the seriousness of their impact on the health of the population and potential spread.
Reportable event: In this protocol, reportable events have the same meaning as Section 38 of the HPPA.\(^1\)

Surveillance: The ongoing systematic collection, analysis, and interpretation of health data, essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. The final link in the surveillance chain is the application of these data to prevention and control. A surveillance system includes a functional capacity for data collection, analysis, and dissemination linked to public health programs.\(^9\)

References