

Public Health Orientation Tuberculosis

July 2018



Ontario Public Health Standards - Tuberculosis

- Goal
 - To reduce the burden of communicable diseases and other infectious diseases of public health importance
- Outcomes
 - Reduced transmission of infections and communicable diseases.
 - Timely and effective detection, identification, and management of exposures and local cases/outbreaks of infectious and communicable diseases of public health importance, including diseases of public health significance, their associated risk factors, and emerging trends.
 - Effective case management results in limited secondary cases.
 - Reduced progression from latent tuberculosis infection (LTBI) to active tuberculosis (TB) disease.
 - Reduced development of acquired drug-resistance among active TB cases.

History of TB in First Nations and Inuit

- Epidemic tuberculosis (TB) came to Canada with European settlers in the 1700s.
- Malnutrition increased the risk of disease, and the confinement of First Nations people on crowded reserves allowed the disease to spread rapidly
- Tragically, TB death rates among children in residential schools were even worse -- as high as 8,000 deaths per 100,000 children.
- At least one-third of Inuit were infected with TB in the 1950s.
- Many families were not notified when a TB patient died in the south. The dead were buried in paupers' graves in a southern cemetery, paid for by the Department of Northern Affairs.

Source: <https://www.cpha.ca/tb-and-aboriginal-people>

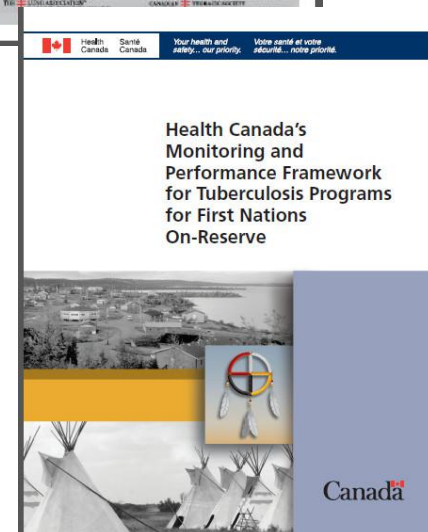
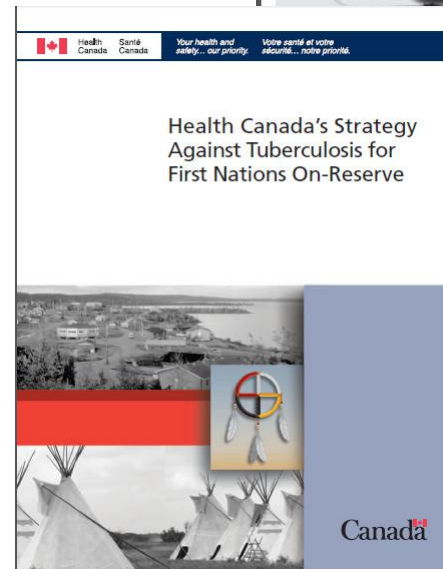
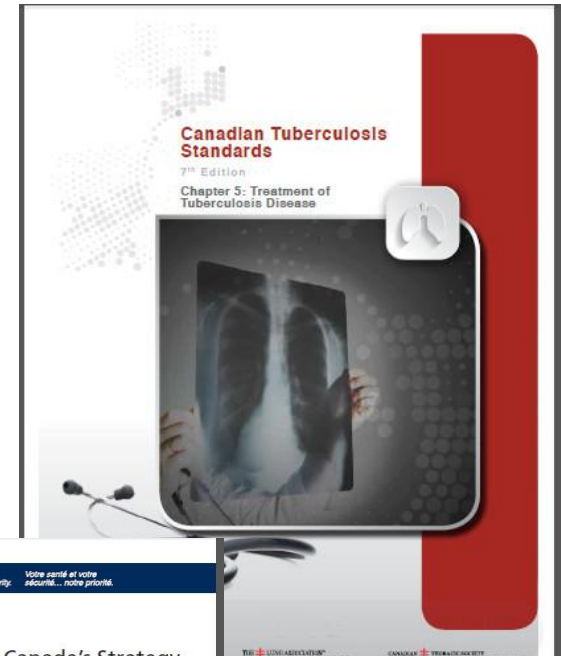
TB in Aboriginal Communities Today

- While TB rates across Canada fell dramatically in the 1950s and 1960s due to the introduction of strong antibiotic treatment, the disease persists in many Aboriginal communities today.
- The TB rate among Aboriginal people was almost six times greater than the overall Canadian rate in 2008
- Overcrowded housing increases the likelihood that infectious cases will spread TB to others.
- To achieve a significant decrease in the TB rate among Aboriginal peoples, improvements are needed in socio-economic conditions, the early detection of cases, appropriate and complete treatment, and available resources.

Source: <https://www.cpha.ca/tb-and-aboriginal-people>

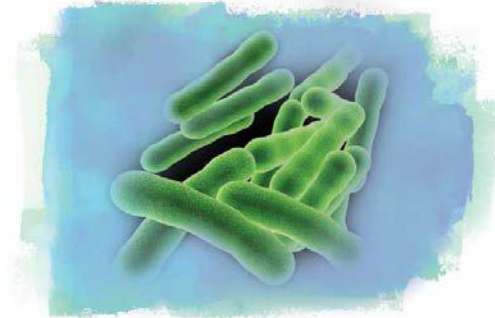
Foundational Documents

- Canadian Tuberculosis Standards
- FNIHB-OR Tuberculosis Policies and Procedures
 - Outlines areas where FNIHB-OR policies differ from the Canadian TB Standards, such as reporting, screening practices, etc.
- Reporting Forms
- Health Canada's Strategy Against Tuberculosis for First Nations On-Reserve



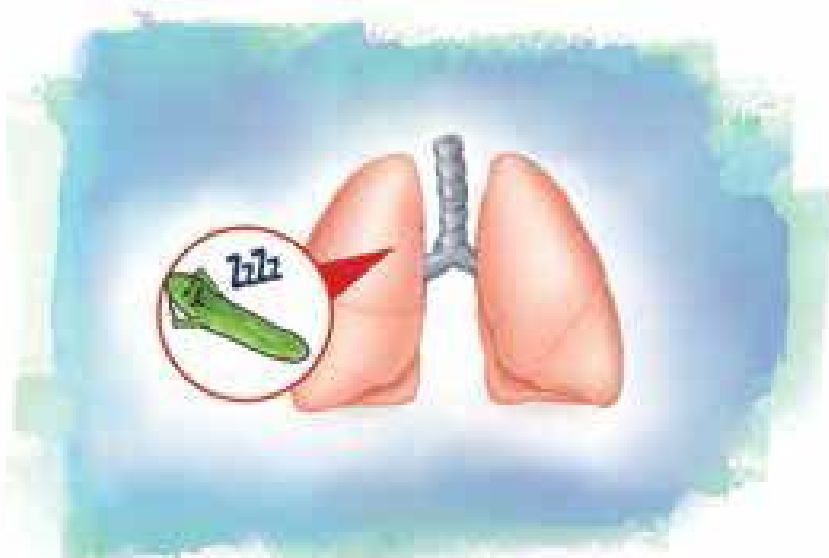
How Does TB Enter the Body

- Droplet nuclei containing tubercle bacilli are inhaled, enter the lungs, and travel to the alveoli. Infection begins when droplet nuclei reach the alveoli.
- Tubercle bacilli multiply in the alveoli.
- TB enter the bloodstream and spread throughout the body. The tubercle bacilli may reach any part of the body, including areas where TB disease is more likely to develop (lungs, kidney, brain or bone).
- Within 2 to 8 weeks the immune system produces macrophages that surround the tubercle bacilli. The cells form a barrier shell that keeps the bacilli contained and under control.
- This is known as **Latent TB Infection (LTBI)**



Latent TB Infection

- Tubercle bacilli are in the body but the immune system is keeping them dormant. People with latent TB infection have no symptoms.
- People with LTBI are NOT infectious and CANNOT spread TB to others.**
- Some will go on to develop TB disease but most will not.

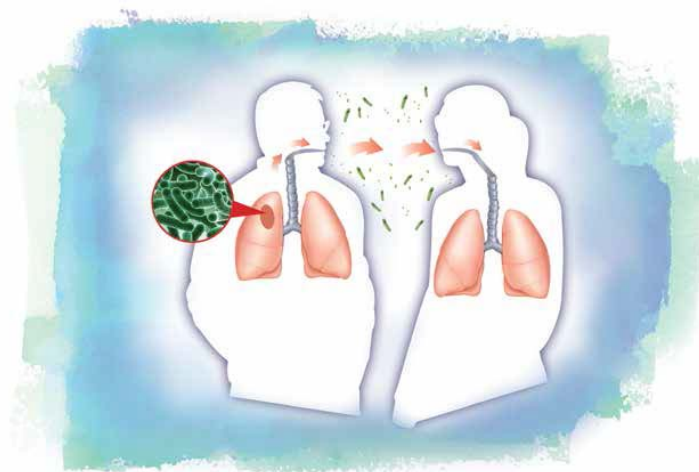


TB Disease

- If the immune system cannot keep the tubercle bacilli under control, they begin to multiply.
- This process can occur in different places in the body, such as the lungs, kidneys, brain or bone.
- TB disease can develop very soon after infection or many years after infection
- People with early TB disease may or may not have symptoms. Only TB in the respiratory system can be spread to others.
- Extra pulmonary or non respiratory TB disease is usually considered non-infectious

PPE

- Tuberculosis is an airborne transmittable disease. Airborne transmission refers to dissemination of microorganisms by aerosolization.
- Control of airborne transmission requires control of airflow and use of N95 respirators that are fitted specifically to the health care provider.
- When nurses are caring for patients with TB they should review the airborne precautions outlined in the FNIHB-OR TB policies and FNIHB-OR IPAC policies, as well as review protocols with the CD nurse and physician in charge of the care of the client.

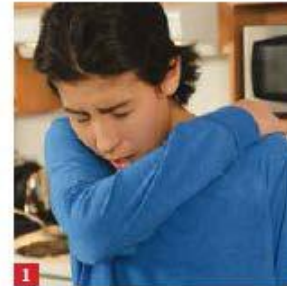


TB Infection Versus TB Disease

TB Infection	VS	TB Disease
Positive skin test	SKIN TEST	Positive skin test
TB germ has entered the body but IS NOT growing (dormant)	STATUS	TB Germ has entered the body and <u>IS</u> growing (replicating)
NOT CONTAGIOUS Cannot pass TB germ to anyone else	INFECTIOUSNESS	CONTAGIOUS If disease is in the lungs and not properly treated with medication
Normal chest x-ray	CHEST X-RAY	Has abnormal chest x-ray OR evidence of TB in other parts of the body
No symptoms	SYMPTOMS	Symptoms become more severe over time (e.g., cough, chest pain, chills, weakness, fever, weight loss, night sweats, coughing up blood)
May be prescribed medication for 6-12 months to prevent disease from developing	TREATMENT	Requires treatment with several medicines for at least 6 months to cure disease
Person is at risk of developing disease in the future	RISKS	Person has disease and must be treated to prevent disease from getting worse or spreading to others

Symptoms of Respiratory TB

- Chronic cough lasting at least 2-3 weeks
- Fever
- Night sweats
- Hemoptysis
- Anorexia
- Weight loss
- Chest pain or discomfort



Symptoms in Children

- Most young children with TB are asymptomatic at presentation. Typically, children are identified as contacts of adult patients with infectious TB.
- Older children and adolescents are more likely to experience adult-type disease and often present with the classic triad of fever, night sweats and weight loss.



Medical Directive



Government of Canada
Gouvernement du Canada

Medical Directive

Authority to Administer Tuberculin Skin Tests by Nurses Working in First Nations Communities in FNIHB-Ontario Region

Medical Directive: CD-TST-001 C

Activation Date: March 1, 2018

Review Due by: January 31, 2020

Sponsoring Person(s): Jo Ann Majerovich, MSc MD CCFP MSc FCFP MPH, Regional Medical Officer, Shari Glenn, NP (PHC), Director of Nursing

Delegated Procedure/Order

The safe and effective intradermal administration of purified tuberculin protein derivative (PPD) by nurses working in First Nation communities in Ontario Region. Nurses will assess for tuberculosis infection in those designated as screening priority that live in First Nations communities in Ontario Region, in accordance with *FNIHB-Ontario Region Tuberculosis Prevention and Control Policies and Procedures* (2018) or current, as well the *Canadian Tuberculosis Standards, 7th Edition* or current.

Informed Consent

Registered Nurses and Registered Practical Nurses will obtain informed consent as per the *College of Nurses of Ontario: Practice Guidelines on Consent* with additional support from the *FNIHB-Ontario Region Tuberculosis Prevention and Control Policies and Procedures* (2018) or current, as well as the *Canadian Tuberculosis Standards, 7th Edition* or current.

Medical Directive – con't

Recipients Clients/ Patients

- In all zones, when required for contact tracing of a tuberculosis case.
- In all zones, when a client has a positive HIV test and no past history of tuberculosis disease, or a past history of a positive TST result.
- In all zones, when a high or moderate risk client has a positive tuberculosis symptom assessment and no past history of tuberculosis disease, or a past history of a positive TST result.
- Routine screening in Sioux Lookout Zone of four year olds that **do not** have a history of BCG vaccination in the following communities:
 - Lac Seul
 - Pikangikum
 - Poplar Hill
 - Sandy Lake
 - Mishkeegogamang

Dosage

- A single dose of 0.1mL PPD administered intradermally.

Authorized Implementers

The medical directive may be implemented by nurses who:

- Are Registered Nurses (RNs) or Registered Practical Nurses (RPNs) working in First Nations communities in Ontario, who are in good standing with the College of Nurses of Ontario, with no suspensions
- Are working in a Community Health Nursing role.
- Have successfully completed the FNIHB-Ontario Region Immunization Orientation and Competency Certification, and attended all mandatory immunization education sessions to maintain competency.

Medical Directive – con't

All nurses using this directive must be:

- Knowledgeable of the *FNIHB-Ontario Region Tuberculosis Prevention and Control Policies and Procedures* (2018) or current, as well the *Canadian Tuberculosis Standards 7th Edition* or current.
- Able to apply their knowledge, judgment and skills in safely administering and accurately reading the TST
- Remain up-to-date on changes to the *FNIHB-Ontario Region Immunization Protocol* including the current *Canadian Immunization Guide* and approved regional policies.
- Knowledgeable and remain up-to-date on Early Vaccine Reactions Including Anaphylaxis found in the *Canadian Immunization Guide: Part 2 - Vaccine Safety* and the *FNIHB-Ontario Region Basic Management of Post-Immunization Anaphylaxis in Non-Hospital Setting*.
- Currently certified in CPR

Guidelines for Implementing the Procedure/Order

Implementation of this medical directive requires the nurse(s) to:

- Discuss with the recipient or parent/guardian, the benefits and risks of receiving or not receiving the TST and answer questions in order to obtain informed consent
- Ensure that the recipient or parent/guardian is able to return in 48-72 hours to have the TST read
- Assess and document allergies/contraindications related to TST
- Administer and read TSTs as per the *Canadian Tuberculosis Standards, 7th edition* Chapter 4 (p. 66-78) or current
- Document the intervention and treatment of any Adverse Event Following Immunization (AEFI) (according to the *FNIHB-Ontario Region Immunization Protocol*).

Medical Directive – con't

Contraindications to the Implementation of this Directive

- Allergy to any component of Tubersol or its container, or an anaphylactic or other allergic reaction to a previous test of tuberculin.
- Previous positive TST.
- Those with severe blistering TST reactions in the past or with extensive burns or eczema present over TST testing sites, because of the greater likelihood of adverse reactions or severe reactions.
- Those with documented active TB or a well-documented history of adequate treatment for TB infection or disease in the past. In such patients, the test is of no clinical utility.
- Those with major viral infections.
- Those who have received measles immunization within the past 4 weeks, as this has been shown to increase the likelihood of false negative TST results. No data are available regarding the effects on TST of other live virus immunizations - mumps, rubella, varicella, yellow fever, varicella zoster, rotavirus and live attenuated influenza vaccine (ie., FluMist) - but it is prudent to follow the same 4 week guideline. However, if the opportunity to perform the TST might be missed, the TST should not be delayed for live virus vaccines since these are theoretical considerations.

Documentation and Communication

Documentation and communication must be in compliance with the requirements defined by *College of Nurses of Ontario Practice Standard: Documentation, Revised 2008*.

Document in the client medical record using the FNIHB-Ontario Region TST Consent Form. For communities that use an electronic medical record, consent indicated within the EMR will be sufficient. .

Medical Directive – con't

Quality Assurance and Review Process

- Ongoing nursing competency support is provided via ongoing education sessions and access to updated information at www.onehealth.ca
- Nurses will consult with the Communicable Disease Nurse and/or Practice Consultant as necessary for support, guidance and questions.
- This medical directive will be reviewed biannually or earlier if new information becomes available.

Approving Physician(s)/Authorizer(s)

Jo Ann Majerovich, MSc MD CCFP MSc FCFP, Regional Medical Officer

Signature



Date:

01.05.18

Administrative Approvals

Shari Glenn, NP (PHC), Director of Nursing

Signature:



Date:

March 1, 2018

TST Consent Form



Government
of Canada

Gouvernement
du Canada

Tuberculin Skin Test Form

Client Demographic Information				* Indicates required information.
*Community Name:				
*Client's Name:				
	(Last Name, First Name, Middle Initial)	Alternate Name		
*Unique Identifier: (OHIP #)		*DOB: DD-MMM-YYYY		
Panorama Identifier:		*Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Undifferentiated		
Band Number:				

Tuberculin Screening Questions (to be completed by the Community Health Nurse- look in client chart for previous TSTs or TB history)

Please answer these screening questions by checking (✓) where appropriate:

	YES	NO
1. Have you/has your child had tuberculosis?	<input type="checkbox"/>	<input type="checkbox"/>
2. Have you/has your child ever had a TB skin test on their forearm that caused a blister? (ie. allergic reaction)	<input type="checkbox"/>	<input type="checkbox"/>
3. Have you/has your child ever had a TB skin test that caused a bump equal to or greater than 10 mm (size of a dime)?	<input type="checkbox"/>	<input type="checkbox"/>
4. Have you/has your child had a live vaccine in the past 4 weeks? (measles, mumps, & rubella, varicella, yellow fever, herpes zoster or live attenuated influenza vaccine [ie. Flumist])?	<input type="checkbox"/>	<input type="checkbox"/>

If the client answers YES to ANY of the above 4 questions then they should NOT have a tuberculin skin test.

TST Consent Form – con't

Consent for Tuberculin Skin Test (TST)																																							
<input type="checkbox"/> I have read or had explained to me information about the TST. <input type="checkbox"/> I have had the chance to ask questions, which were answered to my satisfaction. <input type="checkbox"/> I understand the risks and benefits associated with this test. <input type="checkbox"/> I am aware that personal health information collected on this form may be shared with another doctor or nurse if that is required for my care. <input type="checkbox"/> <i>I consent to having the TST done and I am aware that I am required to return for reading of the test in 48-72 hours.</i>	*Form of Consent: <input type="checkbox"/> Written <input type="checkbox"/> Verbal *Relationship: <input type="checkbox"/> Parent <input type="checkbox"/> Client <input type="checkbox"/> Substitute Decision-Maker Print Name of Person Giving Consent: Signature of Person Giving Consent: _____ Date: _____ Relationship: _____																																						
*Reason for Testing (check (✓) one box only) <input type="checkbox"/> Contact tracing <input type="checkbox"/> Targeted Screening <input type="checkbox"/> Other: _____																																							
<table border="1"> <thead> <tr> <th colspan="3">Test Specification</th> </tr> </thead> <tbody> <tr> <td colspan="3">*Date of Test: DD-MMM-YYYY</td> </tr> <tr> <td colspan="3">*Time of Test: ____ : ____</td> </tr> <tr> <td>Dose:</td> <td>Route:</td> <td>Site: <div> <input type="checkbox"/> Inner aspect of Rt forearm <input type="checkbox"/> Inner aspect of Lt forearm <input type="checkbox"/> Other- _____ </div> </td> </tr> <tr> <td>Lot #</td> <td colspan="2">Expiry Date:</td> </tr> <tr> <td colspan="3">*Please note 2 step Mantoux requires a physician's order*</td> </tr> <tr> <td colspan="3"> <input type="checkbox"/> Step 1 of 2 <input type="checkbox"/> Step 2 of 2 </td> </tr> <tr> <td>Print Name of Provider:</td> <td colspan="2">Signature of Provider:</td> </tr> </tbody> </table>	Test Specification			*Date of Test: DD-MMM-YYYY			*Time of Test: ____ : ____			Dose:	Route:	Site: <div> <input type="checkbox"/> Inner aspect of Rt forearm <input type="checkbox"/> Inner aspect of Lt forearm <input type="checkbox"/> Other- _____ </div>	Lot #	Expiry Date:		*Please note 2 step Mantoux requires a physician's order*			<input type="checkbox"/> Step 1 of 2 <input type="checkbox"/> Step 2 of 2			Print Name of Provider:	Signature of Provider:		<table border="1"> <thead> <tr> <th colspan="2">Test Results</th> </tr> </thead> <tbody> <tr> <td colspan="2">*Date of Reading: DD-MMM-YYYY</td> </tr> <tr> <td colspan="2">*Time of Reading: ____ : ____</td> </tr> <tr> <td colspan="2"> *Induration: _____ mm (mm measurement is mandatory for all results) <i>For interpretation of results refer to page 75 of the Canadian TB Standards, 7th Edition, or as current</i> </td> </tr> <tr> <td colspan="2"> *Check only one: <input type="checkbox"/> Positive → Fill out LTBI Report Form <input type="checkbox"/> Negative <input type="checkbox"/> Not Read </td> </tr> <tr> <td>Follow Up:</td> <td> <input type="checkbox"/> No follow up required <input type="checkbox"/> Repeat TST <input type="checkbox"/> Inform TB/ CDC Nurse / Physician <input type="checkbox"/> Chest X-Ray </td> </tr> <tr> <td>Print Name of Provider:</td> <td>Signature of Provider:</td> </tr> </tbody> </table>	Test Results		*Date of Reading: DD-MMM-YYYY		*Time of Reading: ____ : ____		*Induration: _____ mm (mm measurement is mandatory for all results) <i>For interpretation of results refer to page 75 of the Canadian TB Standards, 7th Edition, or as current</i>		*Check only one: <input type="checkbox"/> Positive → Fill out LTBI Report Form <input type="checkbox"/> Negative <input type="checkbox"/> Not Read		Follow Up:	<input type="checkbox"/> No follow up required <input type="checkbox"/> Repeat TST <input type="checkbox"/> Inform TB/ CDC Nurse / Physician <input type="checkbox"/> Chest X-Ray	Print Name of Provider:	Signature of Provider:
Test Specification																																							
*Date of Test: DD-MMM-YYYY																																							
*Time of Test: ____ : ____																																							
Dose:	Route:	Site: <div> <input type="checkbox"/> Inner aspect of Rt forearm <input type="checkbox"/> Inner aspect of Lt forearm <input type="checkbox"/> Other- _____ </div>																																					
Lot #	Expiry Date:																																						
Please note 2 step Mantoux requires a physician's order																																							
<input type="checkbox"/> Step 1 of 2 <input type="checkbox"/> Step 2 of 2																																							
Print Name of Provider:	Signature of Provider:																																						
Test Results																																							
*Date of Reading: DD-MMM-YYYY																																							
*Time of Reading: ____ : ____																																							
*Induration: _____ mm (mm measurement is mandatory for all results) <i>For interpretation of results refer to page 75 of the Canadian TB Standards, 7th Edition, or as current</i>																																							
*Check only one: <input type="checkbox"/> Positive → Fill out LTBI Report Form <input type="checkbox"/> Negative <input type="checkbox"/> Not Read																																							
Follow Up:	<input type="checkbox"/> No follow up required <input type="checkbox"/> Repeat TST <input type="checkbox"/> Inform TB/ CDC Nurse / Physician <input type="checkbox"/> Chest X-Ray																																						
Print Name of Provider:	Signature of Provider:																																						

After reading and recording the test result, fax this page to the appropriate number below, and place this form in the client's chart.

Moose Factory, Southern, and Thunder Bay Zones	FAX: 1-613-952-0177
Sioux Lookout Zone	FAX: 1-807-737-2141

TST Consent Form – con't

Positive Tuberculin Skin Test Please answer these positive TST questions by checking (✓) where appropriate: Write comments in the nursing notes section and sign and date.

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Cough | <input type="checkbox"/> Fever |
| <input type="checkbox"/> Contact with someone who has had TB | <input type="checkbox"/> Weight loss |
| <input type="checkbox"/> Fatigue | <input type="checkbox"/> Night sweats |
| <input type="checkbox"/> Hemoptysis | |
| <input type="checkbox"/> Previous BCG vaccine | |

If YES, date of BCG vaccine: _____

- ☐ Any medical illness such as diabetes, HIV or other conditions that may cause immunosuppression (refer to pg. 127 of the Canadian TB Standards, 7th ed. or as current)

If YES, please list here: _____

Nursing Notes Check (✓) each item when completed. Write comments in the nursing notes section and sign and date. Additional comments may be made in the client's chart.

WAIT 15 minutes after test

- | | |
|---|---|
| <input type="checkbox"/> Teaching re: signs & symptoms of reaction to the TST | <input type="checkbox"/> Instructed client to return for reading in 48-72 hours |
| <input type="checkbox"/> Teaching re: management of minor side effects | <input type="checkbox"/> Next appointment scheduled for: |
| <input type="checkbox"/> Teaching re: serious reactions and how to manage | _____ |


Comments:


Nurse's Signature: _____

Date (DD/MM/YYYY): _____

I

TB Report Forms – Active TB Form

 <p>Government of Canada Gouvernement du Canada</p>	<div style="text-align: right; margin-bottom: 10px;"> Case Number: _____ </div> <h2 style="text-align: center; margin: 0;">ACTIVE TUBERCULOSIS (TB) REPORT FORM</h2> <p style="text-align: center; font-weight: bold;">First Nations and Inuit Health Branch – Ontario Region</p>
Date CEN initially notified/date de cas: _____ Date CU nurse notified: _____	
Initial date and (YYYYMMDD). Each form is updated and filed to CEN nurse: _____	
Client Demographics Date of Birth: ____-____-____ Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Age: _____ Other (specify): _____ Residency (at time of diagnosis): <input type="checkbox"/> ON RESERVE <input type="checkbox"/> OFF RESERVE Place of residence (e.g. community): _____ Residency (check all that apply currently and in the last 12 months): <input type="checkbox"/> ON RESERVE <input type="checkbox"/> OFF RESERVE <input type="checkbox"/> Home <input type="checkbox"/> Boarding house/motel <input type="checkbox"/> Correctional facility <input type="checkbox"/> Other institution (e.g. nursing home) <input type="checkbox"/> Street <input type="checkbox"/> Rehab transition house <input type="checkbox"/> Relative/friend's house <input type="checkbox"/> Shelter	
TB History <u>First episode of TB disease?</u> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Previous diagnosis occurred in: <input type="checkbox"/> Canada <input type="checkbox"/> Other country (specify): _____ Previous treatment completed: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown End date of previous treatment: _____ Year of previous diagnosis: _____ Previous treatment with (check all that apply): <input type="checkbox"/> INH <input type="checkbox"/> Isoniazid <input type="checkbox"/> No drugs prescribed <input type="checkbox"/> EMSB <input type="checkbox"/> Rifampin <input type="checkbox"/> Unknown <input type="checkbox"/> RMP <input type="checkbox"/> Pyrazinamide <input type="checkbox"/> Ethambutol <input type="checkbox"/> PZA <input type="checkbox"/> Kanamycin <input type="checkbox"/> PAS <input type="checkbox"/> Kanamycin <input type="checkbox"/> Clofazimine	
Has the client ever had a Tuberculin Skin Test (TST)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Any positive TST results? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Date of most recent negative: _____ Result (in mm): _____ Result (in mm): _____ Has the client ever received the BCG vaccine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Date BCG was given: _____	
Risk Factors HIV status: <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative Year of first positive result: _____ <input type="checkbox"/> Test not offered <input type="checkbox"/> Test refused Year of most recent result: _____ Contact with person with active TB if yes, indicate month/year of contact: _____ Overtaken infection (Type 1 or 2) _____ Chronic renal disease requiring hemodialysis _____ Lived in residential setting in the last 2 years _____ Treatment with corticosteroids (eg prednisone >15 mg/day) _____ Previous abnormal chest x-ray (Reticular, fibrotic) _____ Substance use (TOU, tobacco, other) _____ Immunosuppression (related to immunosuppressive therapy) _____ Travel to high incidence TB country in last 2 years _____ If yes, how long: _____ (in weeks) Travelling internationally _____ Overcrowding _____ Other (specify): _____	
TB Infection is defined as a minimum of 3 people per bed/dorm, household members under 16 years old of the same ancestry, a bedroom, and household member aged 15 or over/in a common bathroom. Source: National Occupancy Standard (NOS), 2010. Consulting Task Group for Aboriginal Peoples to Improve Census of Dwellings Unit, 2010 (p. 17-18).	



Government of Canada
Gouvernement du Canada

Case Number: _____

Case Finding (i.e. How case was first identified)

☐ Symptoms compatible with site of disease
☐ Occupational screening
☐ Routine screening
☐ Post-mortem

☐ Incidental finding
☐ Contact investigation
 Yes: Case # _____
 No: " " " " " "

☐ Unknown
☐ Other (specify): _____

Diagnosis/Clinical

Date of diagnosis: ____/____/____ (e.g. Clinical, treatment start date, lab/CXR date, etc.)
 Case Classification: ☐ New ☐ Reactivation ☐ Re-treatment *(see definitions in Schedule for TB Report Form)*
 Site(s) of disease (check all that apply): ☐ Unknown ☐ Pulmonary ☐ Miliary/disseminated ☐ Meningeal
☐ Lymph nodes ☐ Other (specify): _____
 If pulmonary (i.e. Infectious), indicate date the initial list of contacts was started: ____/____/____

☐ TB was the cause of death
☐ TB contributed but was not the cause of death
☐ TB did not contribute to death

Was TB confirmed post-mortem? ☐ Yes ☐ No ☐ Unknown
 Date of death: ____/____/____

☐ TB was the cause of death
☐ TB contributed but was not the cause of death
☐ TB did not contribute to death

Chest x-ray: ☐ Normal ☐ Abnormal ☐ Not done ☐ Unknown
 Result identified on chest x-ray: ☐ Cavitary ☐ Non-cavitary ☐ Unknown

Symptoms: ☐ Yes ☐ No ☐ Unknown
 Symptom onset date: ____/____/____
 Date client first went to a primary care provider for TB related symptom(s): ____/____/____
 Indicate symptoms (check all that apply): ☐ Productive cough ☐ Hemoptysis ☐ Fever ☐ Weight loss
☐ Fatigue ☐ Anorexia ☐ Night sweats ☐ Other (specify): _____

Was client hospitalized for this episode of TB? ☐ Yes ☐ No ☐ Unknown

Admission date: ____/____/____
 Discharge date: ____/____/____
 Duration of airborne isolation in hospital (days): _____

Was client advised to self-isolate at home? ☐ Yes ☐ No ☐ Unknown
 Duration of self-isolation at home (days): _____

Laboratory Results

Were any specimens sent to the laboratory for culture? ☐ Yes ☐ No ☐ Unknown


	Specimen #1	Specimen #2	Specimen #3
Specimen type:			
Specimen source:			
Date collected:	____/____/____	____/____/____	____/____/____
Site collected by lab:			
Microscopy (AFB)	<input type="checkbox"/> Pos (H) <input type="checkbox"/> Neg <input type="checkbox"/> Unknown / <u>Indeterminate</u> <input type="checkbox"/> Not done	<input type="checkbox"/> Pos (H) <input type="checkbox"/> Neg <input type="checkbox"/> Unknown / <u>Indeterminate</u> <input type="checkbox"/> Not done	<input type="checkbox"/> Pos (H) <input type="checkbox"/> Neg <input type="checkbox"/> Unknown / <u>Indeterminate</u> <input type="checkbox"/> Not done
Date reported by lab:	____/____/____	____/____/____	____/____/____
Nucleic Acid Amplification (NAAT, e.g. <u>ingested</u> <u>Isolation</u> <u>Tuberculosis</u> <u>Direct</u> <u>IGDT</u> Test)	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Not done <input type="checkbox"/> Pending	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Not done <input type="checkbox"/> Pending	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Not done <input type="checkbox"/> Pending
Culture Result:	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Unknown / <u>Indeterminate</u> <input type="checkbox"/> Pending	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Unknown / <u>Indeterminate</u> <input type="checkbox"/> Pending	<input type="checkbox"/> Pos <input type="checkbox"/> Neg <input type="checkbox"/> Unknown / <u>Indeterminate</u> <input type="checkbox"/> Pending
Date reported by lab:	____/____/____	____/____/____	____/____/____

Antibiotic Resistance

Indicate below only lab results confirmed susceptibility/resistance: ☐ Results Unavailable ☐ Pending

Susceptible: ☐ INH ☐ 3A/B ☐ RVP ☐ PZA ☐ Others (specify): _____
 Resistant: ☐ INH ☐ 3A/B ☐ RVP ☐ PZA ☐ Others (specify): _____

Susceptible: ☐ INH ☐ 3A/B ☐ RVP ☐ PZA ☐ Others (specify): _____
 Resistant: ☐ INH ☐ 3A/B ☐ RVP ☐ PZA ☐ Others (specify): _____



Government of Canada
Gouvernement du Canada

Case Number: _____

Treatment Details

TREATMENT START DATE: _____

Was Directly Observed Therapy (DOT) applied? ☐ Yes ☐ No ☐ Unknown

Drugs prescribed initially? (check all that apply) ☐ Yes ☐ No drugs prescribed ☐ Unknown

☐ INH

☐ RMP

☐ Streptomycin

☐ Rifampin

☐ Ethionamide

☐ PAS

☐ EMB

☐ PZA

☐ Clofazimine

☐ Capreomycin

☐ Others specify: _____

Nurse Identification

First Name: _____

Last Name: _____

Signature: _____

TB Report Forms – TB Treatment Form

Government of Canada / Gouvernement du Canada

TUBERCULOSIS (TB) TREATMENT OUTCOMES REPORT FORM
First Nations and Inuit Health Branch – Ontario Region

Date Treatment form completed: _____

Date handed to CD nurse: _____

Case Number: _____

Initials and date (DDMMYYYY) each time form is updated and re-forwarded to CD nurse: _____

Client Verification

Date of Birth: _____ Gender: ☐ Male ☐ Female
Age: _____ ☐ Other (specify): _____

Date of Diagnosis: _____ Date treatment started: _____ Last day of treatment: _____

If applicable, date discharged from hospital: _____

Was active TB ruled out? ☐ Yes ☐ No ☐ Not applicable (i.e. active TB confirmed on initial notification)

☐ Clinical ☐ Lab confirmed

Date of negative culture: _____

Alternate diagnosis, if known: _____

If Yes, skip sections below and submit this form. If No, complete the remaining sections below.

Treatment

Resistance developed during treatment (check all that apply)? ☐ Yes ☐ No ☐ Not tested ☐ Unknown ☐ No drugs prescribed

☐ INH ☐ RFP ☐ Streptomycin ☐ Rifabutin ☐ Ethambutol ☐ PAS ☐ Other (specify): _____

☐ EMB ☐ PZA ☐ Kanamycin ☐ Clofazimine ☐ Capreomycin ☐ VLS

Is treatment required to be taken? (check all that apply)? ☐ Yes ☐ No ☐ No Drugs Prescribed ☐ Unknown

☐ INH ☐ RFP ☐ Streptomycin ☐ Rifabutin ☐ Ethambutol ☐ PAS ☐ Other (specify): _____

☐ EMB ☐ PZA ☐ Kanamycin ☐ Clofazimine ☐ Capreomycin ☐ VLS

Major mode of treatment:

☐ DOT (Directly Observed Therapy) ☐ Modified ☐ Standard ☐ Enhanced (See definitions in Guidelines for TB Report Forms)

☐ Daily, self-administered

☐ Other (specify): _____

☐ Unknown

Adherence estimate (% of medication received):

☐ 80%+ ☐ 50 – 79% ☐ <50% ☐ Unknown

Treatment Outcomes

Negative cultures since treatment was initiated: ☐ Yes ☐ No ☐ Unknown ☐ Not available

First negative culture since treatment was initiated: _____

First negative culture after treatment completion: _____

Indicate the treatment outcome (check all that apply):

☐ Cure – negative culture at completion of treatment

☐ Treatment completed – without culture at end of treatment

☐ Failure – continued or recurrent positive culture after 4 months or more of treatment

☐ Death during treatment ☐ Date of death: _____

☐ TB was the cause of death

☐ TB contributed to the death, but was not the underlying cause

☐ TB did not contribute to death

☐ Treatment ongoing

☐ Treatment outcome unknown – client moved off reserve (Specify new location: _____)

☐ Treatment outcome unknown for other reason (Specify reason: _____)

☐ Other (specify): _____

Nurse Identification

Print Name: _____ Last Name: _____ Signature: _____

TB Report Forms – Contact Report Form



Contact Report Form First Nations and Inuit Health Branch - Ontario Region

Date Contact Report Form completed: DD / MM / YYYY

Date faxed to CI nurse: DD / MM / YYYY

Case Number:

Initials and date (DD/MM/YYYY) each time form is updated and re-faxed to the CI nurse:

Date Initial list of contacts was completed:	DD / MM / YYYY
Total number of contacts <input type="checkbox"/> Contact tracing not applicable, case was extra-pulmonary/not infectious	
Number of close contacts	
Number of contacts with no known past history of TB/LTBI who were screened for LTBI	
Of those screened for LTBI, how many converted (new positive TST)?	
Of those screened, by any means, how many were new active TB cases?	
Of those new positives how many were recommended for treatment of LTBI?	
Of those recommended for treatment of LTBI, how many accepted treatment?	
Of those accepting treatment for LTBI, how many started treatment?	
Of those who started treatment for LTBI, how many completed treatment within 12 months of treatment initiation?	
Of those who started treatment for LTBI, how many completed treatment more than 12 months after treatment initiation?	
Nurse Identification	
First Name:	Last Name:
Signature:	

TB Report Forms – LTBI Report Form

Government of Canada / Gouvernement du Canada

Episode Number: L _____

LATENT TUBERCULOSIS INFECTION (LTBI) REPORT FORM

First Nations and Inuit Health Branch – Ontario Region

Date first tested to CD nurse: _____

Initial and date (dd/mm/yyyy) each time form is revised and forwarded to CD nurse: _____

Client Demographics

First Name: _____ Last Name: _____

Date of Birth: _____ Gender: ☐ Male ☐ Female ☐ Unknown

Age (in years, or months if <1 year): _____ Other (specify): _____

Residency (at time of tuberculin skin test): ☐ ON RESERVE ☐ OFF RESERVE

Place of residence (e.g., community): _____

Previous and current residency: (check all that apply currently and in the last 12 months)

☐ ON RESERVE ☐ OFF RESERVE ☐ Home ☐ Correctional facility ☐ Other institution (e.g., nursing home) ☐ Street ☐ Rehab/transition house ☐ Shelter ☐ Boarding house/motel ☐ Relative/friend's house ☐ Other: _____

Tuberculin Skin Test

Any previous negative TST? ☐ Yes ☐ No ☐ Unknown If yes, date: _____

Any previous positive TST? ☐ Yes ☐ No ☐ Unknown If yes, date: _____

Reason for testing: (check all that apply)

☐ Contact tracing ☐ Routine screening ☐ Risk factors for Active TB ☐ Other: _____

If contact tracing, indicate date client added to contact list of index case: _____

Test result (in mm): _____ Date test read: _____

Treatment Details

Assessment of risk for active TB: ☐ High ☐ Moderate ☐ Low

Referred to Physician? ☐ Yes ☐ No ☐ Unknown Date referred: _____

Client assessed for active TB? ☐ Yes ☐ No ☐ Unknown (If yes and active TB confirmed, complete Active TB form)

Prophylaxis recommended? ☐ Yes ☐ No ☐ Unknown

Prophylaxis started? ☐ Yes ☐ No ☐ Unknown Date started: _____

Drugs prescribed (check all that apply):

☐ Isoniazid (INH) Frequency: _____ Duration (months): _____

☐ Rifampin (RMP) Frequency: _____ Duration (months): _____

☐ Other: _____ Frequency: _____ Duration (months): _____

Prophylaxis Completed? ☐ Yes ☐ No ☐ Unknown

Date prophylaxis completed: _____

Major mode of treatment:

☐ Directly Observed Preventive Therapy (DOPT)

☐ Daily, self-administered

☐ Other (specify): _____

☐ Unknown

Risk Factors

HIV: ☐ Positive ☐ Negative

☐ Test refused ☐ Test not offered ☐ Unknown If positive, year of 1st positive test: _____ If negative, year of most recent test: _____

Contact with person with active TB If yes, indicate month/year of contact: _____ ☐ Yes ☐ No ☐ Unknown

Diabetes mellitus (Type 1 or 2) ☐ Yes ☐ No ☐ Unknown

End-stage renal disease requiring hemodialysis ☐ Yes ☐ No ☐ Unknown

Lived in congregate setting at any time in the last 2 years ☐ Yes ☐ No ☐ Unknown

Treatment with corticosteroids No prednisone > 12 mg/day or equivalent ☐ Yes ☐ No ☐ Unknown

Previous abnormal chest x-ray (fibrotic disease) ☐ Yes ☐ No ☐ Unknown

Substance use (ETOH, tobacco, other) ☐ Yes ☐ No ☐ Unknown

Government of Canada / Gouvernement du Canada

Episode Number: L _____

Risk Factors continued

Transplantation (related to immunosuppressive therapy) ☐ Yes ☐ No ☐ Unknown

Travel to high incidence TB country in last 2 years If yes, how long: _____ (in weeks) ☐ Yes ☐ No ☐ Unknown

Food insecurity ☐ Yes ☐ No ☐ Unknown

Overcrowding ☐ Yes ☐ No ☐ Unknown

Other (specify): _____ ☐ Yes ☐ No ☐ Unknown

*Food insecurity is defined as lack of access to food (insufficient funds to buy a nutritious diet, food unavailability (not enough food), inability to apply (not always having enough food) and poor food utilization (knowledge deficit regarding basic nutrition and food preparation). (Source: POWDER, Doherty M., 2008. *Conceptualizing Food Security for Aboriginal People in Canada*. Canadian Journal of Public Health, 99:45-57).

*Overcrowding is defined as a maximum of 2 people per bedroom household members under 18 years old of the same sex have a bedroom, and household members aged 18 or over have a separate bedroom. (Source: National Occupancy Standard, CIBC).

Nurse Identification

First Name: _____ Last Name: _____ Signature: _____

Exercise

- Break into groups/individuals. Consider possible approaches to support clients in a circumstance outlined below.
1. A client is under self isolation at home but is still considered infectious. You have heard that they are out and about in the community.
 2. Community leadership would like to meet with to discuss the situation of J.K., who they have heard has TB.
 3. A contact of an infectious TB case is refusing to be tested for TB.
 4. A.M. is on Directly Observed Therapy for their TB medications. They feel that you are being too intrusive by insisting that you observe that they take all their medications and don't want to continue.
 5. A client is under self isolation at home but is still considered infectious. Community members are coming to visit them in their home to offer their support.
 6. L.M. is a contact for an active TB case and was found to have LTBI. They do not want to take preventative treatment.

Case Scenario #1

- John is a 17 year old male with recent contact with a 3+ smear positive TB case.
- As part of the TB contact follow up, he had a 30mm TST, night sweats, no hemoptysis, no cough, no fever, no unexplained weight loss, and appetite was normal. CXR showed mediastinal lymphadenopathy.
- CT scan was also done to rule out active TB and was suggestive of possible active TB. Client was immediately put on home isolation pending hospital admission for further assessment and sputum collection.
- After reviewing the CXR and CT scan, the attending MD suspected TB of the lymph nodes and he was started on quad therapy. Biopsy of the lymph nodes were ordered but were never obtained.

Case Scenario #1

- After 2 weeks in the hospital, John was discharged from hospital without any precautions after 3 negative smear results..
- Cultures came back positive for mycobacterium tuberculosis complex.
- Client was advised of the positive culture results and he was very concerned that he may have infected his 2 year old son with TB along with other close family members
- Should contact tracing be done?
- Was the client taken off precautions prematurely?
- What should be done with the 2 year old?

Case Scenario #2

- J.P. is a 38 year old female who lives with her daughter (12 years), son (8 years), and common law partner and often invites friends for sleep overs.
- She has a history of alcohol and drug abuse. In November, she presented to the ER with hemoptysis, weight loss, night sweats, and a productive cough for the past 2 months.
- She was admitted on suspicion of Active TB and was immediately put on airborne precautions.
- She had a 3 + smear and mycobacterium tuberculosis complex positive cultures, confirming active TB. She was started on Rifampin, INH, Pyrazinamide, ethambutol and Vit B6.?

Case Scenario #2

- During the Christmas holidays, she was discharged from hospital on self-isolation but the Public Health Unit was not notified.
- She was seen on Christmas Day driving in the community and went to the BINGO hall in a nearby town. Although she was instructed to self-isolate at home, her children and partner had nowhere else to stay and continued to stay in the same household.
- The daughter had a positive TST conversion (20mm) with some chest X-ray changes.
- J.P continued to struggle with substance abuse which affected adherence to her treatment plan.
- What are the social factors at play in this scenario?

Case Scenario #3

- A 13 year old is a house hold contact of an active TB case. As part of the contact tracing follow up, the first TST was 0 mm and the second was 20mm after 8 weeks.
- Client was asymptomatic but had CXR changes. She was started on quad therapy (INH, PZA, Ethambutol, rifampin).
- Child had difficulties swallowing pills. She also didn't like taking medication in front of her friends. The DOT worker arranged to meet her along with her mother at lunch time at home, but they were often unavailable.
- DOT worker struggled to make contact with the child as at times child and mom travelled to a nearby town or went camping without any notification.
- As a result, the child missed many doses of treatment.

Case Scenario #3

- The mother has a history of alcohol abuse and is often unaware of where her child could be located.
- The DOT worker feels the child is purposefully avoiding him.
- The attending MD was notified multiple times that the child had missed many doses but he feels this is a public health issue.
- What issues do you identify?

Resources

- FNIHB-OR. (2018). Tuberculosis Policy and Procedure Manual. Retrieved from: www.onehealth.ca
- Health Canada. (2012). Health Canada's Strategy Against Tuberculosis for First Nations On-Reserve. Retrieved from: <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/summary-health-canada-strategy-against-tuberculosis-first-nations-reserve.html>
- PHAC. (2014). Canadian Tuberculosis Standards. Retrieved from: http://strauss.ca/OEMAC/wp-content/uploads/2013/11/Canadian_TB_Standards_7th-edition_English.pdf

Resources

- Talking Tuberculosis: TB An Educational Resource flipchart
- Online TST/IGRA interpreter:
<http://www.tstin3d.com/en/calc.html>

The Online TST/IGRA Interpreter
Version 3.0

The following tool estimates the risk of active tuberculosis for an individual with a tuberculin skin test reaction of ≥ 5 mm, based on his/her clinical profile. It is intended for adults tested with standard tuberculin (5 TU PPDS, or 2 TU RT-23) and/or a commercial Interferon Gamma release assay (IGRA). For more details about the algorithm used, go to the [About](#) page. The current version of the algorithm contains modifications of the original version, which was detailed in a paper by [Menzies et al. \(2008\)](#). For further information see [references](#), or contact dick.menzies@mcgill.ca

Please select the best response for each field:

TST Size:

IGRA Result:

Age:

Age at immigration (if person immigrated to a low TB incidence country):

Country of birth:

BCG status:

For more info, visit: [BCG World Atlas](#)

