



Service Delivery Standard

TITLE: MEASURING INDURATION

APPROVED BY:

		Date		TARGET REVIEW DATE	PAGE
		Date			
		<input type="checkbox"/> WRHA TB team			
		<input checked="" type="checkbox"/> TB working group April 2015			
		<input type="checkbox"/> Population and Public Health			

PURPOSE:

To promote consistency and competency in reading a tuberculin skin test (TST).

SCOPE & GOAL:

Public Health Nurses (PHNs) will consistently and accurately interpret tuberculin skin tests.

DEFINITIONS

Induration: A localized reaction to tuberculin purified protein derivative (PPD) that results in a raised, firm area with clearly defined margins around the TST injection site.

BACKGROUND

After a TST is administered the reading must occur 48 to 72 hours later. Although reactions may persist longer than 72 hours, if the TST cannot be read within 72 hours it should be repeated. No minimum wait is required before the repeat test. Approximately 2%-3% of persons tested will have localized redness or rash (without induration) within the first 12 hours after the administration of the test. These are mild allergic reactions that do not indicate the presence of latent tuberculosis infection (LTBI) and are not a contraindication to future TSTs.

PROCEDURE

1. Visual assessment of the TST site for induration
 - 1.1. Visual assessment is completed within 48-72 hours of administering the TST
 - 1.2. Seat the client so his or her forearm is supported on a firm surface and slightly flexed at the elbow



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- 1.3. In good light, look for the presence or absence of induration by looking at the site from the side
2. Direct palpation of the TST site
 - 2.1. Following visual assessment, feel the TST site by running your fingers directly over the skin. Use routine precautions if there is potential for contact with blood or bodily fluids
 - 2.2. Always palpate the induration, never rely solely on the pen method (described below) for TST measurement
3. Mark the outer edges of the indurate area with a pen (optional but recommended)
 - 3.1. Move the tip of the pen at a 45 degree angle laterally across the forearm toward the site of the injection
 - 3.2. The tip of the pen will stop at the edge of the induration, if present
 - 3.3. Repeat the process on the opposite side of the TST test site
4. Measuring the induration
 - 4.1. Measure the distance between the two pen markings using a caliper
 - 4.1.1. Readings are more precise if a caliper is used
 - 4.1.2. Calipers are single use or must be cleansed with alcohol prior to use
 - 4.1.3. If a caliper is not available, a flexible ruler may be used
5. Interpretation
 - 5.1. The distance between the two pen markings reflects the width of the induration, to be measured perpendicular (90 degrees) to the long axis of forearm
 - 5.2. If the measurement falls between demarcations on the ruler, the smaller of the two numbers should be recorded
 - 5.3. Disregard and do not measure erythema or redness at the TST site

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6. Documentation

- 6.1. The TST result in millimeters (mm)
 - 6.1.1. Record no induration as “0 mm”
- 6.2. Date and time the TST was read
- 6.3. Any adverse reactions, such as blistering
 - 6.3.1. Blistering at the TST site occurs in 3% to 4% of subjects with positive tests and should be recorded
- 6.4. Name and credentials of individual reading the test

7. Client follow-up

- 7.1. Provide a record of the TST result to the client
- 7.2. Advise the client if a repeat TST or additional follow-up is needed

VALIDATION

Accurate reading of TST results contributes to the identification of individuals with LTBI, which is important for TB control activities.

RECOMMENDED READING

Manitoba Communicable Disease Control Branch (2009). *Tuberculosis Communicable Disease Management Protocol*,
<http://www.gov.mb.ca/health/publichealth/cdc/protocol/tb.pdf>

Public Health Agency of Canada (2013) *Canadian tuberculosis standards* 7th Ed.
<http://www.phac-aspc.gc.ca/tbpc-latb/pubs/tb-canada-7/index-eng.php>