

# Contact Screening Parameters Tool

## INSTRUCTIONS

This tool provides the **MINIMUM guidelines for initial follow-up** of contacts of infectious tuberculosis (TB) cases. Contact investigation outcomes must be analyzed for all settings to decide if contact follow-up should be expanded.

This tool should be used in conjunction with Toronto Public Health's (TPH) TB Contact Identification and Evaluation Procedure. **If variations to parameters exist**, media attention expected, and/or cases spent time in school, daycare, long-term care, shelters/corrections, or high risk facilities (e.g. hospital settings), an immediate discussion with TB manager and AMOH is required. The cumulative hour thresholds are guidelines, not absolute.

Definitions and Considerations	
<b>Cumulative exposure</b>	Total number of hours during the case's period of infectivity that contacts shared the same airspace with the case (and contact did not use an N95 mask). In facility settings, contacts may include direct care and support staff, volunteers, visitors, etc.
<b>Period of infectivity (POI)</b>	Calculate start of infectivity by counting back from TB symptom onset or date of first test indicating TB, whichever is first, as below: <ul style="list-style-type: none"> <li>For smear negative and CXR normal/non-cavitary: 4 weeks</li> <li>For smear positive and CXR normal/non-cavitary OR smear negative and CXR cavitary: 8 weeks</li> <li>For smear positive and CXR cavitary: 12 weeks</li> </ul> POI normally ends on the date the case is placed in respiratory isolation. See break in contact.
<b>Break in contact (BIC)</b>	<ul style="list-style-type: none"> <li>Last date a contact was exposed to an active infectious TB case (e.g. last day at work/school, date placed in negative pressure respiratory isolation in hospital). Repeat TST is done at least 8 weeks after BIC.</li> <li>BIC may vary in different settings – please note on the TPH Contact Investigation Line List (CILL) and on BIC column below.</li> <li>For case in home isolation with fully sensitive TB (or INH resistant only), for household contacts 5+ years use BIC= <ul style="list-style-type: none"> <li>For smear negative: 2 weeks on effective treatment</li> <li>For smear positive: 4 weeks on effective treatment OR date of smear conversion, whichever first</li> </ul> </li> <li>For household contacts &lt;5 years old, when case is in home isolation BIC is the date case is no longer infectious.</li> </ul>
<b>Effective TB treatment (in relation to BIC)</b>	On standard RIPE treatment, or as appropriate for known drug sensitivities (see Canadian TB Standards) AND clinical improvement AND tolerating medication with no breaks in treatment. For smear positive: AND repeat sputum smears declining.
<b>Initial &amp; repeat tuberculin skin test (TST)</b>	All contacts should be assessed for TB signs and symptoms when doing a skin test. Initial tuberculin skin test means it should be done as soon as possible, then repeated ≥8 weeks after BIC date.
<b>Ventilation</b>	In poorly ventilated spaces, consider lowering threshold for exposure time. Example: a small room with radiator/baseboard heating, no forced air and no open windows. Consider the direction/path of air flow (e.g. fan blowing air from infectious patient towards others; basement apartment in a house with forced air furnace - air recirculates through entire house). If number of air changes per hour (ACH) is available, 6 or more ACH is considered good ventilation; below 2 ACH is considered poor ventilation.
<b>Clinical pulmonary case</b>	(a) Radiology suggestive of active pulmonary TB AND culture negative on respiratory sample (or no laboratory specimens available), OR (b) PCR positive on lung biopsy. If deceased and no specimens will be available, clinical consultation may be necessary to determine the working classification of the case.
<b>Pleural TB</b>	If sputum/BAL is culture positive, manage as pulmonary case. If radiology indicates pulmonary involvement (e.g. infiltrates, cavities) but sputum/BAL culture negative, manage as clinical pulmonary case. If radiology does not indicate pulmonary involvement and sputum/BAL culture negative, manage as extrapulmonary - no contact follow-up.
<b>TB wounds (smear and culture positive tissue/fluid from surgical wounds, abscesses)</b>	Diseased tissues are not typical sources of infection unless procedures create aerosols. Staff involved in high pressure irrigation of open TB wounds, orthopaedic procedures (i.e. cutting with power tools) or cauterization of TB infected tissue while not wearing a N95 mask should be screened. Dressing changes with or without packing but no irrigation do not need screening. Autopsy and embalming have also been associated with TB transmission; staff not using an N95 mask during these procedures on a deceased untreated TB case should be screened.
<b>Cough inducing procedure</b>	Refers to aerosol-generating procedures (e.g. bronchoscopy, sputum induction, suctioning if not a closed system, intubation/extubation, CPAP). Staff must be present during the procedure without an N95 mask to be at risk.
<b>&lt;1 year of age contacts</b>	Start with minimum guideline for contacts <5 years old and consider lowering threshold based on closeness of exposure (e.g. index case held baby while infectious).
<b>Elderly contacts</b>	For community-living contacts 85 years or older: in addition to symptom screening, do a chest x-ray rather than a TST. For long-term care contacts, see section 3 below.
<b>Immunosuppressed contacts</b>	Examples of immunosuppressed contacts include HIV positive with low CD4 counts; dialysis, oncology, and transplant patients. Consider lowering threshold based on extent of immunosuppression and closeness of exposure (e.g. direct caregivers). Consider symptom assessment and chest x-ray with or without TST, and flag TB exposure in the client's hospital/physician chart.
<b>Masks</b>	Only N95 masks are considered adequate PPE for TB. Surgical masks are not considered sufficient PPE.



### 3. Identify Contacts Requiring Follow-up and Establish Break in Contact - please complete the following:

Location of Exposure	Low Risk (0 – 2)	High Risk (3 – 4)	Contacts meeting criteria? (complete CILL for each "yes")		Name of Facility	BIC
			No	Yes		
<b>Household</b>	<ul style="list-style-type: none"> <li>Everyone in household – <i>initial &amp; repeat TST</i></li> <li>For rooming houses/basement apartments, consider those on the same floor as "household"</li> </ul>	<ul style="list-style-type: none"> <li>Everyone in household – <i>initial &amp; repeat TST</i></li> <li>For rooming houses/basement apartments with forced air, consider all floors as "household"</li> </ul>	No	Yes		
<b>Close non-household</b> (e.g. family, friends)	<ul style="list-style-type: none"> <li>Contacts ≥ 5 years old with ≥ <b>120 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> <li>Contacts &lt; 5 years old or immunosuppressed contacts with ≥ <b>60 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> </ul>	<ul style="list-style-type: none"> <li>Contacts ≥ 5 years old with ≥ <b>96 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> <li>Contacts &lt; 5 years old or immunosuppressed contacts with ≥ <b>36 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> </ul>	No	Yes		
<b>Worksites / Universities / Colleges</b>	<ul style="list-style-type: none"> <li>Smear negative index case – <i>no screening</i></li> <li>Smear positive index case – follow-up contacts with ≥ <b>120 hours</b> of cumulative exposure in a poorly ventilated or small space (e.g. approximately 150 square feet) – <i>TST &gt; 8 weeks BIC</i></li> </ul>	<ul style="list-style-type: none"> <li>Contacts with ≥ <b>96 hours</b> of cumulative exposure in a medium space (e.g. classroom or smaller size space), or within 8 feet of index case in a large space (e.g. lecture hall, large open warehouse or open office floor) – <i>TST &gt; 8 weeks BIC</i></li> <li>Lower threshold for poorly ventilated or small space (e.g. lunch room, approximately 150 square feet)</li> </ul>	No	Yes		
<b>School Contacts ≥ 5 years of age</b> (excludes universities/colleges)	<ul style="list-style-type: none"> <li>Smear negative index case – <i>no screening</i></li> <li>Smear positive index case – follow-up contacts with ≥ <b>120 hours</b> of cumulative exposure in classroom and group activities – <i>initial &amp; repeat TST</i></li> </ul>	<ul style="list-style-type: none"> <li>Contacts with ≥ <b>96 hours</b> of cumulative exposure in classroom and group activities – <i>initial &amp; repeat TST</i></li> </ul>	No	Yes		
<b>Daycare / School Contacts &lt; 5 years of age</b>	<ul style="list-style-type: none"> <li>Contacts &lt; 5 years old with ≥ <b>60 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> <li>Staff/volunteers with ≥ <b>120 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> </ul>	<ul style="list-style-type: none"> <li>Contacts &lt; 5 years old with ≥ <b>36 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> <li>Staff/volunteers with ≥ <b>96 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> </ul>	No	Yes		
<b>Shelters / Group Homes / Drop-ins</b>	<ul style="list-style-type: none"> <li>Contacts ≥ 5 years old who spent ≥ <b>5 nights</b> sleeping in the same room – <i>TST &gt; 8 weeks BIC</i></li> <li>Staff and others with ≥ <b>120 hours</b> cumulative exposure – <i>TST &gt; 8 weeks BIC</i></li> <li>Contacts &lt; 5 years old or immunosuppressed contacts with ≥ <b>60 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> </ul>	<ul style="list-style-type: none"> <li>Contacts ≥ 5 years old who spent ≥ <b>3 nights</b> sleeping in the same room – <i>TST &gt; 8 weeks BIC</i></li> <li>Staff and others with ≥ <b>96 hours</b> cumulative exposure – <i>TST &gt; 8 weeks BIC</i> (for staff, initial TST may also be feasible)</li> <li>Contacts &lt; 5 years old or immunosuppressed contacts with ≥ <b>36 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> <li>If infectious case spent ≥ <b>60 hours</b> in facilities with drop-in services, consider holding site-based screening in addition to the above.</li> </ul>	No	Yes		
<b>Correctional Facilities</b>	<ul style="list-style-type: none"> <li>Contacts who spent ≥ <b>5 nights</b> sleeping in the same cell – <i>initial &amp; repeat TST</i></li> <li>Staff and others with ≥ <b>120 hours</b> cumulative exposure – <i>TST &gt; 8 weeks BIC</i></li> </ul>	<ul style="list-style-type: none"> <li>Contacts who spent ≥ <b>3 nights</b> in same cell – <i>initial &amp; repeat TST</i></li> <li>Staff and others with ≥ <b>96 hours</b> cumulative exposure – <i>initial &amp; repeat TST</i></li> </ul>	No	Yes		
<b>Long Term Care, Assisted Living and Retirement Facilities, Home Care</b>	<ul style="list-style-type: none"> <li>Residents who spent ≥ <b>5 nights</b> sleeping in the same room or residents with ≥ <b>120 hours</b> cumulative exposure in a medium size space (e.g. classroom or smaller size space) – <i>initial symptom screen and CXR; if symptomatic, collect sputum as well. Consider TST if prophylaxis is an option. Recommend LTCF to flag TB exposure on resident chart and that they conduct enhanced TB symptom surveillance for 2 years.</i></li> <li>Staff with direct patient care and others with ≥ <b>120 hours</b> cumulative exposure in classroom size or smaller airspace – <i>TST &gt; 8 weeks BIC</i></li> </ul>	<ul style="list-style-type: none"> <li>Residents who spent ≥ <b>3 nights</b> sleeping in the same room or residents with ≥ <b>96 hours</b> cumulative exposure in a medium size space (e.g. classroom or smaller size space) or within 8 feet in a larger size room (e.g. large dining hall) – <i>initial symptom screen and CXR; if symptomatic, collect sputum as well. Consider TST if prophylaxis is an option. Recommend LTCF to flag TB exposure on resident chart and that they conduct enhanced TB symptom surveillance for 2 years.</i></li> <li>Staff with direct patient care and others with ≥ <b>96 hours</b> cumulative exposure – <i>TST &gt; 8 weeks BIC</i></li> </ul>	No	Yes		
<b>Hospitals and Clinics</b>	<ul style="list-style-type: none"> <li>Patients with ≥ <b>48 hours</b> cumulative exposure in the same room, or for larger bay areas the patients in adjacent beds, or participation in patient group activities (e.g. pediatric play room, psychiatric group programs) – <i>TST &gt; 8 weeks BIC, unless &lt;5 years old, initial &amp; repeat TST</i></li> <li>Staff with direct patient care for ≥ <b>60 hours</b> cumulative exposure; all staff involved during cough inducing/aerosolizing procedures if not wearing PPE – <i>TST &gt; 8 weeks BIC</i></li> </ul>	<ul style="list-style-type: none"> <li>Patients with ≥ <b>24 hours</b> cumulative exposure in the same room, or participation in patient group activities (e.g. pediatric play room, psychiatric group programs) – <i>TST &gt; 8 weeks BIC, unless &lt;5 years old, initial &amp; repeat TST</i></li> <li>Staff with direct patient care ≥ <b>36 hours</b> cumulative exposure; all staff involved during cough inducing/aerosolizing procedures if not wearing PPE – <i>TST &gt; 8 weeks BIC</i></li> </ul>	No	Yes		
<b>Emergency Medical Services</b>	Notify EMS of situation and recommend if any follow-up is needed (use above hospital staff parameters)	Notify EMS of situation and recommend if any follow-up is needed (use above hospital staff parameters)	No	Yes		
<b>Public Travel</b>	<ul style="list-style-type: none"> <li>For air travel, utilize Public Health Agency of Canada guidelines</li> <li>For long distance (i.e. &gt;8 hours) public bus and train travel, consider follow-up only if evidence of transmission among closer contacts.</li> <li>No follow-up for local public transit (e.g. TTC, GO train).</li> </ul>		No	Yes		

<b>Wound Care</b>	<ul style="list-style-type: none"> <li>Wound specimens smear negative – <i>no screening</i>.</li> <li>Wound specimens smear <u>and</u> culture positive – staff involved in high pressure irrigation of open TB wounds, orthopaedic procedures (i.e. cutting with power tools) or cauterization of TB infected tissue while not wearing a N95 mask should be screened – <i>TST &gt; 8 weeks BIC</i></li> </ul>	No	Yes		

### TB Contact Assessment and LTC Admission Screening Form

Reason for Assessment					
Initial contact assessment <input type="checkbox"/>	Assessment $\geq 8$ weeks after last contact with infectious cases <input type="checkbox"/>	Self-identified contact <input type="checkbox"/>	Screening (client or 3 <sup>rd</sup> party request) <input type="checkbox"/>	Symptoms of TB disease <input type="checkbox"/>	
Demographics					
Last name		First name	Middle	PHIN#	MHSC#
Address		City/Town		Postal code	
Gender <input type="checkbox"/> Male <input type="checkbox"/> Female	Date of birth (yyyy/mm/dd)	First Nations <input type="checkbox"/> On reserve <input type="checkbox"/> Off reserve		Treaty #	Occupation
Home phone number		Work phone number		Cell phone number	
Primary Language		Interpreter required? <input type="checkbox"/> No <input type="checkbox"/> Yes _____			
Family Physician		Country/Canadian province of birth		Date entered Canada (yyyy/mm/dd)	
Health Assessment (symptoms experienced in the last year)					
	YES	NO	Date Started (yyyy/mm/dd)	Date Resolved (yyyy/mm/dd)	Comments
Fatigue	<input type="checkbox"/>	<input type="checkbox"/>			
Fever	<input type="checkbox"/>	<input type="checkbox"/>			
Night sweats	<input type="checkbox"/>	<input type="checkbox"/>			
Weight loss	<input type="checkbox"/>	<input type="checkbox"/>			
Pain with breathing	<input type="checkbox"/>	<input type="checkbox"/>			
Cough lasting more than 3 weeks	<input type="checkbox"/>	<input type="checkbox"/>			
Coughing up blood (hemoptysis)	<input type="checkbox"/>	<input type="checkbox"/>			
Have you had contact with a person sick with tuberculosis?	<input type="checkbox"/>	<input type="checkbox"/>			
Have you ever had TB disease?	<input type="checkbox"/>	<input type="checkbox"/>			
Have you had BCG vaccine?	<input type="checkbox"/>	<input type="checkbox"/>			
Have you ever had a Tuberculin Skin Test (TST)?	<input type="checkbox"/>	<input type="checkbox"/>			
Have you been treated for TB Infection (TBI) in the past?	<input type="checkbox"/>	<input type="checkbox"/>			
History of not completing TBI therapy/risk of treatment failure?	<input type="checkbox"/>	<input type="checkbox"/>			
Do you have allergies?	<input type="checkbox"/>	<input type="checkbox"/>			
Have you had a major viral infection or vaccination in the past 4 weeks (e.g., mumps, measles, rubella, yellow fever, chickenpox)?	<input type="checkbox"/>	<input type="checkbox"/>			
Do you smoke?	<input type="checkbox"/>	<input type="checkbox"/>			
Alcohol or other substance use?	<input type="checkbox"/>	<input type="checkbox"/>			
Do you have a history of an abnormal	<input type="checkbox"/>	<input type="checkbox"/>			

Place Client ID Label Here

chest X-ray?					
Have you recently travelled to a TB endemic area?	<input type="checkbox"/>	<input type="checkbox"/>			
Are you pregnant & what is the expected date of confinement	<input type="checkbox"/>	<input type="checkbox"/>			

## TB Contact Assessment and LTC Admission Screening Form

Do any of the following apply?						
HIV	<input type="checkbox"/>	<input type="checkbox"/>				
Diabetes	<input type="checkbox"/>	<input type="checkbox"/>				
End-stage Renal Disease	<input type="checkbox"/>	<input type="checkbox"/>				
Silicosis	<input type="checkbox"/>	<input type="checkbox"/>				
Transplantation	<input type="checkbox"/>	<input type="checkbox"/>				
Cancer diagnosis	<input type="checkbox"/>	<input type="checkbox"/>				
Tumor necrosis factor alpha (TNF) Antagonists	<input type="checkbox"/>	<input type="checkbox"/>				
Prednisone (at least 15 mg/day for >4 weeks)	<input type="checkbox"/>	<input type="checkbox"/>				
Other immune-suppressing condition	<input type="checkbox"/>	<input type="checkbox"/>				
Exposure Assessment						
TB case ID #	Pan-sensitive <input type="checkbox"/> yes <input type="checkbox"/> no If no specify:		Exposure setting			Exposure date (yyyy/mm/dd)
Date TST planted (yyyy/mm/dd)	Product	Lot #	Measurement (mm)	Date TST read	TST plant site	Administered by
Online TST Interpreter Results: <a href="http://www.tstin3d.com/en/calc.html">http://www.tstin3d.com/en/calc.html</a>						<b>Percentages</b>
1) The likelihood that this is a true positive test (PPV) is:						
2) Annual risk of development of active tuberculosis disease is estimated to be:						
3) The cumulative risk of active tuberculosis disease, up to the age of 80, is:						
4) a. If treated with INH, the probability of clinically significant drug-induced hepatitis is:						
b. and the associated probability of hospitalization related to drug-induced hepatitis is:						
	<b>YES</b>	<b>NO</b>	<b>Date</b> (yyyy/mm/dd)	<b>Comments</b>		
Referred for chest x-ray						
Adverse reaction to TST						
Containers given for sputum collection						
Referred for induced sputum						
Hospitalized due to TB						
Comments						
Prescriber to complete (mark applicable response(s) with an X):						
<input type="checkbox"/> There is intent to provide TBI treatment if TST results are significant						
<input type="checkbox"/> There is reason to believe the resident can tolerate TBI treatment (e.g., no concerns of hepatotoxicity etc.)						
<input type="checkbox"/> There is NO intent to provide TBI treatment if TST results are significant						
<input type="checkbox"/> There is reason to believe the resident CANNOT tolerate TBI treatment						
Comments						
Name of individual completing assessment ( <i>please print</i> ):					Date of assessment (yyyy/mm/dd):	
Communication						
<p>The results from all contact follow up conducted by IP&amp;C are to be documented on the TB Contact Assessment Form and must be forwarded to Manitoba Health, Seniors, and Active Living (MHSAL) through fax number 204- 948-3775</p> <p><b>PRESCRIBER SHALL CONSULT WITH ADULT CHEST MEDICINE REGARDING LTBI TREATMENT WHEN THE RISK OF DEVELOPMENT OF ACTIVE DISEASE OUTWEIGHS THE PROBABILITY OF DRUG-INDUCED HEPATITIS/HOSPITALIZATION.</b></p> <p>Fax the WRHA LTC Program 204-940-8610 attention: Pharmacy Manager</p>						