

Appendix B: Provincial Case Definitions for Reportable Diseases

Disease: Tuberculosis

Revised August 2015

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* BCG strain)

OR

- In the absence of positive culture, cases clinically compatible with active tuberculosis that have:

i. Chest radiological changes compatible with active tuberculosis;

OR

ii. Histopathologic or post-mortem evidence of active tuberculosis;

OR

iii. Response to anti-tuberculous treatment;

OR

iv. Detection of MTB complex by nucleic acid amplification test (NAAT) with compatible clinical and epidemiological associated information;

OR

v. Active nonrespiratory 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

- i. No evidence of clinically active disease;

AND

- ii. No evidence of radiographic changes that suggest active disease;

AND

- iii. 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 extra-pulmonary TB but current Health Canada approved assays are not approved for extra-pulmonary specimens.
- Direct NAAT for MTB has the potential for false positive results; therefore direct NAAT positive results should be confirmed by culture when possible.

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 Code(s)

6.1 ICD-10 Code(s)

Respiratory tuberculosis

A15.0 Tuberculosis of Lung

A15.4 Tuberculosis of Intrathoracic Lymph Nodes

A15.5 Tuberculosis of Larynx, Trachea and Bronchus

A15.6 Tuberculous Pleurisy

A15.7 Primary Respiratory Tuberculosis

A15.8 Other Respiratory Tuberculosis

15.9 Respiratory Tuberculosis Unspecified

Tuberculosis of nervous system

17.0 Tuberculous Meningitis

17.1 Meningeal Tuberculoma

17.8 Other Tuberculosis of Nervous System

17.9 Tuberculosis of Nervous System, Unspecified

Tuberculosis of other organs

18.0 Tuberculosis of Bones and Joints

18.1 Tuberculosis of Genitourinary System

18.2 Tuberculosis Peripheral Lymphadenopathy

18.3 Tuberculosis of Intestines, Peritoneum and Mesenteric Lymph Nodes

18.4 Tuberculosis of Skin and Subcutaneous Tissue

18.5 Tuberculosis of Eye

18.6 Tuberculosis of Ear

18.7 Tuberculosis of Adrenal Glands

18.8 Tuberculosis of Other Specified Organs **Miliary tuberculosis**

19.0 Acute Miliary Tuberculosis of a Single Specified Site

19.1 Acute Miliary Tuberculosis of Multiple Sites

19.2 Acute Miliary Tuberculosis, Unspecified

19.8 Other Miliary Tuberculosis

7.0 Comments

Several additions and changes in this document were made in order to align with the current *Canadian Tuberculosis Standards* (7th edition).

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

1) New Active Case

A confirmed case who 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

- i. Documented evidence or adequate history of previously active TB that was declared cured or treatment completed by current standards;
AND
- ii. At least a 6-month interval since the last day of previous treatment;[†]
AND
- iii. Diagnosis of a subsequent episode of TB that meets the active TB case definition.

OR

Scenario 2

- i. Documented evidence or adequate history of previously active TB that cannot be declared cured or treatment completed by current standards;
AND
- ii. Inactive[‡] disease for 6 months or longer after the last day of previous treatment;
AND
- iii. Diagnosis of a subsequent episode of TB that meets the active TB case definition.

[†] 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 below in section 3) Inactive Tuberculosis.

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 nonrespiratory TB case is to be documented bacteriologically, radiologically and/or clinically as appropriate to the site of disease

AND

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

8.0 Sources

Advisory Committee on Epidemiology; Health Canada. Case definitions for diseases under national surveillance. Can Commun Dis Rep. 2000; 26 Suppl 3:i-iv, 1-122. Available from: <http://publications.gc.ca/collections/Collection/H12-21-3-26-3E.pdf>

Canadian Lung Association, Canadian Thoracic Society; Public Health Agency of Canada. Canadian tuberculosis standards. 7th ed. Ottawa, ON: Her Majesty the Queen in Right of Canada, as represented by the Minister of Health; 2014. Available from: http://www.respiratoryguidelines.ca/sites/all/files/Canadian_TB_Standards_7th_Edition_EN_G.pdf

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. ”
April 2015	7.0 Comments	Removed “A case should not be counted twice within any consecutive 12-month period, unless a second genotype is detected.” 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”. Added “(from within or outside of Ontario)” to 1) New Active Case. 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”.
April 2015	8.0 Sources	Sources updated.
August 2015	3.1 Confirmed Case	Addition of last bullet: “Active nonrespiratory tuberculosis (meningeal, bone, kidney, peripheral lymph nodes, etc.)”.

Revision Date	Document Section	Description of Revisions
August 2015	3.2 Suspect Case	Addition of “AT LEAST ONE OF THE FOLLOWING”.
August 2015	3.3 Latent TB infection	First bullet, deletion of “or dormant”, and the acronyms TST and IGRA are defined. Deletion of “AND No clinical symptoms”. Addition of “if performed” at the end of last bullet.
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 .
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 (7th edition)</i> .

