



Health and
Wellness

Tuberculin Skin Testing Policy

July 28, 2016

Department of Health and Wellness
Chief Public Health Office

1.0 POLICY

- 1.1 All persons who receive a positive TST on Prince Edward Island will be assessed for follow up by the Chief Public Health Office (CPHO) regardless of why they were tested.
- 1.2 The TST report form *Positive Tuberculin Skin Test Report* (appendix A) must be filled out for all clients who have a positive TST result and the report sent to the Chief Public Health Office.

2.0 DEFINITIONS (1)

- 2.1 **Latent tuberculosis infection (LTBI)** – The presence of latent or dormant infection with *Mycobacterium tuberculosis*. Patients with LTBI have no evidence of clinically active disease, meaning that they have no symptoms, no evidence of radiographic changes that suggest active disease and negative microbiologic tests; they are non-infectious.
- 2.2 **Active tuberculosis (disease)** – Active clinical disease that is usually symptomatic and for which microbiologic tests are usually positive and radiologic tests usually abnormal.
- 2.3 **Tuberculin skin test (TST)** – Skin test to identify whether a person has *delayed-type hypersensitivity* reaction to tuberculin antigens.
- 2.4 **Interferon gamma release assay (IGRA)** – In-vitro T-cell based assays that measure interferon- γ (IFN- γ) production and that have been developed as alternatives to **tuberculin skin testing** (TST) for the diagnosis of latent TB infection. IGRA can help to distinguish if the positive TST result is from exposure to TB or another organism or cause. On PEI this test is used if there is a positive TST and the client is very low risk or has had BCG in the past.

3.0 PURPOSE

This policy provides direction to health care providers regarding the documentation and reporting of positive TST results.

4.0 APPLICATION

This policy applies to any licensed health care provider administering a TST on PEI. This includes but is not limited to physicians, nurse practitioners, and registered nurses. This policy is not intended for use with close contacts of active TB cases. For this information, please see the policy on Management of an Active Case of Tuberculosis (pending).

5.0 BACKGROUND

- 5.1 The Tuberculin Skin Test (TST) is used to determine Latent Tuberculosis Infection (LTBI). The goal of diagnosing LTBI is to identify those who are at increased risk of active TB who may benefit from treatment.
- 5.2 A positive TST indicates a potential diagnosis of LTBI. The Canadian Tuberculosis Standards (1) recommends treating LTBI in certain circumstances in order to reduce the risk of reactivation of active TB for that individual.
- 5.3 Active TB is a public health risk as it can be easily transmitted in the population. Reducing reactivation of LTBI in individuals is an important public health measure in TB prevention.
- 5.4 The CPHO conducts an assessment on all reported positive TSTs in order to offer treatment to those LTBI cases who would benefit from treatment.
- 5.5 New policies for employee TSTs in PEI health care facilities are being implemented, resulting in increased TSTs being done in practice settings other than Health PEI Public Health Nursing.

6.0 PROCEDURE

6.1 Client Assessment

Tuberculin Skin Tests are performed in several practice areas including Health PEI Public Health Nursing, employee health, and other medical clinics/services.

TST may be required for the following:

- A physician or clinic needs to determine a client's TST status prior to being started on a medication;
- A physician or clinic requires the TST as part of the diagnostic investigation of a patient;
- A person requires a TST screening before entering an educational program;
- A person is working in a location where active TB is endemic;
- A person is a Health Care Worker and requires baseline TST;
- A person 65 years of age or under is screened on admission to a long-term care facility.

The following people should not receive a TST:

- Those with positive, 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;
- Due to the decreasing utility of TST to diagnose Latent Tuberculosis Infection (LTBI) after age 65 and the increasing risk of adverse effects from LTBI treatment in this age group, screening with a posterior-anterior and lateral chest x-ray for active TB is preferred for those **over 65**.

The TST should be delayed for the following people:

- Those with current major viral infections (e.g. measles, mumps, varicella);
- Those who have received measles or other live virus immunization within the past 4 weeks, as this has been shown to increase the likelihood of false-negative TST results. Note that only measles vaccination has been shown to cause false-negative TST results, but it would seem prudent to follow the same 4-week guideline for other live virus immunizations – mumps, rubella, varicella (chickenpox) and yellow fever. 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. (NOTE that a TST may be administered before or even on the same day as the immunizations but at a different site.) (1)

The following people can receive a TST:

- Those with a history of receiving BCG vaccination(s);
- Those with a common cold;
- Those who are pregnant or are breastfeeding;
- Those immunized with any vaccine on the same day;
- Those immunized within the previous 4 weeks with vaccines other than the ones listed above;
- Those who give a history of a positive TST reaction (other than blistering) that is not documented;
- Those taking low doses of systemic corticosteroids, <15 mg prednisone (or equivalent) daily. It generally takes a steroid dose equivalent to ≥ 15 mg prednisone daily for 2-4 weeks to suppress tuberculin reactivity. (1)

6.2 **One Step TST**

In general, a one step TST is used for diagnosis of LTBI. However, in certain circumstances as noted in 6.2, a two step TST may be required. For more

information on the technique for performing a TST go to: [Canadian Tuberculosis Standards http://www.respiratoryguidelines.ca/tb-standards-2013](http://www.respiratoryguidelines.ca/tb-standards-2013)

6.3 **Two Step TST**

A two step TST is required for anyone who will need ongoing TSTs such as health care and corrections workers and close contacts of an active case. The two step TST establishes a baseline so that the response will not be confused with conversion for subsequent exposures. Residents 65 years of age and younger who are being admitted to a long term care facility also require a two step TST upon admission to the facility.

If the first step is negative, the second step TST should be completed no sooner than one week and no later than twelve months after the first TST. The ideal time frame for the second step is one to four weeks after the first. If performed less than one week after the first TST there is not enough time to elicit the booster reaction and greater than four weeks allows the possibility of a conversion from an exposure. A two step TST is required only once if done properly and documented. All subsequent TST can be single step, regardless of how long it has been since the previous test.

If the first step of the two step TST is positive, the second step is not required.

6.4 **Documentation**

The TST report form entitled “Report of Patients for Positive Tuberculin Skin Test” (appendix A) is to be filled out by the person performing the test for all clients who have a positive result from a TST and is to be sent to the Chief Public Health Office. When a TST is requested by a physician/NP the physician/NP must be notified of the result by the health care provider (HCP) that performed the TST.

7.4 **Follow-up and Reporting**

The following is recommended for follow up and reporting of positive TST results:

- 7.4.1 If the TST result is positive on the first or second step, complete the TST report form and notify the ordering physician and CPHO.
- 7.4.2 Unless otherwise indicated, provide a requisition for a chest x-ray (if the client has not had one in the past year).
- 7.4.3 Follow up will be determined by the ordering physician (e.g. testing done prior to medication administration) and/or the CPHO.
- 7.4.4 Interferon Gamma Release Assay (IGRA) may be recommended if the client is low risk and if it is suspected the positive result may not be due to LTBI. The decision and arrangements for IGRA testing is usually made by the CPHO.
- 7.4.5 Treatment may be offered (9 month course of INH) for those at risk of developing active TB in the future. More information on risk assessment for reactivation of TB may be found in the link listed in section 7.0.
- 7.4.6 The Tuberculosis Fact Sheet (Appendix B) may be given to the client.

7.0 **GUIDELINES**

Diagnosis of Latent Tuberculosis Infection, Chapter 4, 7th edition, [Canadian Tuberculosis Standards](http://www.respiratoryguidelines.ca/tb-standards-2013) <http://www.respiratoryguidelines.ca/tb-standards-2013>

8.0 **KEY SEARCH WORDS**

TST, Tuberculosis testing, Tuberculin skin test, Latent tuberculosis infection, LTBI

9.0 **CROSS REFERENCE**

- 10.1 Health PEI Immunization and TB testing
- 10.2 Community Care Facility, Nursing Home (CCFNH) Regulations
- 10.3 Policy on the Management of an Active Case of Tuberculosis, CPHO (pending)

1. **Canada, Canadian Thoracic Society and Public Health Agency of.** *Canadian Tuberculosis Standards, 7th Edition.* Ottawa : Queens Printer, 2013.

Appendix A



Positive Tuberculin Skin Test Report Case ID:

| 1. CLIENT INFORMATION: | | | |
|---|---|---|--|
| PHN: | Sex <input type="checkbox"/> Male <input type="checkbox"/> Female | Date of birth: | Age _____ years months (if under 2 yrs) |
| Last name: | | First name: | Email: |
| Parent/Guardian (if applicable): | | | |
| Address: | | City/town: | Postal Code: |
| Tel: | Alt. Tel: | Family Dr.: | Tel: |
| Ethnicity: | | Employer: | Tel: |
| Country of Birth: | | Date of Immigration (if applicable): | |
| 2. REASON FOR TESTING: | | | |
| <input type="checkbox"/> 65 years of age and under at a LTC facility | | <input type="checkbox"/> Diagnosis of Medical Condition | |
| <input type="checkbox"/> Entry into Educational Program | | <input type="checkbox"/> Working in TB Endemic Area | |
| <input type="checkbox"/> Health Care Worker Screening | | <input type="checkbox"/> Pre-Medication | |
| <input type="checkbox"/> Other, If yes, specify | | | |
| 3. HAS CLIENT RECEIVED BCG? | | | |
| <input type="checkbox"/> No | <input type="checkbox"/> Yes | If yes , At what age? | Where (country)? |
| 4. HAS CLIENT BEEN EXPOSED TO TB IN THE PAST? | | | |
| <input type="checkbox"/> No | <input type="checkbox"/> Yes | If yes , When? | Where (country)? |
| Circumstances of Exposure: | | | |
| Was the client treated? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes , describe: | | | |
| 5. TUBERCULIN SKIN TEST RESULTS | | | |
| Initial TST | | Second TST (if needed) | |
| Date planted: | | Date planted: | |
| Date read: | | Date read: | |
| Result (induration only, not redness): _____ mm | | Result (induration only, not redness): _____ mm | |
| 6. RISK FACTORS FOR REACTIVATION | | | |
| <input type="checkbox"/> HIV Infection | | <input type="checkbox"/> Abnormal Chest X-ray: granuloma | |
| <input type="checkbox"/> AIDS | | <input type="checkbox"/> Abnormal Chest X-ray: fibronodular disease | |
| <input type="checkbox"/> Diabetes Mellitus | | <input type="checkbox"/> Carcinoma of Head or Neck | |
| <input type="checkbox"/> Cigarette smoker (> 1 pack/day) | | <input type="checkbox"/> Recent TB infection (TST conversion ≤ 2 years ago) | |
| <input type="checkbox"/> Transplantation (requiring immune-suppressant therapy) | | <input type="checkbox"/> Tumor Necrosis Factor (TNF) alpha inhibitors (infliximab/Etanercept) | |
| <input type="checkbox"/> Treatment with glucocorticoids | | <input type="checkbox"/> Silicosis | |
| <input type="checkbox"/> Underweight (< 90% ideal body weight or a body mass index (BMI) ≤ 20) | | <input type="checkbox"/> Young age when infected with TB (i.e. 0 - 4 years) | |
| <input type="checkbox"/> Chronic renal failure requiring hemodialysis | | <input type="checkbox"/> Other: | |
| 7. REFERRED FOR CHEST X-RAY AND REQUISITION GIVEN TO CLIENT | | | |
| <input type="checkbox"/> No | <input type="checkbox"/> Yes | If no , comment: | |
| NOTE: IT IS RECOMMENDED THAT ANY CLIENT WITH A POSITIVE TST HAVE A CHEST X-RAY IF ONE HAS NOT BEEN DONE IN THE PAST 6 MONTHS | | | |
| Does client require a copy of their chest x-ray? | | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Does client require a copy of their IGRA result (if done)? | | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| If yes, CPHO will send a copy to the PHN to forward to the client. Date sent: | | | |
| Additional Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| HCP Completing Form: | | Date: | |
| Please return completed form to the CPHO – FAX: 902-620-3354, Mail: 16 Fitzroy St. 2 nd Fl Sullivan, PO Box 2000 Charlottetown, PE, C1A 7N8 | | | |
| CPHO Nurse: | | Date: | |

Tuberculosis

What are the symptoms of tuberculosis?

TB mainly causes symptoms in the lungs and airways. It can also affect other parts of your body, such as your:

- bones
- kidneys
- lymph nodes (small, bean-shaped organs found throughout the body that help the body recognize and fight germs)

About 90% of people who become infected with TB do not develop the disease. This is called latent tuberculosis. They:

- do not feel sick
- have no symptoms
- do not spread TB to others

Those who do get sick have active tuberculosis. The symptoms of active TB include:

- a bad cough that:
 - lasts longer than 2 weeks
 - makes you cough up blood sometimes
 - makes you cough up phlegm sometimes (thick liquid that comes up from your lungs or airways)
- chest pain
- weakness or tiredness
- weight loss
- a lack of appetite
- chills
- fever
- night sweats

In severe cases, the disease may lead to death if untreated.

What do you do if you become ill?

Call your health care provider if you:

- have any of the listed symptoms
- think you may have been exposed to TB

If you have TB, you may have spread it to other people without knowing. Your health care provider will offer you treatment with medications to help prevent worsening illness and the spread of TB to others. Public Health will talk with you about the people you spend time with in case they need to be tested.

This information is adapted from the Government of Canada website. For more information please visit: <http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/tuberculosis-tuberculose/index-eng.php>