Nunatsiavut and Labrador-Grenfell Health TB Manual

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Record of Revisions

Date	Title	Revision

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Acknowledgements

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How to Use This Manual

This Tuberculosis (TB) Manual is divided into a Quick Guide, 15 sections with more detail and five appendices. A brief description is provided below.

Quick Guide	A summary of key information and procedures.
Section 1: Introduction	The background on TB in Labrador, a description of the current status of TB and the TB program along with roles and responsibilities of staff and partners.
Section 2: Understanding Tuberculosis (TB)	Background on TB including transmission, assessment, treatment, investigation, and surveillance.
Section 3: General TB Assessment	Conducting a general TB assessment and documenting the result in the Tuberculosis Assessment Form (TBAF).
Section 4: Tuberculin Skin Testing (TST)	How to give, read, measure, document, and follow-up TSTs and two-step TSTs.
Section 5: Collection of Specimens for TB Testing	Collecting sputum and other types of specimens for TB testing.
Section 6: Care of Clients with TB Signs and Symptoms	Assessing and providing care to clients with symptoms of TB.
Section 7: Care of Clients with Active TB	Providing care for clients diagnosed with active TB.
Section 8: Care of Clients with Latent TB Infection (LTBI)	Providing care for clients diagnosed with LTBI.
Section 9: Care of Clients with Non-respiratory TB	Managing clients with non-pulmonary TB such as miliary TB or genitourinary TB.
Section 10: Guidelines for Working with Clients	Information on building a relationship with TB clients and practical tips on case management.
Section 11: Management of Pediatric TB and Contacts	Different presentations of TB in children and how to manage them.
Section 12: Contact Investigation, Window Period Prophylaxis, Source Case Investigation	Investigating clients who have been in contact with active TB.
Section 13: TB Surveillance	Follow up of clients who have been recommended for TB surveillance.

Section 14: Immigration, Refugees and Citizenship Canada Medical Surveillance	Follow up of clients recommended for TB surveillance by Immigration, Refugees and Citizenship Canada (IRCC).
Section 15: Infection Prevention and Control	Infection prevention and control practices relevant to TB, including mask types, home isolation guidelines, and transportation and medevac of clients with suspected or confirmed active TB.
Appendix A: Glossary of Terms	The definition of medical terms used throughout the manual.
Appendix B: Acronyms	The long form for all acronyms.
Appendix C: Key Flow Charts, Tools and Tables	Key flow charts, tools and tables are here for reference.
Appendix D: TB Forms and Client Letters and Consent Forms	All forms and form letters for clients are gathered here for easy access.
Appendix E: TB Fact Sheets	Standardized information sheets to support client and community education on TB prevention, treatment and control.

Key Messages

Text boxes highlighted in blue contain important information.

A physician order is required prior to taking shielded chest x-rays of a client who is or might be, pregnant.

TB Manual Quick Guide

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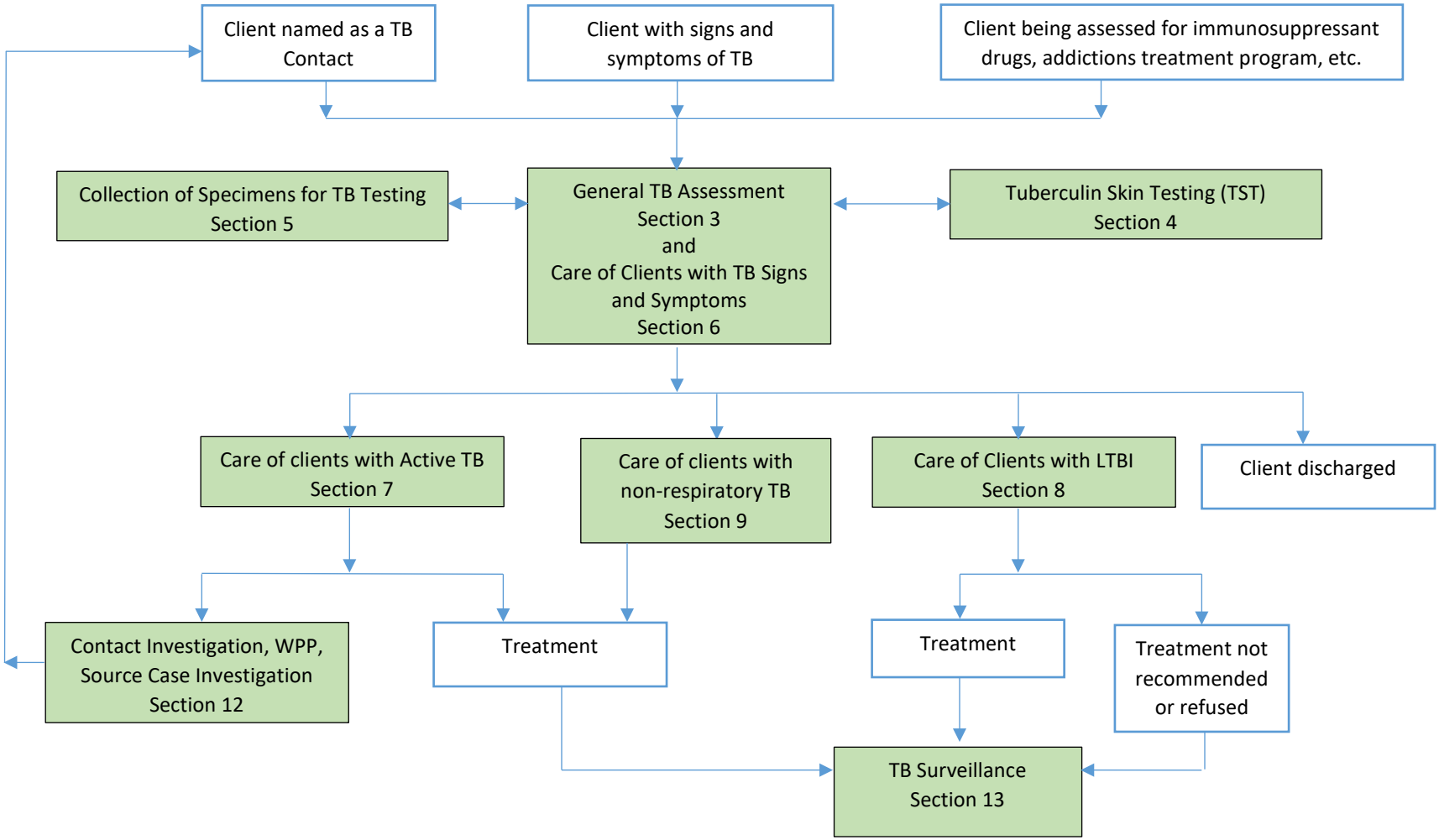
Introduction to the Quick Guide

The purpose of this Quick Guide is to provide a quick reference to the contents of the TB Manual for those who are well versed in tuberculosis but need a handy reminder of the processes and the forms used within Nunatsiavut and Labrador-Grenfell Health. Further detailed information can be found in the corresponding section of the TB Manual.

The Quick Guide does not include every section of the Manual. It only includes the sections where there is a procedure or protocol. For example, Section 2: Understanding Tuberculosis, provides background information on tuberculosis but does not contain any procedure or protocol and therefore is not included in the Quick Guide.

Client Pathway and Corresponding Section of the TB Manual



Section 3: General TB Assessment

Materials required	
Flow Charts, Tools and Tables	General TB Testing Flow Chart
TB Forms, Client Letters and Consent Forms	Tuberculosis Assessment Form (TBAF)
TB Fact Sheets	Tuberculosis Tuberculin Skin Test Sputum Collection Instructions Keep your Family and Friends Safe from TB Tuberculosis and Smoking

Steps	Activity	Notes
Step 1	**Initiate a Tuberculosis Assessment Form (TBAF) and document the reason for the assessment**	- Apply the addressograph and fill in the necessary client information on each page. - Indicate the reason for the assessment in **Part 1** of **TBAF.**
Step 2	**Record TB and BCG vaccination history**	- Complete **Part 2** of **TBAF** as fully as possible. Refer to the client's public health chart and medical chart (when available) as necessary.
Step 3	**Identify risk factors**	- Ask the client and review chart for risk factors. - Complete **Part 3** of **TBAF.**
Step 4	**Do a TB symptoms assessment**	- Review **ALL** TB symptoms with EVERY client. - If TB symptoms are present, refer to the Health Center or Community Clinic and follow the steps outlined in **Section 6: Care of Clients with TB Signs/Symptoms**. - Complete **Part 5** of **TBAF.**
Step 5	**Give a TST if appropriate or proceed to Step 6 if TST not given.**	For administration of a TST: - Follow the steps in **Section 4: Tuberculin Skin Testing** and complete **Part 5** of **TBAF.**
Step 6	**Initiate clinical investigations**	- Follow-up the TST result per the **General TB Testing Flowchart** if client was ineligible for a TST, the TST was positive or the client is immunosuppressed. - Initiate CXR and sputum collection as appropriate. - Complete **Part 6** of **TBAF.**

Step 7	**Complete the diagnostic summary and outcome**	- Once all tests have been completed sign and date **Part 7** of the **TBAF**. - Fax to the CDCN. - File the **TBAF** in the client's chart and send a copy to the attending physician or the Regional Community Clinic.

Section 4: TB Skin Testing

Materials required	
Flow Charts, Tools and Tables	General TB Testing Flow Chart TB Contact Testing Flow Chart
TB Forms, Client Letters and Consent Forms	Tuberculosis Assessment Form (TBAF)
TB Fact Sheets	Tuberculin Skin Test

Steps	Activities	Comments
Step 1	**Prepare to give the TST**	- Ensure there are no contraindications to TST. - Explain the procedure to the client and review the **Fact Sheet on Tuberculin Skin Test (TST).** - Ensure the risks and benefits of the test are understood. Confirm the client is able to stay for 15 minutes and return in 48 to 72 hours. - Obtain written consent from the client or guardian on the **Tuberculosis Assessment Form (TBAF).** - Check expiry date and consistency of the product.
Step 2	**Give the TST**	Inject the Tubersol® **INTRADERMALLY**.
Step 3	**Provide aftercare Information**	- Do not scratch the test site or use any creams on the site. - Redness or rash may develop in a few hours. - A blister may appear. - Any discomfort can be reduced with a cold compress. - Bathing and showering are permitted.
Step 4	**Read the TST and document the result**	- After 48 to 72 hours, read the test. - Measure induration only. - Document the TST measurement in millimeters (mm) on the immunization record and in **Part 5** of the **TBAF**.
Step 5	**Follow-up the TST Result**	Interpretation and follow-up of TST results is client-specific. See Table 4.2.

Section 5: Collection of Specimens

Materials required	
Flow Charts, Tools and Tables	
TB Forms, Client Letters and Consent Forms	Laboratory Requisition
TB Fact Sheets	Sputum Collection Instructions

The diagnosis and management of active TB and latent TB infection requires testing sputum, blood and other biological material.

Sputum Collection

Steps	Activities	Comments
Step 1	**Get ready**	- Complete the laboratory requisitions with client's name, date of birth and health card number. - Note the sample is for AFB smear and culture. - Complete the label on the specimen containers with the name, date of birth and health card number. - Include ***Date*** followed by a blank space and ***Time*** followed by a blank space on the label to prompt the client to fill in the space.
Step 2	**Give containers to the client**	- Give the client the sputum bottles. - Educate the client about collecting the sputum. - Review the fact sheet with the client. - Ask the client to put the date and time the sputum was collected on the label of the container, tighten the lid and put it in the refrigerator in a separate biohazard bag. - When all the samples are collected, the client should return them to Public Health, the Community Clinic or the Health Center's Laboratory (as appropriate).
Step 3	**Receive the containers back from the client**	- Examine the containers to ensure there is sufficient sputum of good quality. - If less that 5 mL or poor quality, ask the client to collect more sputum.

		- Ensure date and time are noted on the label and the containers are tightly closed. - Ensure each specimen is in a biohazard bag and then all three bags are placed in another biohazard bag. Put the requisition in the outside pocket of the second bag. - Deliver samples to the Health Center Laboratory or the Community Clinic.
Step 4	**Document sputum collection**	- Document the sputum collection dates in the client's progress notes and appropriate form depending on the reason for sputum collection. - Inform the CHN (if applicable) when the specimens are delivered to the clinic.
Step 5	**Clients who are unable to produce sputum**	- Consult the CDCN for further direction. - The TB Physician may order induced sputum. - Coastal Communities: Refer the client to the Community Clinic for induced sputum collection, document that a referral was sent and attach a copy to the client's chart. Follow up with the Regional Nurse in 48 hours to ensure arrangements have been made for induced sputum. - Hospital/Health Centers: Where available, the induced sputum is collected in a negative pressure room. Consult the CDCN to assist you in arranging this process in your area.

Blood Tests

Steps	Activities	Comments
Step 1	**Initiate blood work once the order is received**	- Complete the Laboratory requisition. - Coastal Communities: Forward the requisition to the Regional Nurse at the Community Clinic. - Hospital/Health Centers: Give the Laboratory requisition to the client to take with them to the Lab collection site, or forward the requisition directly to the appropriate Laboratory collection department.
Step 2	**Arrange for blood to be drawn**	- Coastal Communities: The Regional Nurse arranges for the client to come in for the blood work.

		- Hospital/Health Centers: Instruct the client to visit the facility's blood collection department as appropriate for your area. - If the client is non-compliant, the PHN/CHN informs the CDCN.
Step 3	**Check Meditech for results and follow up as necessary**	- Check Meditech regularly for blood work results. - If blood work is normal, file in the client's chart. - If blood work is abnormal notify and consult with the CDCN for further direction.
Step 4	**Arrange for repeat blood work as necessary**	- Complete the requisition for subsequent blood work.

Section 6: Care of Clients with TB signs and Symptoms

Materials required	
Flow Charts, Tools and Tables	
TB Forms, Client Letters and Consent Forms	Tuberculosis Assessment Form (TBAF)
TB Fact Sheets	Tuberculin Skin Test Sputum Collection Instructions

Steps	Activities	Comments
Step 1	**Determine if airborne precautions are needed**	Initiate **AIRBORNE PRECAUTIONS** immediately when sharing airspace with a client who has: o Symptoms suggestive of active TB including cough for three weeks or longer, **AND/OR** o Abnormal chest x-ray results (e.g. cavitary disease) **OR** o Positive sputum AFB smears or mycobacterial cultures.
Step 2	**Diagnostic testing**	- Initiate a **Tuberculosis Assessment Form (TBAF)**. - Give a tuberculin skin test (TST) unless contraindicated or already done and document in **Part 5 of TBAF**. - Monitor for CXR results and document in **Part 6** of the **TBAF.** - Collect three sputum specimens for TB testing and document in **Part 6** of the **TBAF**.
Step 3	**TST follow up**	- Read and document the TST result if done and complete **Part 5** of the **TBAF**.
Step 4	**Other follow-up**	- Send the partially completed **TBAF** to the CDCN. - **Monitor** for results of chest x-rays, sputum testing and blood tests.
Step 5	**Complete Part 7 of TBAF**	- Sign and date **Part 7** of the **TBAF** once all tests have been completed. - Fax the **TBAF** to the CDCN. - File the **TBAF** in the client's chart and send a copy to the Regional Community Clinic or attending physician.

Section 7: Care of Clients with Active TB

Materials required	
Flow Charts, Tools and Tables	TB Case Interview Guide
TB Forms, Client Letters and Consent Forms	Active TB DOT Record Active TB DOT Record- Extension of treatment Medication Administration Consent Form (School or Day Care) Active TB Treatment Outcome Record
TB Fact Sheets	Home Isolation Taking Medications for Active TB Etc.

Steps	**Activities**	**Comments**
Step 1	**Prepare to deliver the TB diagnosis**	Consult the CDCN to: - **Confirm isolation requirements**, **AND** - Confirm whether a **contact investigation and/or source case investigation** is needed.
Step 2	**Deliver TB diagnosis**	- The TB physician will deliver the TB diagnosis via videoconference or in person, arranged by the CDCN.
Step 3	**Client teaching**	During the diagnosis visit: - Discuss home isolation, contact tracing, routine monitoring, and follow-up. - Review pertinent **Fact Sheets**. - Reinforce compliance with isolation requirements (where indicated), adherence to treatment and the **curability** of TB with adherence to treatment. - Review medications with the client.
Step 4	**Prepare to begin treatment**	- Ensure all baseline testing has been done and documented on the **Active TB DOT Record.** - Consult the CDCN to obtain prescription for TB treatment. - Compare current weight with prescription dosage to ensure dosing is adequate. Record the weight on the DOT record. - Consult CDCN if dosing adjustment is required. - When TB treatment is to be provided at the school or day care, ask the parent/guardian to sign a **Medication Administration Consent Form (School or Day Care).**
Step 5	**Begin TB treatment**	- Document all doses on the **Active TB DOT Record**.

		- Confirm a plan for the next DOT dose.
Step 6	**Continue TB treatment**	- Monitor clients taking standard or extended TB treatment as per **Section 7** of the **TB Manual**, or as directed by the CDCN and/or the TB physician. - For clients travelling during active treatment consult the CDCN, complete a **Travel/Transfer Form** and send to the receiving community or the CDCN as appropriate.
Step 7	**Extend or discontinue TB treatment**	TB treatment is usually discontinued once: - The prescribed number of doses have been taken, and - The end-of-treatment examinations have been ordered (e.g., chest x-rays, sputum tests for TB), and - The file (including the **Active TB DOT Record**) has been reviewed by the CDCN and/or the treating physician and s/he has confirmed that an adequate course of treatment has been completed. **If treatment beyond six months (extended treatment) is required, initiate the Active TB DOT Record-Extension of Treatment and consult the CDCN** to confirm: - Whether an updated prescription is needed (to maintain the client's TB drug supply). - Monitoring requirements.
Step 8	**Document TB treatment outcome**	**For a client with 'Complete' TB treatment:** - Review TB signs/symptoms with the client. - Remind the client (and/or the parent/guardian) to remain alert for TB signs/symptoms, and to report to a health care provider quickly should any develop. - Complete **Part 1 and 2** of the **Active TB Treatment Outcome Form** and send it to the CDCN along with an updated growth chart for clients under five years of age. - The CDCN will complete **Part 3** of the form and return it. - If surveillance **WAS** recommended, follow the steps in **Section 13: TB Surveillance**. File the **Active TB Treatment Outcome Form** in the client's chart and write a note. Send a copy of the form to the Regional Community Clinic or Medical Records Department as appropriate. - If surveillance **WAS NOT** recommended, file/forward the **Active TB Treatment Outcome Form** as above.

		- Note that if the client plans to travel during the treatment period, complete the **Tuberculosis Travel/Transfer Form** and consult the CDCN.

Section 8: Care of Clients with Latent TB Infection (LTBI)

Materials required	
Flow Charts, Tools and Tables	
TB Forms, Client Letters and Consent Forms	Consent/Refusal for LTBI Treatment or WPP Form Latent TB Infection (LTBI) DOT Record Latent TB (LTBI) Treatment Outcome Form Medication Administration Consent Form (School or Day Care) Tuberculosis Surveillance and Outcome Form
TB Fact Sheets	Latent TB Infection vs Active TB Disease Latent TB Infection (LTBI) Treatment with INH Latent TB Infection (LTBI) Treatment with Rifapentine Etc.

Steps	Responsibilities	Activities
Step 1	**Discuss LTBI and LTBI treatment with the client**	- Review the assessment and testing results with the client, as well as medication information. - Have the client or their designate sign the form indicating consent or refusal for LTBI treatment and send the form to the CDCN**.** - Initiate LTBI Surveillance if treatment is declined.
Step 2	**Prepare to begin LTBI treatment**	- Ensure all baseline testing has been done. - Consult the CDCN to obtain a prescription for LTBI treatment. - Compare current weight with prescription dosage to ensure dosing is adequate. Record the weight on the DOT record. - Consult CDCN if dosing adjustment is required.
Step 3	**Begin LTBI treatment**	- Document the initial treatment dose on the **Latent TB Infection (LTBI) DOT Record**. - Confirm a plan for the next dose. - Confirm that baseline blood tests are within normal limits for age.

Step 4	**Monitoring LTBI treatment**	- Monitor the client as per Section 8.
		- If signs/symptoms consistent with hepatotoxicity are present:
		  - **Hold treatment;**
		  - Consult the CDCN or the treating physician.

Step 5	**Document LTBI treatment outcome when completed**	To document the end of LTBI treatment outcome: - Ensure completion of **all parts** of the **Latent TB Infection (LTBI) DOT Record.** - Send the **Latent TB Infection (LTBI) DOT Record** to the CDCN, along with an updated growth chart for clients under five years of age. - File the original **Latent TB Infection (LTBI) DOT Record** in the client's chart. - When the last dose is taken, complete **Parts 1-4** of the **Latent TB (LTBI) Treatment Outcome Form** and send it to the CDCN. - After consulting the TB Physician, the CDCN will complete **Part 5: Treatment Outcome and Surveillance Recommendations** and return it. - If surveillance **WAS** recommended, follow the steps in **Section 13: TB Surveillance**. File the **Latent TB (LTBI) Treatment Outcome Form** in the client's chart and write a note. Send a copy of the form to the Regional Community Clinic or Medical Records Department as appropriate. - If surveillance **WAS NOT** recommended, file/forward the **Latent TB (LTBI) Treatment Outcome Form** as above. - Note that if the client plans to travel during the treatment period, complete the **Tuberculosis Travel/Transfer Form** and consult the CDCN.

Section 12: Contact Investigation, Window Period Prophylaxis, Source Case Investigation

Contact Investigation

Materials required	
Flow Charts, Tools and Tables	TB Contact Testing Flow Chart TB Case Interview Guide
TB Forms, Client Letters and Consent Forms	Tuberculosis Investigation Record (TBIR) Tuberculosis Assessment Form Contact Notification Letter
TB Fact Sheets	What to expect if you are a TB Contact Keeping Your Family and Friends Safe from TB

Step 1	**Determine how infectious the case is**	- Confirm the infectious period for the case in order to determine the time period of exposure of potential contacts.
Step 2	**Determine the likely period of infectiousness**	Consider: - Onset of cough or worsening of baseline cough or other symptoms of TB; - Sputum results (smear positive or negative); - CXR findings.
Step 3	**Interview the case to get a list of contacts**	- Interview the case within one business day of diagnosis to identify contacts. - Follow the TB Case Interview Guide - Review the **Keeping Your Family & Friends Safe from TB** Fact Sheet with the case during the interview.
Step 4	**Classify contacts into the categories which reflect the degree of exposure**	- **Type 1 - Household**: - **Type 2 - Close, non-household**: people who shared breathing space with the case daily. - **Type 3 - Casual/community**: people who spent time with the case less frequently than household or close non-household contacts.
Step 5	**Identify high-priority contacts**	- **High priority contacts** generally include **Type 1** contacts and symptomatic contacts, contacts under five years of age and immunosuppressed contacts. - Record information about contacts on the **Tuberculosis Investigation Record (TBIR)**. - Send the **TBIR** to the CDCN.

Step 6	**Begin the initial round/phase of contact screening based on case characteristics and contact classification**	- Begin the initial round of contact screening within one week, starting with high priority contacts. - Document all attempts to reach/screen contacts. - Initiate a **Tuberculosis Assessment Form** (**TBAF**) for each contact. - Screen and follow-up contacts using the **TB Contact Testing Flowchart.** - Complete the **TBAF** as the client proceeds through screening and when the assessment is complete. - Also update the **Tuberculosis Investigation Record** with testing dates and results/findings as they become available. - Send the updated **Tuberculosis Investigation Record** to the CDCN weekly or as directed by the CDCN. - Provide CDCN with updates on recommended follow-up.

Step 7	**Review findings from first round of screening with the CDCN**	- Decisions on when and how to expand a contact investigation are made by the CDCN in contact with the Medical Officer of Health (MOH).
		- If the contact investigation is expanded:
		  - Re-interview the case to identify additional contacts;
		  - Update the **Tuberculosis Investigation Record** with information on additional contacts, and send it to the CDCN;
		  - Begin screening additional contacts as soon as possible.

Step 8	**Complete the second round of contact screening if required (eight weeks after break in contact with the case while infectious)**	- Some contacts may not require a second round of screening (see specific criteria listed in Section 12). **For contacts requiring a second round:** - Document all attempts to reach/screen contacts; - Update the **Tuberculosis Investigation Record** with testing dates and results as they become available and update the "current status" of each contact.

Step 9	**Review findings from second round of screening with the CDCN**	After reviewing findings from the second round of screening, the CDCN, in consultation with the MOH, will determine whether the contact investigation should be continued, expanded or closed. - If the CDCN recommends that the contact investigation be closed, proceed to **Step 10** If the CDCN recommends that the contact investigation be expanded: - Re-interview the case to identify additional contacts. - Update the **Tuberculosis Investigation Record** with information on additional contacts and send it to the CDCN. - Begin screening additional contacts as soon as possible. - Complete the **TBAF** as the client proceeds through screening and when the assessment is complete. - Update the **Tuberculosis Investigation Record** with testing dates and results/findings as they become available.
Step 10	**Close the contact investigation**	Once the CDCN recommends that the contact investigation be closed: - Ensure the "current status" section of the **Tuberculosis Investigation Record** is completed for every contact; - Send an updated copy of the **Tuberculosis Investigation Record**, marked "**FINAL**" to the CDCN. - File the original copy of the "**FINAL**" **Tuberculosis Investigation Record** in the client's community health chart.

Window Period Prophylaxis (WPP)

Materials required	
Flow Charts, Tools and Tables	TB Contact Testing Flow Chart
TB Forms, Client Letters and Consent Forms	Tuberculosis Assessment Form Consent/Refusal for LTBI Treatment and WPP Form Latent TB Infection (LTBI) DOT Record

	Latent TB (LTBI) Treatment Outcome Form Medication Administration Consent Form (School or Day Care)
TB Fact Sheets	Keeping Your Family and Friends Safe from TB.

Steps	Responsibilities	Activities
Step 1	**Discuss WPP with the client (and/or the parent/guardian)**	- Discuss test results with client as well as medication information. - If WPP is accepted, obtain consent signature on the **Consent/Refusal for LTBI Treatment and WPP Form.** - If WPP is declined obtain refusal signature on the **Consent/ Refusal for LTBI Treatment and WPP Form.** - Document the date WPP was discussed and declined in the '*Progress Notes'* in the client's Community Health chart. - Update the client's test results and status on the **Tuberculosis Assessment Form (TBAF)** and send it to the CDCN along with the consent/refusal form. - Proceed to **Step 5** if WPP was declined**.**
Step 2	**Prepare to begin WPP**	- Ensure all baseline testing has been done. - Consult the CDCN to obtain a prescription for WPP.
Step 3	**Begin WPP**	- Once a prescription has been received, initiate a **LTBI DOT Record.** - Before administering the first dose of WPP ensure baseline blood test results are within normal limits for the client's age. - Confirm the client's weight and document it on the **LTBI DOT Record**. Compare the current weight against the prescription dosage to ensure the dosing is adequate. Consult the CDCN if dosage adjustments are required. - After administering the first dose of WPP document the initial treatment dose on the **LTBI DOT Record** and **c**onfirm a plan for the next DOT dose.
Step 4	**Document and monitor WPP**	- Document and monitor as described in **Section 8: Care of Clients with Latent TB Infection (LTBI).**
Step 5	**Complete follow-up post exposure Screening**	- Complete screening as per the **TB Contact Testing Flowchart** after eight weeks have

		passed since the contact's last exposure to the infectious case **AND** the contact has reached six months of age. - Update the **TBAF** and **TBIR** with testing dates and results/findings as they become available. **For contacts on WPP diagnosed with LTBI:** - Review pertinent **Fact Sheets**. - Consult the CDCN to determine if an updated prescription is required for the client and/or updated chest x-rays. Also confirm with the CDCN the number of additional doses needed to complete LTBI prophylaxis. **NOTE:** DOT doses taken during WPP are counted toward completion of LTBI prophylaxis. **The date WPP was started is considered the start date of LTBI prophylaxis**. - Manage remainder of client's LTBI prophylaxis (e.g. documentation and monitoring) as per **Section 8: Care of Clients with Latent TB Infection (LTBI)**. - Continue documenting treatment on the existing **Latent TB Infection DOT Record**. **For contacts diagnosed with active TB,** manage as described in **Section 7: Care of Clients with Active TB**. **For all other contacts,** consult the CDCN to confirm whether/when WPP can be discontinued. **DO NOT discontinue WPP prior to consulting the CDCN or the treating physician.**
Step 6	**Discontinue WPP**	- Once approval to discontinue WPP has been obtained remind the client (and/or the parent/guardian) to remain alert for TB signs/symptoms, and to report to a health care provider quickly should any develop. - Document discontinuation of WPP in the '*Progress Notes*' on the client's Community Health chart. Clearly indicate that treatment was taken for **WPP** (not for **LTBI**).

		- Ensure the current **Latent TB Infection (LTBI) Treatment Outcome Summary** is complete and send it to the CDCN, along with an updated growth chart for contacts under five years of age. - File the **Latent TB Infection Treatment Outcome Form** in the client's Community Health chart. - Initiate follow-up for active TB or LTBI if indicated.

Source Case Investigation

Materials required	
Flow Charts, Tools and Tables	TB Contact Testing Flow Chart
TB Forms, Client Letters and Consent Forms	Tuberculosis Investigation Record (TBIR) Tuberculosis Assessment Form (TBAF) Tuberculosis Surveillance and Outcome Form Contact Notification Letter
TB Fact Sheets	Latent TB Infection vs Active TB Disease Etc.

Steps	Responsibilities	Activities
Step 1	**Consult the CDCN**	- Consult the CDCN for guidance on the source case investigation.
Step 2	**Identify high-priority contacts**	- Interview the client (and/or the parent/guardian) to identify his/her **high-priority contacts** including symptomatic contacts, household members and close non-household contacts. - Record the information on the **Tuberculosis Investigation Record (TBIR).** - **Send the TBIR** to the CDCN**.** - Begin screening high priority contacts **within one week.**
Step 3	**Screen high priority contacts.**	- Document all attempts to reach/screen contacts. - Initiate a **Tuberculosis Assessment Form** (**TBAF**) for each contact. - Test and follow-up contacts using the **TB Contact Testing Flowchart (Appendix C).**

		- Complete the **TBAF** as the client proceeds through screening and when the assessment is complete. - Send the **Tuberculosis Investigation Record** to the CDCN once the majority of contacts have completed screening.
Step 4	**Review the findings with the CDCN**	- Source case investigations are not usually expanded unless a source case was not found **AND** TST converters or children with active TB are identified among those tested. Decisions on when and how to expand a source case investigation are made by the CDCN, in consultation with the MOH. - If the CDCN recommends that the source case investigation be expanded, follow steps as per **Section 12**.
Step 5	**Close the source case investigation**	Once the CDCN recommends that the contact investigation be closed: - Ensure the "current status" section of the **Tuberculosis Investigation Record** is completed for every contact; - Send an updated copy of the **Tuberculosis Investigation Record**, marked "**FINAL**" to the CDCN and file the original in the client's Community Health chart. - File the original copy of the **TBAF** in the client's Community Health chart.

Section 13: TB Surveillance

Materials required	
Flow Charts, Tools and Tables	Table 13.1 Criteria and time intervals for TB surveillance
TB Forms, Client Letters and Consent Forms	Tuberculosis Surveillance and Outcome Form
TB Fact Sheets	Tuberculosis Surveillance Fact Sheet

Steps	Responsibilities	Activities
Step 1	**Determine the surveillance recommendation made by the physician**	- Review the surveillance recommendations made on the **TBAF, Active TB Treatment Outcome Form or LTBI Treatment Form.** - Initiate a **Tuberculosis Surveillance and Outcome Form.**
Step 2	**Advise the client that s/he is on surveillance**	- Review the **Tuberculosis Surveillance Fact Sheet** with the client. - Advise the client when the first assessment is due. - Record the due date for the next surveillance in the *Progress Notes* in the Community Health chart.
Step 3	**Complete surveillance assessment at the appropriate times**	- Arrange for three sputum specimens and a CXR. - Reinforce the signs and symptoms of TB and the need to report these to a health care provider. - Advise the client when the next surveillance assessment is due. - Notify the CDCN of any client with TB signs and symptoms, positive results, failure to comply with surveillance, no longer in the community or died. - Record the due date for the next surveillance on the **Tuberculosis Surveillance and Outcome Form** and in the *Progress Notes* in the Community Health chart.
Step 4	**Discontinue TB surveillance**	- At the end of the surveillance period, review TB signs and symptoms with the client and the need to report these to a health care provider.

		- Update the **Tuberculosis Surveillance and Outcome Form.** - When all results have been received, complete the surveillance outcome at the bottom of the **Tuberculosis Surveillance and Outcome Form.** - Send the form to the CDCN who will review and send a copy (along with a growth chart for children who were under five years of age when TB surveillance began) to Medical Records or the Regional Clinic, as appropriate. - Document surveillance completion in the P*rogress Notes* and file the original **Tuberculosis Surveillance and Outcome Form** in the client's chart.

TB Assessment Tool

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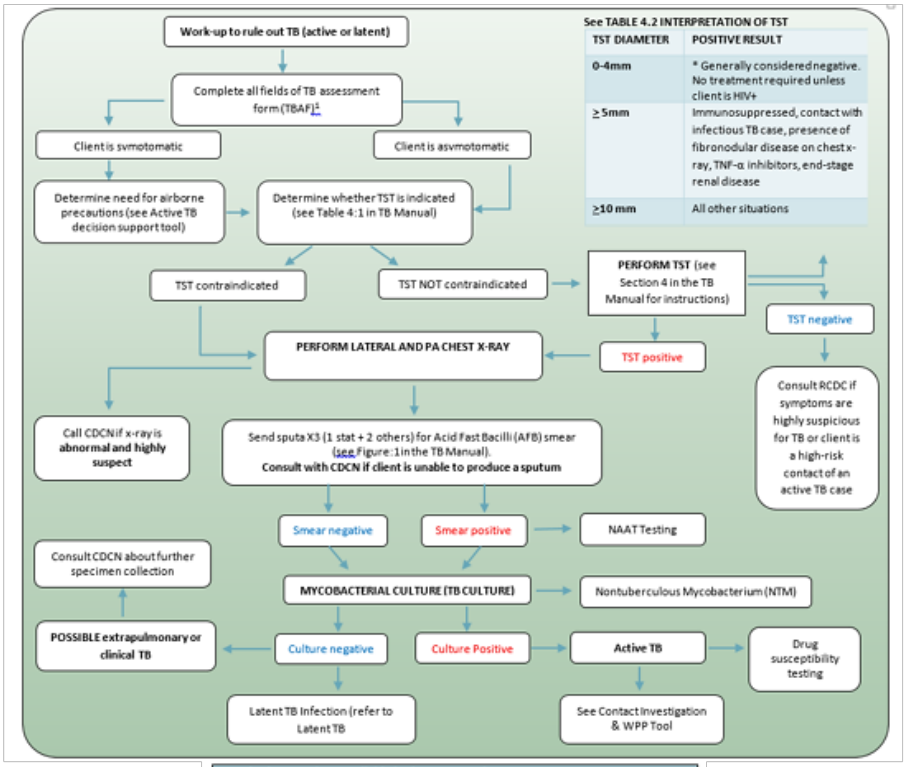
TB Assessment Tool

Refer to the TB Manual for further information. Superscripts refer to the required forms list on the TB Investigational Tool.

Table 1- Active Tuberculosis Presentation

Involved Site	Signs/Symptoms	
Be alert that some Active TB Cases may be asymptomatic		
Systemic	• Fever • Night sweats • Fatigue	• Weight loss or failure to gain weight (i.e. failure to thrive) • Loss of appetite
PULMONARY TUBERCULOSIS		
Lungs	• Cough (dry or productive) for at least 3 weeks • Bloody sputum • Chest pain	• Shortness of breath • Hoarse voice and/or sore throat (with laryngeal TB)
EXTRAPULMONARY TUBERCULOSIS		
Pleural	• Pleural effusion on chest x-ray • Shortness of breath	• Decreased breath sounds on one side • Pleuritic chest pain
Peripheral Lymph Nodes	• Isolated, unilateral, non-tender mass • Often involves anterior and posterior triangles of the neck, supraclavicular or axillary regions	
Meninges (TB Meningitis)	• Prodromal headache • Malaise • Cranial nerve palsies	• Personality changes, confusion • Seizure/ coma
Miliary/ Disseminated	• Fever of unknown origin • Occurs most commonly in childhood	• May be present on chest x-ray
Genitourinary	• Bloody urine • Sterile pus in urine	• Frequent and/or painful urination
Abdominal/ GI/ Peritoneal	• Abdominal pain/swelling • Diarrhea, weight loss	• Can mimic IBD, Crohn's disease
Bone	• Pain at involved site	



See TABLE 4.2 INTERPRETATION OF TST

TST DIAMETER	POSITIVE RESULT
0-4mm	* Generally considered negative. No treatment required unless client is HIV+
≥5mm	Immunosuppressed, contact with infectious TB case, presence of fibronodular disease on chest x-ray, TNF-α inhibitors, end-stage renal disease
≥10 mm	All other situations

Required Forms List – Available in the TB Manual
1. **TBAF—Tuberculosis Assessment Form** (see Section 3)
2. **LTBI DOT Record** (see Section 8)
3. **LTBI Treatment Outcome Form** (see Section 8)
4. **Active TB DOT Record for Initial Phase of Treatment** (see Section 7)
5. **Active TB DOT Record- Extension of Treatment** (see Section 7)
6. **Active TB Outcome Form** (see Section 7)
7. **Tuberculosis Surveillance and Outcome Form** (see Section 13)
8. **Tuberculosis Investigation Record** (see Section 12)

Active TB Management Tool

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Active TB Management Tool

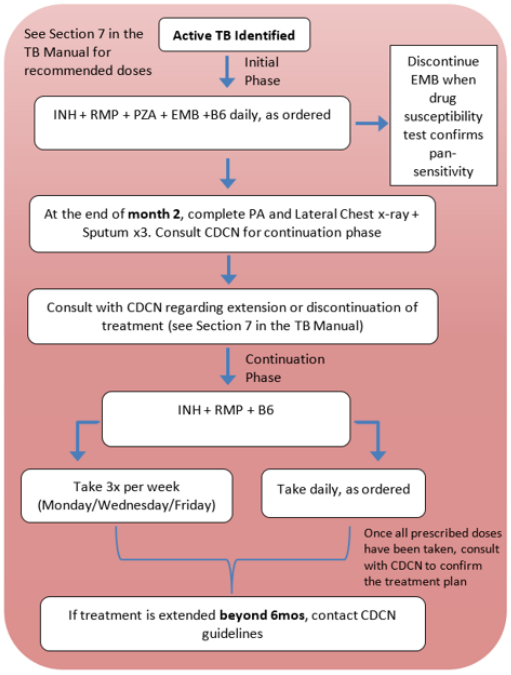
Refer to the TB Manual for further information. Superscripts refer to the required forms list on the TB Assessment Tool.

1 Active TB Confirmed

NURSING CHECKLIST: WORK-UP

- ☐ Initiate airborne precautions;
- ☐ Document Active Tuberculosis diagnosis on the Tuberculosis Assessment Form, the Active TB DOT Record and the client's TB chart.
- ☐ Ensure baseline investigations are complete according to the Tuberculosis Assessment Form (TBAF)[1].
- ☐ Inform client of their diagnosis (including infectiousness and home isolation);
- ☐ Discuss treatment options (including adherence requirements, drug-drug interactions and potential drug side effects) with the client and obtain verbal consent from client or parent/ guardian to begin TB treatment;
- ☐ Discuss any past travel that may have occurred during their infectious period or future travel plans and inform client of travel restrictions;
- ☐ Document visual acuity and colour vision test results on the DOT record at baseline and monthly **throughout** treatment with Ethambutol (EMB);
- ☐ If client declines treatment, contact CDCN;
- ☐ Conduct contact investigation as needed (see Section 12 in the TB Manual). Consult with CDCN prior to screening.

2 Active TB Treatment



AIRBORNE PRECAUTIONS

Initiate airborne precautions **immediately** when the client has:

- Symptoms suggestive of active TB including cough for ≥3 weeks
  AND/OR
- Abnormal chest x-ray results (e.g. cavitary disease) OR
- Positive sputum AFB smears or mycobacterial cultures

Once initiated, airborne precautions must continue until the client is no longer deemed infectious by a TB physician OR until respiratory TB disease has either been ruled out or determined unlikely by a TB physician.

HOME ISOLATION – during home isolation:

- Client must not travel outside of their home community without prior approval from CDCN nor are they allowed to travel via any form of public transportation.
- Client must not go to work, school or any other public indoor places.
- No visitors are allowed in the client's home.
- Client should wear a surgical/procedure mask during health care provider visits to his/her home.
- Health care providers must wear N95 respirators while in the client's home.

3 Active TB Monitoring

NURSING CHECKLIST: MONITORING (see **Table 7.3** in the TB Manual for routine monitoring)

- ☐ **Throughout treatment, client should be monitored for drug side effects and adverse responses. All severe adverse events must be reported to CDCN;**
- ☐ **Client weight should be measured monthly to ensure adequate dosing is maintained by comparing the client's current weight against the last month's weight, and against the prescription dosage.**

Initial Phase

- ☐ Document the prescribed dose on the Active TB DOT Record[4];
- ☐ Complete AST, ALT and bilirubin (if 13+ years old and/or at increased risk for hepatotoxicity) if ordered by Physician;
- ☐ After **2 weeks** of treatment, consult CDCN for guidance on discontinuation of home isolation;
- ☐ Complete face-to-face assessment **at least monthly**;
- ☐ Once results from drug susceptibility testing are received, consult CDCN to confirm whether adjustments to the drug regimen are required;
- ☐ At the end of **each month**, send DOT record to CDCN;
- ☐ For children ≤5 years, send a current growth chart to CDCN at the end of **each month**;
- ☐ Prior to the client returning to work/school, consult CDCN;
- ☐ At the end of the **2nd month**, repeat chest x-rays, symptom inquiry and sputa testing X3. Consult CDCN to obtain prescription for continuation phase of treatment if needed (**do not stop treatment while waiting for updated prescription**);

Continuation Phase

- ☐ Begin continuation phase of treatment once all doses prescribed for the initial phase of treatment have been observed AND a reviewed prescription has been received from CDCN. Record treatment/monitoring on the Active TB DOT Record[6];
- ☐ If treatment is extended **beyond 6mos**, consult with CDCN and monitor as per Table 7.4 throughout treatment;
- ☐ If it is determined that treatment can be discontinued, record on patient chart;
- ☐ During the **last month** of treatment consult with CDCN about further possible investigation;
- ☐ Within **1 week of last patient dose**, complete part 1 and 2 of Active TB DOT Record[4];
- ☐ Document treatment outcome on Active TB Outcome Form[6];
- ☐ Send completed DOT record[4] and Treatment Outcome Form[6] to RCDC.
- ☐ Cases that require follow-up after treatment (see Section 13 in TB Manual) are placed on TB Surveillance in consultation with CDCN;

Latent TB Infection Management Tool

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Latent TB Infection Management Tool

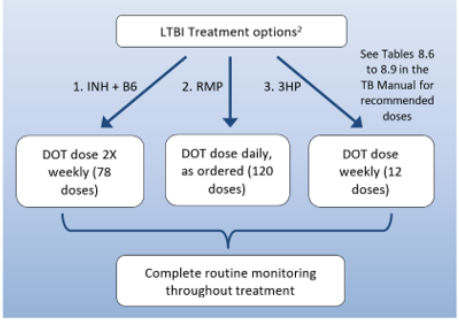
Refer to the TB Manual for further information. Superscripts refer to the required forms list on the TB Assessment Tool.

1 Latent TB Infection Confirmed

NURSING CHECKLIST: WORK-UP

- ☐ Document Latent Tuberculosis Infection (LTBI) diagnosis on the TBAF, LTBI DOT Record and the client's TB chart.
- ☐ Ensure baseline investigations are complete according to the Tuberculosis Assessment Form (TBAF)[1]. Document and follow up on test results;
- ☐ Inform client of their diagnosis, including the difference between LTBI and Active TB;
- ☐ Discuss LTBI treatment options (including adherence requirements, drug-drug interactions and potential drug side effects) with the client and obtain verbal consent from client or parent/ guardian to begin TB treatment. Discuss any future plans for travel;
- ☐ If treatment is accepted, complete baseline blood work;
- ☐ If treatment is declined, contact CDCN regarding TB surveillance;

2 LTBI Treatment Accepted



OR

2 LTBI Treatment Declined

Table 2- TB Surveillance

1. Review TB surveillance fact sheet with client and/or parent/guardian	
ADULT (13+)	**PEDIATRIC (<13)**
2. Advise the client when the first surveillance assessment is due	
o As per Table 13.1 or as directed by the Physician	o As directed by the Physician
3. Complete initial Surveillance Assessment (document all attempts to reach/test the client). Initiate Surveillance and Outcome form[7]	
o Screen for TB signs/symptoms o Document the client's weight (kg) and compare it to the last weight on record o Take PA and lateral chest x-ray (unless client is or might be pregnant) o Ask client to submit 3 sputa specimens	o Screen for TB signs/symptoms o Arrange for a physical assessment by CHN, NP or physician o Document client's weight (kg) and compare it to the last weight on record; for clients <2, plot the current weight on the growth chart. o Diagnostic tests as per Physicians orders
4. Advise the client when the next surveillance assessment is due	
o As per Table 13.1 or as directed by the Physician	o As per Table 13.1 or as directed by the Physician
5. Continue surveillance assessments until surveillance period has concluded.	
6. Discontinue TB surveillance at the end of the surveillance period after consultation with CDCN.	

*Consult the CDCN **immediately** about clients with abnormal test results that could be indicative of active TB. Notify CDCN about clients who did not adhere to assessment schedule, have moved out of the community or died.

3 LTBI Monitoring

NURSING CHECKLIST: MONITORING/ FOLLOW-UP

- ☐ **Throughout treatment, client should be monitored for drug side effects and adverse responses. All severe adverse events must be reported to RCDC;**
- ☐ **Client weight should be measured monthly to ensure adequate dosing is maintained by comparing the client's current weight against the last month's weight, and against the prescription dosage;**
- ☐ Document the initial dose amount on the LTBI DOT Record Form[2] and the client's TB chart;
- ☐ Monitor clients taking **INH and B6** as per Table 8.3 in the TB Manual, or as outlined by the treating physician;
- ☐ Monitor clients taking **rifampin** as per Table 8.4 or as outlined by the treating physician;
- ☐ Monitor clients taking **3HP** as per Table 8.4 in the TB Manual;
- ☐ Nurse must complete face-to-face assessment at least **monthly**;
- ☐ For children ≤2 years, send an updated LTBI DOT record and a current growth chart to CDCN at the end of **each month**;
- ☐ Repeat AFB sputum x3 and TB culture, chest x-rays, symptom inquiry and blood testing (if 13+) at the **end of month 3** of treatment with INH and B6 and update LTBI DOT record with results. Consult with CDCN about any abnormal findings;
- ☐ Within **1 month** of anticipated completion date, confirm with CDCN whether end of treatment chest x-rays and sputum specimen tests are required;
- ☐ Within **1 week** of when the last dose was taken, document LTBI treatment outcome[3] (part 1-4) and complete DOT record. Send it to the CDCN;
- ☐ Review LTBI Treatment outcome form[3] for a TB surveillance recommendation when it is returned by the CDCN.

Treatment Outcome	INH + B6	Rifampin	3HP Regimen
OPTIMAL	78 doses in 9 months (100% of prescribed doses)	120 doses in 4 months (100% of prescribed doses)	12 doses taken in 12 weeks
ADEQUATE	78 doses 12 months	120 doses within 180 days (6 months) or 90 doses in 130 days	11 doses taken in 16 weeks

TB Contact Investigation & Window Period Prophylaxis Tool

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TB Contact Investigation & Window Period Prophylaxis (WPP) Tool

Refer to the TB Manual for further information. Superscripts refer to the required forms list on the TB Investigational Tool.

CONTACT AND SOURCE CASE INVESTIGATION

CONTACT INVESTIGATION: All people who came into contact with an infectious client are identified and categorized. Screening and follow-up is done based on priority. For TST eligible contacts, 2nd follow-up should be done **8 weeks** after the date of last contact with the case while they were still deemed infectious.

Priority level

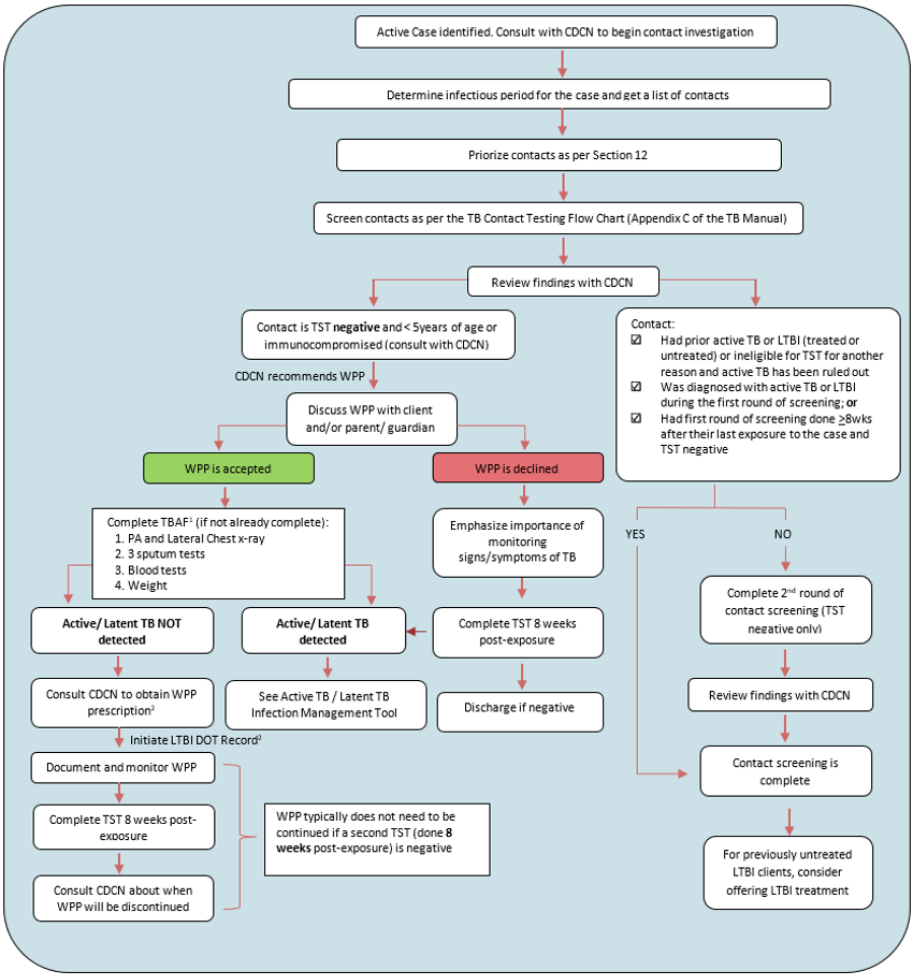
1. Household contacts, close immunologically vulnerable non-household contacts, any symptomatic contacts or contacts <5.
2. Close non-household contacts (people who shared breathing space with the case) with daily or almost daily exposure.
3. Casual contacts with less exposure.

SOURCE CASE INVESTIGATION: conducted when a client is likely to have been recently infected with TB bacteria and the source is unknown. It is conducted to identify who the client got the infection from in order to treat the source and prevent further transmission.

Always consult with CDCN prior to initiating either investigation. Refer to Section 12 of TB Manual for Contact Investigation, WPP and Source Case Investigation Protocol.

Table 2- Estimating Infectious Period

CHARACTERISTIC OF CASE			RECOMMENDED *MINIMUM* BEGINNING OF INFECTIOUS PERIOD
Respiratory TB Symptoms	Sputum Smear Positive	Pulmonary Cavity on Chest X-ray	
Yes	No	No	3 months before symptom onset or first finding consistent with TB disease, whichever is longer
Yes	Yes	Yes	3 months before symptom onset or first finding consistent with TB disease, whichever is longer
No	Yes	Yes	3 months before finding consistent with TB disease
No	No	No	1 month (4 weeks) before date of suspected diagnosis



List of Flow Charts and Tools in Appendix C

- General TB Testing Flow Chart
- TB Contact Testing Flow Chart

List of TB Forms and Client Letters in Appendix D

- Active TB DOT Record
- Active TB DOT Record- Extension of Treatment
- Active TB Treatment Outcome Record
- Consent/Refusal for LTBI Treatment or WPP
- Contact Notification letter
- Latent TB Infection (LTBI) DOT Record
- Latent TB Infection (LTBI) Treatment Outcome Form
- Medication Administration Consent-Day Care
- Medication Administration Consent-School
- Outpatient Specimen Collection Requisition
- TB Case Interview Guide/Form
- Tuberculosis Assessment Form (TBAF)
- Tuberculosis Investigation Record
- Tuberculosis Surveillance and Outcome Form
- Tuberculosis Travel/Transfer Form

List of TB Fact Sheets in Appendix E

- Home Isolation Guidelines
- Keep Your Family and Friends Safe from TB
- Latent TB Infection (LTBI) Treatment with 3 HP (12 doses)
- Latent TB Infection vs. Active TB Disease
- Latent Tuberculosis Infection (LTBI) Treatment with INH
- Sputum Collection Instructions
- Taking Medication for Active Tuberculosis (TB)
- TB Medications and Alcohol
- TB Medications and Your Liver
- TB Medicine and Acetaminophen (Tylenol®)
- TB Medication – Ethambutol
- TB Medication – Isoniazid (INH)
- TB Medication – Pyrazinamide
- TB Medication – Pyridoxine
- TB Medication – Rifampin
- Tuberculin Skin Test (TST)
- Tuberculosis (TB)
- Tuberculosis (TB) and Smoking
- Tuberculosis (TB) Surveillance
- What to expect if you are a TB Contact
- Window Period Prophylaxis (WPP)