

Appendix B: Provincial Case Definitions for Diseases of Public Health Significance

Disease: Tuberculosis

Effective: February 2019

Tuberculosis

1.0 Provincial Reporting

Confirmed and suspect cases of disease

2.0 Type of Surveillance

Case-by-case

3.0 Case Classification

3.1 Confirmed Case

- Laboratory confirmed case: cases with *Mycobacterium tuberculosis* complex (MTB complex) demonstrated on culture from an appropriate clinical specimen (e.g., sputum, body fluid or tissue) specifically *M. tuberculosis*, *M. africanum*, *M. canetti*, *M. caprae*, *M. microti*, *M. pinnipedii* or *M. bovis* (excluding *M. bovis* Bacillus Calmette Guérin [BCG] strain)

OR

- In the absence of positive culture, cases clinically compatible with active tuberculosis that have:
 - Chest radiological changes compatible with active tuberculosis;
OR
 - Histopathologic or post-mortem evidence of active tuberculosis;
OR
 - Response to anti-tuberculosis treatment;
OR
 - Detection of MTB complex by nucleic acid amplification test (NAAT) with compatible clinical and epidemiological associated information;
OR
 - Active non-respiratory tuberculosis (meningeal, bone, kidney, peripheral lymph nodes, etc.).

A case should not be counted twice within any consecutive 12-month period, unless a second genotype is detected.

3.2 Suspect Case

- Signs and symptoms compatible with active disease;

AND AT LEAST ONE OF THE FOLLOWING:

- Radiological findings suggestive of active disease;
- OR**
- Demonstration of acid-fast bacillus (AFB) in clinical specimen.

3.3 Latent TB Infection

- The presence of latent infection with *Mycobacterium tuberculosis* as determined by a tuberculin skin test (TST) **or** an interferon gamma release assay (IGRA);*
- AND**
- No evidence of clinically active disease;
- AND**
- No evidence of radiographic changes that suggest active disease;
- AND**
- Negative microbiologic tests, if performed.

4.0 Laboratory Evidence

4.1 Laboratory Confirmation

Any of the following will constitute a confirmed case of Tuberculosis:

- Positive culture of MTB complex (*M. tuberculosis*, *M. canetti*, *M. africanum*, *M. caprae*, *M. microti*, *M. pinnipedii*, or *M. bovis*, excluding BCG strain).

4.2 Approved/Validated Tests

- Standard culture for MTB complex;
- Biochemical tests to differentiate between *M. bovis* and *M. bovis* BCG;
- AFB smear; and
- NAAT for MTB complex.

4.3 Indications and Limitations

- Direct NAAT is used for smear positive and smear negative respiratory specimens. However, a negative NAAT result does not rule out MTB complex.
- Direct NAAT for MTB may be useful in extrapulmonary TB but current Health Canada approved assays are not approved for extrapulmonary specimens.
- Direct NAAT for MTB has the potential for false positive results; therefore direct NAAT positive results should be confirmed by culture when possible.

***Note:** If both TST and IGRA are performed and results are discordant, they should be interpreted in the context of other relevant clinical information (e.g., BCG vaccination history), and a decision made as to whether a diagnosis of latent TB infection is appropriate. Please see Chapter 4 of the *Canadian Tuberculosis Standards, 7th ed.* (or as current) for more example scenarios.

5.0 Clinical Evidence

- Clinically compatible signs and symptoms of active tuberculosis include but are not limited to cough, chest pain, fevers, night sweats, weight loss and haemoptysis. Active extrapulmonary tuberculosis (e.g., meningeal, bone, kidney, peripheral lymph nodes) consists of signs or symptoms referable to the extrapulmonary organ involved, and histopathologic or post-mortem evidence of active tuberculosis.
- MTB complex comprises *M. tuberculosis*, including *M. canetti*, *M. bovis* (including BCG strain, though this strain is not included in the case definition of tuberculosis), *M. africanum*, *M. caprae*, *M. microti*, and *M. pinnipedii*. New species may be added with the progress of scientific development in the field.

6.0 ICD 10 Code(s)

A15 Respiratory tuberculosis, bacteriologically and histologically confirmed

A15.0 Tuberculosis of lung, confirmed by sputum microscopy with or without culture

A15.1 Tuberculosis of lung, confirmed by culture only

A15.2 Tuberculosis of lung, confirmed histologically

A15.3 Tuberculosis of lung, confirmed by unspecified means

A15.4 Tuberculosis of intrathoracic lymph nodes, confirmed bacteriologically and histologically

A15.5 Tuberculosis of larynx, trachea and bronchus, confirmed bacteriologically and histologically

A15.6 Tuberculous pleurisy, confirmed bacteriologically and histologically

A15.7 Primary respiratory tuberculosis, confirmed bacteriologically and histologically

A15.8 Other respiratory tuberculosis, confirmed bacteriologically and histologically

A15.9 Respiratory tuberculosis unspecified, confirmed bacteriologically and histologically

A16 Respiratory tuberculosis, not confirmed bacteriologically or histologically

A16.0 Tuberculosis of lung, bacteriologically and histologically negative

A16.1 Tuberculosis of lung, bacteriological and histological examination not done

A16.2 Tuberculosis of lung, without mention of bacteriological or histological confirmation

A16.3 Tuberculosis of intrathoracic lymph nodes, without mention of bacteriological or histological confirmation

A16.4 Tuberculosis of larynx, trachea and bronchus, without mention of bacteriological or histological confirmation

A16.5 Tuberculous pleurisy, without mention of bacteriological or histological confirmation

A16.7 Primary respiratory tuberculosis without mention of bacteriological or histological confirmation

A16.8 Other respiratory tuberculosis, without mention of bacteriological or histological confirmation

A16.9 Respiratory tuberculosis unspecified, without mention of bacteriological or histological confirmation

A17 Tuberculosis of nervous system

A17.0 Tuberculous meningitis

A17.1 Meningeal tuberculoma

A17.8 Other tuberculosis of nervous system

A17.9 Tuberculosis of nervous system, unspecified

A18 Tuberculosis of other organs

A18.0 Tuberculosis of bones and joints

A18.1 Tuberculosis of genitourinary system

A18.2 Tuberculosis peripheral lymphadenopathy

A18.3 Tuberculosis of intestines, peritoneum and mesenteric glands

A18.4 Tuberculosis of skin and subcutaneous tissue

A18.5 Tuberculosis of eye

A18.6 Tuberculosis of ear

A18.7 Tuberculosis of adrenal glands

A18.8 Tuberculosis of other specified organs

A19 Miliary tuberculosis

A19.0 Acute miliary tuberculosis of a single specified site

A19.1 Acute miliary tuberculosis of multiple sites

A19.2 Acute miliary tuberculosis, unspecified

A19.8 Other miliary tuberculosis

A19.9 Miliary tuberculosis, unspecified

7.0 Comments

Confirmed cases must fall into one of the following staging categories:

1) New Active Case

A confirmed case that has no documented evidence (e.g., clinical findings, radiological findings, lab results, etc.) either from within or outside of Ontario or no known history of previously active tuberculosis.

2) Re-treatment Case

Scenario 1

- Documented evidence or adequate history of previously active TB that was declared cured or treatment completed by current standards;

AND

- At least a 6-month interval since the last day of previous treatment;[†]

AND

- Diagnosis of a subsequent episode of TB that meets the active TB case definition.

OR

Scenario 2

- Documented evidence or adequate history of previously active TB that cannot be declared cured or treatment completed by current standards;

AND

- Inactive[‡] disease for 6 months or longer after the last day of previous treatment;

AND

- Diagnosis of a subsequent episode of TB that meets the active TB case definition.

3) Inactive tuberculosis

- Inactivity for a respiratory tuberculosis case is defined as three negative tuberculosis smears and cultures plus a 3-month duration of stability in serial chest radiographs or a 6-month duration of stability in serial chest radiographs without laboratory testing. Inactivity for a non-respiratory TB case is to be documented bacteriologically, radiologically and/or clinically as appropriate to the site of disease

[†] If less than 6 months have passed since the last day of previous treatment and the case was not previously reported in Canada, report as a re-treatment case. If less than 6 months have passed since the last day of previous treatment and the case was previously reported in Canada, do not report as a re-treatment case.

[‡] As defined in section 3) Inactive Tuberculosis.

AND

- Does not meet re-treatment case staging category definition above.

8.0 Sources

Canadian Lung Association, Canadian Thoracic Society, Public Health Agency of Canada. Canadian Tuberculosis Standards. Ottawa, ON: Her Majesty the Queen in Right of Canada; 2014. Available from: <https://www.canada.ca/en/public-health/services/infectious-diseases/canadian-tuberculosis-standards-7th-edition.html>

Public Health Agency of Canada. Tuberculosis. In: Case Definitions for Communicable Diseases under National Surveillance. Canada Communicable Disease Report. 2009;35S2.

9.0 Document History

Table 1: History of Revisions

Revision Date	Document Section	Description of Revisions
April 2015	General	New template. NAT (Nucleic acid amplification test) changed to NAAT throughout the document. Title of Section 8.0 changed from “References” to “Sources”. Section 9.0 Document History added.
April 2015	3.1 Confirmed case	Entire section revised.
April 2015	3.2 Suspect case	Entire section revised.
April 2015	3.3 Latent TB infection	Added Section 3.3 Latent TB infection.
April 2015	5.0 Clinical Evidence	Added haemoptysis to the first bullet: “Clinically compatible signs and symptoms of active tuberculosis include but are not limited to cough, chest pain, fevers, night sweats, weight loss and haemoptysis. ”

Revision Date	Document Section	Description of Revisions
April 2015	7.0 Comments	<p>Removed “A case should not be counted twice within any consecutive 12-month period, unless a second genotype is detected.”</p> <p>Revised “Confirmed cases must fall into one of the following staging categories” to read “TB infections must fall into one of the following staging categories”.</p> <p>Added “(from within or outside of Ontario)” to 1) New Active Case.</p> <p>Removed “A confirmed case with documented evidence or history of previously active tuberculosis which became inactive*. If genotyping on the new strain confirms it to be different from the original strain, then this would be considered a new active case” from 2) Reactivated Case, and replaced with “The development of active disease after a period of latent tuberculosis infection.” Replaced “*Inactive tuberculosis” with “3) Inactive tuberculosis”.</p>
April 2015	8.0 Sources	Sources updated.
August 2015	3.1 Confirmed Case	Addition of last bullet: “Active non-respiratory tuberculosis (meningeal, bone, kidney, peripheral lymph nodes, etc.)”.
August 2015	3.2 Suspect Case	Addition of “AT LEAST ONE OF THE FOLLOWING”.
August 2015	3.3 Latent TB infection	<p>First bullet, deletion of “or dormant”, and the acronyms TST and IGRA are defined.</p> <p>Deletion of “AND No clinical symptoms”.</p> <p>Addition of “if performed” at the end of last bullet.</p>
August 2015	6.1 ICD-10 Code(s)	“19.0 Acute Miliary Tuberculosis of a Single Specified Site” was moved from the subsection Tuberculosis of other organs to the subsection for Miliary tuberculosis .

Revision Date	Document Section	Description of Revisions
August 2015	7.0 Comments	Entire section has been revised and it has been noted that several additions and changes in this document were made to align with the current <i>Canadian Tuberculosis Standards</i> (7 th edition).
February 2019	General	Minor revisions were made to support the regulation change to Diseases of Public Health Significance.
February 2019	6.0 ICD 10 Code(s)	Entire section revised.

