

Childhood tuberculosis (TB)

CANADIAN PAEDIATRIC SURVEILLANCE PROGRAM

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REPORTING INFORMATION

(To be completed by CPSP staff)

Report number: _____

Month of reporting: _____

Province: _____

Today's date: _____

**Please complete the following sections for the case identified above.
Strict confidentiality of information will be assured.**

CASE DEFINITION FOR CHILDHOOD TUBERCULOSIS

Report any new active or retreatment case of TB disease in patients under the age of 15 years.

Proven TB disease

1. Laboratory-confirmed

Isolation of *M tuberculosis* complex from any clinical specimen:

Positive culture **OR** positive nucleic acid amplification test (NAAT), specifically *M tuberculosis*, *M africanum*, *M canetti*, *M caprae*, *M microti*, *M pinnipedii* or *M bovis* (excluding *M bovis* BCG strain)

2. Clinically confirmed

Probable intrathoracic	Probable extrapulmonary – non-pleural
Signs and symptoms, histology suggestive of TB or close contact with an infectious source case	Signs and symptoms, histology or findings on diagnostic radiology consistent with TB
Chest radiography consistent with intrathoracic TB disease	
and at least one of the following:	
<ul style="list-style-type: none"> • A positive clinical response to anti-TB treatment • Documented exposure to active case of infectious <i>M tuberculosis</i> • Immunological evidence of <i>M tuberculosis</i> infection: Positive TB skin test (TST) or positive interferon gamma release assay (IGRA) 	

Presumed TB disease

Treatment for suspected TB disease at any site with at least three anti-TB drugs

Cases are identified as "New" or "Re-treatment" based on the following criteria:

- **New active case of tuberculosis disease:** No documented evidence or history of previously active tuberculosis.
- **Re-treatment case of tuberculosis:**
 - a) Documented evidence or adequate history of previously active TB that was declared cured or treatment completed by current standards, and
 - b) At least a six-month interval since the last day of previous treatment and
 - c) Diagnosis of a subsequent episode of TB that meets the active TB case definition.

OR

 - a) Documented evidence or adequate history of previously active TB that cannot be declared cured or treatment completed by current standards, and
 - b) Inactive disease for six months or longer after the last day of previous treatment and
 - c) Diagnosis of a subsequent episode of TB that meets the active TB case definition

Exclusion criteria

- Isolation of another pathogen, including atypical mycobacteria
- Patient arriving in Canada on TB treatment for presumed TB but for whom treatment is stopped because subsequent work-up in Canada suggests no TB
- Patient with latent TB (TST- or IGRA-positive but no clinical or radiologic abnormality)

Month first seen: _____

SECTION 1 – DEMOGRAPHIC INFORMATION

1.1 Date of birth: ____ / ____ / ____
DD MM YYYY

1.2 Sex: Male ___ Female ___

1.3 Province/Territory of permanent residence: _____

1.4 Province/Territory of diagnosis: _____

1.5 Canadian-born? Yes ___ No ___ If yes, specify: non-Aboriginal ___ First Nations ___ Métis ___ Inuit ___

Other Aboriginal, specify: _____ Living on reserve? Yes ___ No ___ Unknown ___

1.6 If not Canadian-born, indicate country of birth: _____ and year of arrival to Canada: _____

If different from the child, country of birth of mother: _____ father: _____

Status of child: Canadian citizen/permanent resident ___ Refugee ___ Other: _____

SECTION 2 – EPIDEMIOLOGY

2.1 Is the index case known? Yes___ No___ Date of diagnosis, index case: ___/___/___
DD MM YYYY

If yes, specify: 1st-degree relative___ 2nd-degree relative___ Friend___
 Other, specify: _____

2.2 Was the index case organism resistant to any of the agents below?

Yes___ No___ Not done___ Unknown___

If yes, check all that apply: Isoniazid___ Ethambutol___ Rifampicin___ Pyrazinamide___
 Streptomycin___ Kanamycin___ Capreomycin___ Ofloxacin___ Ethionamide___
 Para-aminosalicylic acid (PAS)___ Rifabutin___ Amikacin___ Moxifloxacin___ Linezolid___
 Other, specify: _____

2.3 Identify the type of contact: Close household___ Close non-household___ Casual___ Community___
 Visit to endemic country___ Other, specify: _____

2.4 If visit to endemic country, specify location: _____

Date of visit to endemic country prior to active TB diagnosis: ___/___/___ to ___/___/___
DD MM YYYY DD MM YYYY

2.5 Lived in endemic country? Yes___ No___

If yes, specify location and dates: _____ to ___/___/___
DD MM YYYY DD MM YYYY

SECTION 3 – PAST MEDICAL HISTORY

Yes No Unknown

3.1 BCG Vaccination? ___ ___ ___

If yes, specify: Date given: ___/___/___ Country where received: _____
DD MM YYYY

3.2 Previously identified to have latent TB? ___ ___ ___

3.3 Previous treatment for TB? ___ ___ ___

If yes, treatment was for: Latent___ Active___ Unknown___

3.4 Is there an underlying immune compromising condition? ___ ___ ___

If yes, specify: HIV___ Chronic kidney disease, specify: _____

Organ transplantation___ specify organ: _____ and transplant date: ___/___/___
DD MM YYYY

Currently active cancer? ___ ___ ___

Previously treated cancer within last 12 months? ___ ___ ___

If yes to either above, specify:

• Hematologic cancer___ Type: _____ Solid cancer___ Type: _____

Immune suppressing medication(s)? ___ ___ ___

If yes, check all that apply:

• Cancer chemotherapy___ Post-transplant immune suppression___ Corticosteroids___
 Methotrexate___ Biologic agents (TNF alpha inhibitors and others), specify agent: _____
 Other, specify: _____

SECTION 4 – CLINICAL HISTORY

DD MM YYYY Not done

4.1 Clinical diagnosis confirmed: ___/___/___ ___

Laboratory diagnosis, first positive culture: ___/___/___ ___

Laboratory diagnosis, first positive NAAT: ___/___/___ ___

4.2 Case meets the following TB disease definition: Proven___ Clinical___ Presumed___

Specify: Intrathoracic___ Extrapulmonary___

• Location(s): Lungs___ Pleura___ Other: respiratory___ Miliary___ Lymph node___ Bone___

CNS___ Other___ Provide any additional details regarding location (i.e., location of node/bone, etc.):

SECTION 4 – CLINICAL HISTORY (cont'd)

4.3 Clinical presentation

Presentation	Yes	No	Unknown	Duration prior to earliest diagnosis	
				Days	Weeks
Fever	___	___	___	_____	_____
Night sweats	___	___	___	_____	_____
Cough – productive	___	___	___	_____	_____
Cough – non-productive	___	___	___	_____	_____
Hemoptysis	___	___	___	_____	_____
Weight loss	___	___	___	_____	_____
Lymphadenopathy	___	___	___	_____	_____
Chest pain	___	___	___	_____	_____
CNS (specify)	___	___	___	_____	_____
Bone/joint	___	___	___	_____	_____
Other (specify)	___	___	___	_____	_____
Visits to MD/other before diagnosis	___	___	___	_____	_____

SECTION 5 – MICROBIOLOGY AND OTHER TESTS

5.1 TB skin test:

Test	Positive	Negative	Indeterminate	Not done	Induration (mm)	Hours to reading
TB skin test #1						
TB skin test #2						

5.2 Interferon gamma release (IGRA): Positive___ Negative___ Not done___

5.3 Other microbiology and tests

Specimen	Date of specimen collection DD / MM / YYYY	AFB* stain	PCR*	AMTD*	Organism grown on culture:		
					<i>M tuberculosis</i>	<i>M bovis</i>	Other (specify)
Sputum	___/___/___	___	___	___	___	___	_____
Gastric aspirate	___/___/___	___	___	___	___	___	_____
Blood	___/___/___	___	___	___	___	___	_____
CSF	___/___/___	___	___	___	___	___	_____
Bone	___/___/___	___	___	___	___	___	_____
Joint	___/___/___	___	___	___	___	___	_____
Urine	___/___/___	___	___	___	___	___	_____
Drainage from abscess	___/___/___	___	___	___	___	___	_____
Other, specify: _____	___/___/___	___	___	___	___	___	_____

* AFB Acid-fast bacillus; PCR Polymerase chain reaction; AMTD Amplified mycobacterium tuberculosis direct

SECTION 6 – DRUG RESISTANCE

6.1 Antibiotic resistance of initial positive culture

Drug	Results: Susceptible	Resistant	Not done	Unknown
Isoniazid	___	___	___	___
Ethambutol	___	___	___	___
Rifampicin	___	___	___	___
Pyrazinamide	___	___	___	___
Streptomycin	___	___	___	___
Kanamycin	___	___	___	___
Capreomycin	___	___	___	___
Ofloxacin	___	___	___	___
Ethionamide	___	___	___	___
PAS	___	___	___	___
Rifabutin	___	___	___	___
Amikacin	___	___	___	___
Moxifloxacin	___	___	___	___
Linezolid	___	___	___	___
Other, specify _____	___	___	___	___
Unknown___				

SECTION 7 – RADIOLOGY AT DIAGNOSIS

7.1 CXR: Normal___ Cavitory lesions___ Non-cavitory lesions___ Hilar adenopathy___ Pleural effusion___

7.2 Was chest CT done? Yes___ No___ Unknown___

If **yes**, results were: Normal___ Abnormal, specify:_____

7.3 Were other contributory radiologic tests done? Yes___ No___ Unknown___

If **yes**, specify test (e.g., head MRI):_____ and results:_____

SECTION 8 – TREATMENT

8.1 Treatment is: Complete___ Ongoing___ If **ongoing**, treatment is in ___ month of expected ___ months

8.2 Was patient hospitalized for treatment? Yes___ No___

If **yes**, specify: Duration: ___ weeks or ___ days

8.3 Admission to ICU? Yes___ No___

8.4 Patient care

8.4.1 Intensive phase – Patient weight: _____ kg

Medication	Dose (per day)	Frequency (Days per week)	DOT*		Duration (actual or planned)		
			Yes	No	Days	Weeks	Months
Isoniazid	_____	_____	___	___	_____	_____	_____
Rifampicin	_____	_____	___	___	_____	_____	_____
Pyrazinamide	_____	_____	___	___	_____	_____	_____
Ethambutol	_____	_____	___	___	_____	_____	_____
Amikacin	_____	_____	___	___	_____	_____	_____
Ciprofloxacin	_____	_____	___	___	_____	_____	_____
Adjunctive drugs:							
Dexamethasone	_____	_____	___	___	_____	_____	_____
Prednisone	_____	_____	___	___	_____	_____	_____
Other, specify:							
_____	_____	_____	___	___	_____	_____	_____

* DOT: Directly observed therapy

8.4.2 Continuation phase

Medication	Dose (per day)	Frequency (Days per week)	DOT*		Duration (actual or planned)		
			Yes	No	Days	Weeks	Months
Isoniazid	_____	_____	___	___	_____	_____	_____
Rifampicin	_____	_____	___	___	_____	_____	_____
Pyrazinamide	_____	_____	___	___	_____	_____	_____
Ethambutol	_____	_____	___	___	_____	_____	_____
Amikacin	_____	_____	___	___	_____	_____	_____
Ciprofloxacin	_____	_____	___	___	_____	_____	_____
Adjunctive drugs:							
Dexamethasone	_____	_____	___	___	_____	_____	_____
Prednisone	_____	_____	___	___	_____	_____	_____
Other, specify:							
_____	_____	_____	___	___	_____	_____	_____

* DOT: Directly observed therapy

8.5 Did patient's condition deteriorate after therapy started? Yes___ No___

If **yes**, number of days after therapy started:_____

If **yes**, specify reason: Inflammatory response syndrome___ Drug toxicity___

Other, specify: _____

8.6 Any adverse drug reaction requiring change in dosage/medication regimen? Yes___ No___

If **yes**, specify:

Medication	Adverse reaction	Response

8.7 Was patient hospitalized for adverse drug reaction? Yes___ No___

If **yes**, duration of hospitalization: ___ days ___ weeks ___ months

8.8 If directly observed therapy (DOT) used, was it useful in management? Yes___ No___ Unsure___

If **yes**, specify how: _____

SECTION 8 – TREATMENT (con'td)

8.9 Were corticosteroids used to manage the deterioration? Yes___ No___ Unknown___

If yes, specify before___ or after___ therapy was started

and specify:

Medication	Initial dose	Duration

SECTION 9 – TREATMENT OUTCOME

- | | Yes | No |
|---|-----|-----|
| 9.1 Cure: Culture-negative at the completion of treatment*? | ___ | ___ |
| 9.2 Treatment completed but without culture at the end of treatment? | ___ | ___ |
| a) with clinical improvement? | ___ | ___ |
| b) with radiological improvement? | ___ | ___ |
| 9.3. Treatment failure (active TB) [†] ? | ___ | ___ |
| (Positive sputum cultures after four or more months of treatment or two positive sputum cultures in different months during the last three months of treatment, even if the final culture is negative and no further treatment is planned.) | | |
| 9.4 For respiratory TB, time to first negative: # weeks # days not done N/A | | |
| • Respiratory specimen smear | ___ | ___ |
| • Respiratory specimen culture | ___ | ___ |
| 9.5 Loss to follow-up before completion of 80% of doses? | ___ | ___ |
| 9.6 Extended treatment? | ___ | ___ |
| If yes, specify reason: _____ | | |
| 9.7 Did patient move to new country before end of treatment? | ___ | ___ |
| 9.8 Did patient permanently stop treatment due to adverse event(s)? | ___ | ___ |
| 9.9 Death before or during treatment? | ___ | ___ |
| • TB was cause of death___ | | |
| • TB contributed to death but was not underlying cause___ | | |
| • TB did not contribute to death___ | | |
| • If died, age at death: _____ | | |
| • Other comments: _____ | | |

* **Cure:** For multi-drug resistance to TB (MDR-TB) (resistance to at least isoniazid and rifampicin) where serial culture are obtained from the patient, cure is defined as when the patient has been consistently culture-negative (with at least five results) for the final 12 months of treatment. If there was only one positive culture with no clinical evidence of deterioration, a patient may be considered cured provided that the positive culture is followed by at least three consecutive negative cultures taken at least 30 days apart.

† **Treatment failure:** For MDR-TB (resistance to at least isoniazid and rifampicin), treatment is considered to have failed if: two or more of five cultures recorded in the final 12 months are positive, or any one of the final three cultures is positive, or if a clinical decision has been made to terminate treatment early due to poor response or adverse events.

- ___ **I agree to be contacted by the CPSP for further information on this questionnaire.**
- ___ **I do not wish to be contacted by the CPSP for further information on this questionnaire.**
- ___ **I agree to be contacted at 6 and 12 months for follow-up studies.**
- ___ **I do not wish to be contacted for follow-up studies.**

SECTION 10 – REPORTING PHYSICIAN

First name _____ Surname _____

Address _____

City _____ Province _____ Postal code _____

Telephone number _____ Fax number _____

E-mail _____ Date completed _____

Thank you for completing this form.