Taddle Creek
Family Health Team

MEDICAL DIRECTIVE

Title:	Mantoux Tuberculin Test	**Number:**	TCFHT-MD14
Activation Date:	09-Sep-2014	**Review Date:**	09-Sep-2015

Sponsoring/Contact Person(s) *(name, position, contact particulars):*

Victoria Paulionis, RN
790 Bay Street, Suite 522, Box 58/59
Toronto, Ontario M5G 1N8
Tel: 416-591-1222

Christina Biancucci, MD
790 Bay Street, Suite 522, Box 58/59
Toronto, Ontario M5G 1N8
Tel: 416-591-1222

Order and/or Delegated Procedure:

Appendix Attached: _X_ **No** __ **Yes**
Title:

The implementers may administer and interpret the results of a Mantoux Tuberculin Skin Test (TST) in accordance with the conditions identified in this directive.

Recipient Patients:

Appendix Attached: __ **No** _X_ **Yes**
Title: Appendix A – Authorizer Approval Form

Recipients must:

- Be active patients of a TCFHT primary care provider who has approved this directive by signing the Authorizer Approval Form
- Meet the conditions identified in this directive

Authorized Implementers:

Appendix Attached: __ **No** _X_ **Yes**
Title: Appendix B – Implementer Approval Form

Implementers must be TCFHT employed Regulated Health Care Providers or Physician Assistant (under the supervision of a physician).

Implementers must complete the following preparation and sign the Implementer Approval Form:

- Certification in CPR (minimum level C plus AED training)
- Demonstrate clinical competence and knowledge to supervising physician(s) and/or nurse practitioner and administer at least 3 TSTs under his/her supervision
- Review and be familiar with Table 1 (pg.18), Clinical Picture of Pulmonary TB (pgs. 44-45) and

Chapter 4 (pgs. 63-80) in the *Canadian Tuberculosis Standards 7th Edition*, accessible from http://www.respiratoryguidelines.ca/sites/all/files/Canadian_TB_Standards_7th_Edition_ENG.pdf

- Review and be familiar with *Tuberculosis: Information for Health Care Providers – 4th Edition* by The Lung Association, accessible from http://www.on.lung.ca/document.doc?id=475
- Review and be familiar with the most current Tubersol® product monograph, accessible from https://www.vaccineshoppecanada.com/document.cfm?file=tubersol_e.pdf
- Review most current guidelines for anaphylaxis management as per "Anaphylaxis" in the *Canadian Immunization Guide, Part 2 – Vaccine Safety: Early vaccine reactions including anaphylaxis*", accessible from http://www.phac-aspc.gc.ca/publicat/cig-gci/p02-03-eng.php

Indications:

Appendix Attached: _X_ No ___ Yes
Title:

The implementers are authorized to administer and interpret TSTs to any patients who:

- Have been identified as close contacts of persons with active tuberculosis (TB);
- Were born in a TB-endemic country (anywhere outside Canada, US, Western Europe, Australia);
- Homeless/underhoused;
- Lived on a reserve or Inuit community;
- Resided/worked in a correctional facility or shelter system;
- People with chronic medical conditions at higher risk of TB (e.g. HIV/AIDS, renal disease, diabetes mellitus, carcinoma, malnourished);
- Healthcare and other workers in whom surveillance is proposed because of ongoing increased risk of acquiring TB infection;
- In certain clinical situations, to assist in diagnosing or excluding TB infection or disease

The implementer will consult with a physician or nurse practitioner if any contraindication to receiving the test is identified in the initial screening. After consultation, if the TST is to be administered, the physician or nurse practitioner will review the documentation recorded by the implementer in the EMR and will document his/her assessment as well.

Contraindications:

- A previous severe reaction to TST (e.g. blistering, necrosis, ulceration, etc.)
- Known active TB or well-documented history of adequate treatment for TB infection/disease in past
- Extensive burns or eczema
- Documented previous positive reaction to TST
- History of an anaphylactic reaction to a previous TST or to any components of the Tuberculin Purified Protein Derivative (PPD) (e.g. Tubersol)

When to defer TST (defer by 4 weeks):

- Persons with current major viral infections which may temporarily depress the reactivity to TST (e.g. rubeola, mumps, influenza)
- Recent immunization with live virus vaccines* (e.g. measles, mumps, rubella, varicella)

When NOT to defer:

- Immunization with non-live-virus vaccines

- Pregnancy
- Previous BCG vaccination
- Common cold
- When taking low dose corticosteroids daily

*Note: A TST may be administered before or even on the same day as live-virus immunizations but at a different site.

Consent:

Appendix Attached: _X_ No __ Yes
Title:

The implementer will obtain verbal consent from the patient or legal substitute decision maker, and explain any potential risks and benefits prior to administering the TST.

Guidelines for Implementing the Order/Procedure:

Appendix Attached: _X_ No __ Yes
Title:

Authorized implementer may administer or interpret the TST result upon receiving consent to administer or interpret the test and after confirming appropriateness (according to Canadian Tuberculosis Standards 7th Edition). Universal precautions will be taken to minimize transmission of bloodborne pathogens and ensure patient and clinician safety. If the reaction to the TST is positive, the implementer will evaluate possible risk factors for active TB and will notify a physician or nurse practitioner of the positive TST result for management.

A physician or nurse practitioner must be present in the clinic for assessment and decision-making for patients who have contraindications to receiving the test or present with a positive TST result, and to provide emergency treatment should a patient experience an acute reaction to the PPD.

Documentation and Communication:

Appendix Attached: __ No _X_ Yes
Title: Appendix C – TCFHT-MD14 Stamp

Implementer will document administration of the test in a chart note in the patient's file in the EMR using the stamp TCFHT-MD14_Mantoux_Tuberculin_Test (see Appendix C). Information to be documented will include: brand and dose of PPD used, lot #, expiry date, area of body that is injected and details of any adverse reaction that occurs. The primary care provider will be alerted (verbally or electronically) as soon as possible, if an adverse reaction occurs.

The implementer will advise the patient of the schedule for the reading of the TST result and, if applicable, when to return for the subsequent TST.

Review and Quality Monitoring Guidelines:

Appendix Attached: _X_ No __ Yes
Title:

- Review will occur annually on the anniversary of the activation date. Review will involve a collaboration between the authorizing primary care providers and the approved implementers.
- If new information becomes available between routine reviews, such as the publishing of new clinical practice guidelines, and particularily if this new information has implications for unexpected outcomes, the directive will be reviewed by an authorizing primary care provider and a mimimum of one implementer.
- At any such time that issues related to the use of this directive are identified, TCFHT must act upon the concerns and immediately undertake a review of the directive by the authorizing primary care

providers and the authorized implementers.

- This medical directive can be placed on hold if routine review processes are not completed, or if indicated for an ad hoc review. During the hold, implementers cannot perform the procedures under authority of the directive and must obtain direct, patient-specific orders for the procedure until it is renewed.

References:

Canadian Immunization Guide - Part 2 – Vaccine Safety: Early vaccine reactions including anaphylaxis, accessible from http://www.phac-aspc.gc.ca/publicat/cig-gci/p02-03-eng.php

Canadian Tuberculosis Standards 7th Edition, accessible from: http://www.respiratoryguidelines.ca/sites/all/files/Canadian_TB_Standards_7th_Edition_ENG.pdf

Tuberculosis: Information for Health Care Providers – 4th Edition, accessible from: http://www.on.lung.ca/document.doc?id=475

Tuberculosis (TB) Skin Test handout. Toronto Public Health, August 2007 (see Appendix D)

Tubersol® product monograph, accessible from: https://www.vaccineshoppecanada.com/document.cfm?file=tubersol_e.pdf

Appendix A:

Authorizer Approval Form

Name	Signature	Date
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Appendix B:

Implementer Approval Form

To be signed when the implementer has completed the required preparation, and feel they have the knowledge, skill, and judgement to competently carry out the actions outlined in this directive.

Name	Signature	Date

Appendix C:

TCFHT-MD14 Stamp

S: Requires «2nd step» Mantoux Tuberculin Test (TST) for
«school»«work»«volunteering»«•»
«- First test done • weeks ago - negative result»
«- No hx of previous TSTs»«- Hx of previous TSTs - • result, no adverse reaction»
- No hx of known active TB or treatment for TB
- «No» recent major viral illness, «no» live virus vaccinations in past month «- •»

O/E:
- «L»«R» forearm skin clear
- Tubersol administered at •:•«am»«pm»
  0.1ml intradermal • forearm
  Lot #: •, Exp: •

A:
- Successful TST, adequate bleb achieved
- No adverse reaction

P:
- Pt to RTC in 48-72hrs for interpretation of TST result
«- Pt aware to RTC in 1-3 weeks for 2nd step TST»

*actions and interventions in accordance with Medical Directive # TCFHT-MD14

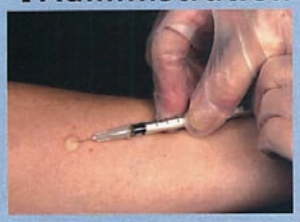
Appendix D:

Tuberculosis (TB) Skin Test

Consider skin testing for patients with the following TB risk factors:

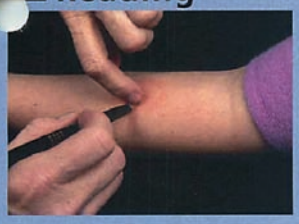
- Contact of an active TB case
- Born in a TB-endemic country (anywhere outside Canada, US, Western Europe, Australia)
- Homeless/underhoused
- Elderly
- Lived on a reserve or Inuit community
- Immunocompromised (e.g. HIV/AIDS, renal disease, diabetes mellitus, carcinoma, malnourished)
- Resided/worked in a correctional facility or shelter system

1 Administration



1. **Locate** the injection site
   i. Place the forearm palm side up
   ii. Select an area 2 to 4 inches below the elbow that is free of tattoos, scars or wounds
   iii. Clean the injection site using an alcohol swab
2. **Prepare** the tuberculin
   i. Check the tuberculin expiration date
   ii. Use a 1ml tuberculin syringe with a 1/2 inch 26 or 27 gauge needle
   iii. Withdraw 0.1 ml (5 tuberculin units) of tuberculin
   iv. Administer tuberculin immediately once it is drawn
3. **Inject** the tuberculin
   i. Insert the needle with the bevel up just below the skin's surface at a 5° to 15° angle
   ii. Inject the tuberculin – a wheal will form
4. **Check** the injection site
   i. Ensure a 5 mm wheal appears
   ii. Repeat test 2 to 4 inches from the original site if the wheal is not 5 mm or more
5. **Document** the test which includes:
   - location (i.e. left or right forearm)
   - tuberculin lot number
   - tuberculin expiration date
   - date & time test administered
   - signature of health care professional

2 Reading



The skin test must be read 48 to 72 hours after administration. If this "window" is missed, the TB skin test may have to be re-administered.

1. **Inspect**
   i. Inspect the skin test site under good lighting
   ii. Note **induration** (hard, dense, raised formation)
2. **Palpate**
   i. Use fingertips to find the edges of the induration
3. **Mark**
   i. Mark the edges across the forearm with a pen
4. **Measure**
   i. Using a ruler place the "0" line on one marked edge
   ii. Read the gradation where the other marked edge falls across the forearm
   iii. Measure induration **NOT** erythema/redness
5. **Record** induration **in mm**
   i. Do **NOT** record as simply positive or negative
   ii. If there is no induration, record result as 0 mm

3 Interpretation

All patients with significant immunocompromise (including HIV) are at high risk for developing TB disease and should be seen by an ID Specialist or TB clinic.

Interpreting a TB skin test depends on two factors:
1. Size of induration measured in mm.
2. Person's risk for being infected with TB and risk of developing active TB disease.

TST Reaction Size (at least)	Results Are Significant (Considered Positive) For:
0 - 4 mm	• Patient with significant immunocompromise **WITH** other TB risk factor(s)
5 - 9 mm	• Household or close contact of a TB case • Patient with abnormal chest radiograph
≥ 10 mm	• Patient who is healthy with no known TB risk factors

Reporting Requirements
Positive TB skin tests AND suspect or confirmed TB cases must be reported to Toronto Public Health.

TB medications for prophylaxis and treatment are **FREE** through public health.

For more information:
TB Prevention and Control Program
416-338-7600
targettb@toronto.ca
toronto.ca/health

TORONTO Public Health

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