

Tuberculosis Prevention and Control 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 provide direction to boards of health to reduce the burden of tuberculosis (TB) through prevention and control.

More detailed information on implementation can be obtained in the most current version of the *Tuberculosis Prevention and Control Best Practices* document (currently called *TB Protocol, 2006*)²

Reference to the Standards

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

Standard	Requirement
Tuberculosis Prevention and Control	Requirement #1: The board of health shall report TB data elements in accordance with the Health Protection and Promotion Act and the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current).
	Requirement #2: The board of health shall conduct surveillance of active tuberculosis as well as individuals with LTBI in accordance with the <i>Population Health Assessment and Surveillance Protocol, 2008</i> (or as current) and the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current).
	Requirement #5: The board of health shall facilitate timely identification of active cases of TB and referrals of persons with inactive TB through immigration medical surveillance* in accordance with the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current).
	Requirement #6: The board of health shall provide management of cases to minimize the public health risk in accordance with the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current).

* Referrals through Citizenship and Immigration Canada include individuals referred to boards of health, post-landing, for medical follow-up to rule out active TB and to determine the need for treatment of LTBI.

Standard	Requirement
	Requirement #8: The board of health shall provide or ensure the provision of the identification, assessment, and public health management of contacts of active cases in accordance with the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current).
	Requirement #9: The board of health shall provide or ensure the provision of the identification and effective public health management of individuals with LTBI in accordance with the <i>Tuberculosis Prevention and Control Protocol, 2008</i> (or as current), with a particular focus on people at highest risk of progression to active TB.†

Operational Roles and Responsibilities

1) Data collection and reporting of data elements

The board of health shall:

General

- a) On an annual basis, advise physicians and health care providers, hospital administrators and superintendents of institutions, school principals, pharmacists and operators of a laboratory about the requirement to report active and latent cases of tuberculosis (TB) according to the HPPA.¹
- b) Ensure that the information entered into the integrated Public Health Information System (iPHIS) or any other method specified by the Ministry of Health and Long-Term Care (the “ministry”) is complete and accurate and includes the final case disposition (see current iPHIS Guide or any other guide specified by the ministry).

Confirmed and suspect cases

- c) Create the person as a suspect or confirmed case in iPHIS or any other method specified by the ministry within 24 hours of receiving the initial report.

Additional information on cases

- d) Enter into iPHIS or any other method specified by the ministry all initial laboratory, sensitivity, and radiological reports within 24 hours of receipt.
- e) Enter into iPHIS or any other method specified by the ministry any additional data elements as specified in O. Reg. 569 (Reports)³ as soon as possible, but in any event not later than 30 calendar days of receipt.

Information for TB contacts

- f) Enter into iPHIS or any other method specified by the ministry demographics, episode status, and the link to the source case within 30 calendar days of identification of the contact.
- g) Enter into iPHIS or any other method specified by the ministry any additional data elements as soon as possible, but in any event not later than 30 calendar days of receipt.

Immigration medical surveillance

- h) Enter into iPHIS or any other method specified by the ministry demographics and episode status of persons self-reporting for immigration medical surveillance within 30 calendar days of the person reporting.
- i) Enter into iPHIS or any other method specified by the ministry additional data elements for persons on medical surveillance as soon as possible, but in any event not later than 30 calendar days of receipt.

Latent TB infection (LTBI)

- j) Enter all required data elements in accordance with the current *iPHIS Tuberculosis (TB) User Guide*⁴ into iPHIS or any other method specified by the ministry as soon as possible, but in any event not later than 30 calendar days

† People at highest risk of progression to active TB may include recent contacts, the immunocompromised, and recent arrivals to Canada.

of receipt.

2) Surveillance

The board of health shall on an annual basis:

- a) Conduct epidemiological analysis of TB data on the following:
 - i) For cases:
 - Age
 - Gender
 - Risk factors
 - Risk settings
 - Disease characteristics
 - Drug resistance
 - Country of origin
 - Date of treatment completion
 - Mortality
 - ii) For LTBI:
 - Age
 - Gender
 - Risk factors
 - Risk settings
 - Country of origin
 - Date of treatment initiation
 - Date of treatment completion
- b) Disseminate this information to relevant health care and community stakeholders.
- c) Utilize this information for program planning.

3) Early identification of TB cases, including referrals of persons with inactive TB through immigration medical surveillance

The board of health shall:

Early identification of TB cases

- a) Implement strategies to promote the early identification and treatment of persons with TB.
- b) Provide annual education to health care providers and/or community stakeholders about the following:
 - i) Considering TB in persons with compatible symptoms;
 - ii) Reporting suspect and confirmed cases of TB according to the HPPA¹; and
 - iii) Screening of high-risk groups.

Referrals for medical surveillance

- c) Have a mechanism in place for urgent referrals for immigration medical surveillance notification (see glossary) to:
 - i) Locate these persons; and
 - ii) Refer and facilitate the process for medical assessment of these persons within seven calendar days of receipt of the urgent notification or immediately if they have signs or symptoms of active TB.
- iii) Once active TB is ruled out continue to follow these persons as per Regular Immigration Medical Surveillance (see d) iii and d) iv).
- d) Have a mechanism in place for regular referrals for immigration medical surveillance notification to:
 - i) Locate these persons within 30 calendar days;
 - ii) Conduct preliminary assessment for symptoms of active TB;

- iii) Provide TB education at first contact with these persons, which would include:
 - Symptom recognition and the need to notify the board of health should symptoms occur;
 - Availability of TB for Uninsured Persons Program (TBUP) as required;
 - Requirements of medical surveillance; and
 - Instructions for obtaining Ontario Health Insurance Program (OHIP) coverage.
- iv) Facilitate medical assessment for active TB disease and/or LTBI, including sputum collection if the individual has signs or symptoms of active TB, tuberculin skin testing (TST) as appropriate and chest X-ray. This should be completed within three months of the person obtaining OHIP coverage, or earlier if required; and
- v) Utilize strategies to facilitate the early identification of active TB in individuals referred for medical surveillance (e.g., follow for two years those persons with LTBI who do not complete prophylaxis and/or educate them about the signs and symptoms of TB disease, and the need to seek medical attention should these develop).

4) Management of TB cases

The board of health shall:

- a) Initiate contact with persons who have suspect/confirmed respiratory TB and their health care providers, within 24 hours of receipt of the notification.
- b) Direct the person to be in respiratory isolation if respiratory TB is suspected/confirmed.
- c) Conduct public health investigation of all suspect/confirmed cases by obtaining details including:
 - i) Demographics;
 - ii) Symptoms;
 - iii) Date of onset of symptoms;
 - iv) Level of infectiousness;
 - v) Radiological and laboratory results;
 - vi) Assessment of risk factors for acquisition and transmission; and
 - vii) Identification of contacts.
- d) Ensure prescribed treatment regimen is in accordance with the current *Canadian Tuberculosis Standards*⁵
- e) Recommend that a TB specialist provides treatment for or is consulted on all cases resistant to two or more drugs, as well as all cases determined to be treatment failures.
- f) Have a mechanism in place to provide directly observed therapy (DOT)^{††} for:
 - i) All respiratory TB cases for a minimum of eight weeks or while the person is infectious, whichever is longer;
 - ii) All cases (respiratory or nonrespiratory TB) resistant to two or more first line drugs for the duration of treatment;
 - iii) All cases (respiratory or nonrespiratory TB) with treatment failure or reactivated TB for the duration of treatment; and
 - iv) All cases (respiratory or nonrespiratory TB) while they are being treated on an intermittent therapy regimen.
- g) Utilize a DOT assessment tool and clinical judgment to identify TB cases that are likely to be non-compliant and may require DOT for the duration of therapy.
- h) Contact persons with respiratory TB, who are no longer on DOT, at a minimum of once every month to monitor the treatment response, compliance and drug toxicity until the completion of therapy. The frequency of monitoring all nonrespiratory cases shall be based on clinical judgment.
 - i) Ensure that respiratory isolation is discontinued only when a case is considered to be no longer infectious.
 - j) Have a mechanism in place to ensure the provision of publicly funded TB medications at no cost to the person with TB or the provider.

†† DOT means that the person is observed taking their TB medication by a trained observer on all business days that treatment is required.

- k) Review drug regimens and sensitivity results to ensure appropriateness and adequacy of therapy.
- l) Monitor patient compliance with prescribed drug regimens, including completion and outcome of therapy.
- m) Monitor sputum culture conversion for pulmonary TB (or chest X-ray improvement if there is no sputum to culture).
- n) Report to the ministry all cases who:
 - i) Leave the province of Ontario; and/or
 - ii) Are being considered for a Section 35 order from the Ontario Court of Justice under the HPPA.¹
- o) Issue orders to persons with suspect/confirmed TB according to criteria specified in Section 22 of the HPPA.¹

5) Identification, assessment, and management of contacts of respiratory TB

The board of health shall:

- a) Identify high priority contacts (as defined in the glossary) within 48 hours of notification of the source case or as soon as possible thereafter.
- b) Recommend and facilitate assessment of high priority contacts to rule out active TB as soon as possible.
- c) Recommend and facilitate prophylaxis for the following high priority contacts who do not have active TB disease even if they are assessed as being tuberculin skin test (TST) negative:
 - i) children under age 5 years – prophylaxis should be continued for at least eight weeks from break in contact and reassessment should be carried out before prophylaxis is discontinued; and
 - ii) contacts with HIV infection or other severe immunodeficiency should receive a full course treatment of LTBI regardless of the TST results.
- d) Direct close contacts who are not high priority to complete contact follow-up evaluation within four months from break in contact or one month of identification, whichever is later.
- e) Identify any additional contacts (beyond those considered to be close contacts) within one month of notification of the source case. Direct the additional contacts for whom follow-up is considered appropriate, to complete follow-up within four months from break in contact or one month of identification, whichever is later.
- f) Facilitate follow-up of all contacts who are symptomatic for TB disease or (TST) positive to rule out active disease and for consideration of prophylaxis.

6) Identification and management of individuals with LTBI

The board of health shall:

- a) Implement strategies to promote the identification and treatment of persons with LTBI. This shall include annual education of health care providers and/or community stakeholders about:
 - i) Considering LTBI in those with risk factors;
 - ii) Reporting persons with LTBI according to the HPPA¹;
 - iii) Screening of high-risk groups; and
 - iv) The need to offer treatment for those with LTBI as appropriate and ensure treatment completion.
- b) Have a mechanism in place to ensure the provision of publicly funded TB medications for persons on LTBI therapy at no cost to the person with LTBI or the provider.

Glossary

Contact: a person identified as having come in contact with a case of infectious active TB disease. Contacts may be classified as high priority, close household, close non-household or casual or community contacts.

Close household contacts: those individuals who live in the same household as the infectious case of TB. Household contacts are considered by definition to share breathing space on a daily basis with the source case. Under certain circumstances, those who share prison cells, shelters, university dormitories and army barracks may also be considered close household contacts.

Close non-household contacts: those individuals who have regular, prolonged contact with the index case and share breathing space daily, but do not live in the same household. These include sexual partners, those with frequent/regular direct face-to-face exposure at work, and regular social contacts.

Casual contacts: those who spend time less frequently with the infectious case or have had less direct exposure. These individuals may include classmates, colleagues at work, or members of a club or team.

Community contacts: those living in the same community or attending the same school or workplace.

High priority contacts: include close household contacts, children under age five years, those with risk factors for progression of LTBI to TB disease, and contacts exposed during bronchoscopy, sputum induction, autopsy and other high-risk medical procedures.

Urgent Immigration Medical Surveillance Notification Referrals: An applicant requiring medical surveillance for TB (such as pulmonary tuberculosis infection (PTI) based on Medical Services Branch (MSB) standard criteria or other non-infectious TB) and presenting one of the following:

- a) A medical condition placing the applicant at high risk for progression from latent TB infection to active disease with a chest X-ray graded 4.1 to 4.7. These conditions are:
 - i) HIV/AIDS
 - ii) Transplantation with immunosuppressive therapy
 - iii) End-stage renal disease (chronic renal failure/ hemodialysis)
- b) Any case of extra-pulmonary tuberculosis under treatment.
- c) Any other significant factors that can make the management of the contacts in Canada more difficult if latent TB infection progresses to active disease (such as suspected multi-drug resistant TB (MDR-TB) because of previous contact with MDR-TB or extremely resistant TB (XDR-TB) cases).
- d) A chest X-ray graded as follows:
 - i) Non-calcified pleural fibrosis and/or effusion likely related to TB
 - ii) Parenchymal lung disease likely related to TB
 - iii) Acute pulmonary disease likely related to TB
- e) A chest X-ray graded 4.7 (any cavitating lesion or “fluffy” or “soft” lesions likely related to TB) or with extensive, significant anomalies that render the determination of radiological stability difficult and/or doubtful.
- f) A known case of treated MDR-TB or XDR-TB.
- g) Any individual who is understood to have received treatment for two or more independent episodes of TB in the past (respiratory or nonrespiratory).
- h) Any individual with a past history of TB that received particularly unusual/unconventional treatment, as determined by a CIC Medical Officer after consultation with a Canadian TB specialist.

References

1. *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7.
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4. Ministry of Health and Long-Term Care. iPHIS tuberculosis (TB) user guide. Toronto, ON: Queen's Printer for Ontario; 2008.
5. Public Health Agency of Canada. Canadian tuberculosis standards. 6th ed. Ottawa, ON: Her Majesty the Queen in Right of Canada; 2007. Available from http://www.phac-aspc.gc.ca/tbpc-latb/pubs/pdf/tbstand07_e.pdf.