

THIS UPDATE IS PROVIDED IN RECOGNITION OF WORLD TUBERCULOSIS DAY HELD ANNUALLY ON MARCH 24

Tuberculosis is still present in Canada. Prevalence rates include:

- National: 4.8 new cases per 100,000 (2021)
 - o Inuit: 135.1 per 100,000
 - o First Nations: 16.1 per 100,000
 - o Newcomers to Canada: 12.3 per 100,000
- *Ontario: 5.1 per 100 000 (2022)
- *Thunder Bay District: 3.2 per 100 000 (2022)

*2023 data not yet complete

THUNDER BAY'S TB OUTBREAK UPDATE

The 2018 tuberculosis (TB) outbreak investigation in the city of Thunder Bay continues with ongoing active case and contact investigation in order to identify any un-diagnosed cases. The same population is also impacted by higher rates of HIV infection which further weakens the immune system, increasing the risk of developing active TB disease. Co-infection with both is not uncommon.

March 8, 2018 – Declared outbreak

- Identified 11 active cases, all of whom were unhoused or underhoused.

March 2018 – Present

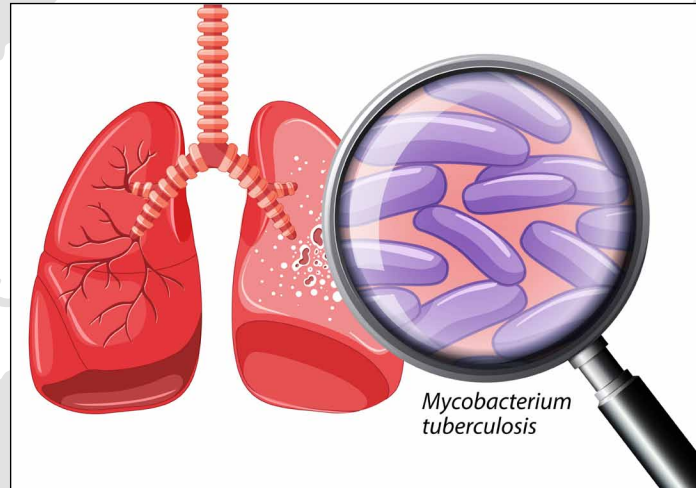
- The cluster of cases identified in March 2018 initiated enhanced case and contact management and the need to develop relationships with community partners to support individuals through testing and treatment. Through this work, as well as through community screening and testing initiatives, TBDHU continues to identify cases of TB and Latent TB infection (LTBI).

Additional Cases by year:

- 2019 (2)
- 2020 (3)
- 2021 (5)
- 2022 (3)
- 2023 (1)

In response to this outbreak, the TBDHU would appreciate your assistance in the following:

- 1. Maintain a high index of suspicion for TB** in patients who are unhoused or underhoused.
- 2. Obtain imaging and sputum samples for diagnosis** if you suspect or want to rule out active respiratory TB. Tuberculin skin testing (TST) does not have a role in the diagnosis of active disease. TST may be falsely negative with active disease.
- 3. Report all confirmed and suspected cases of active TB to the TBDHU** under Ontario Regulation 135/18 of the *Health Protection and Promotion Act*. Please direct reports by the next working day to the TBDHU Infectious Diseases Program; (807) 625-8318 or 1-888-294-6630, ext 8318.



KEEP TB ON THE DIFFERENTIAL

Active TB symptoms can include:

- New persistent cough; > 2 weeks
- Hemoptysis
- Chest pain, dyspnea
- Fatigue, lethargy, weakness
- Weight loss or a lack of appetite
- Chills, fever
- Night sweats
- Lymphadenopathy, for extrapulmonary TB

For respiratory TB, sputum acid-fast bacilli (AFB) smear and culture (3 specimens collected at least 1 hour apart, preferably in the morning) and chest x-ray are needed for diagnosis. Diagnosis of extrapulmonary TB may differ but may include AFB and culture of tissue or fluid samples.

ADMINISTERING AND READING A TB SKIN TEST (TST)

For more information on TST administration, including locating the injection site, preparing and injecting the tuberculin, checking the injection site and documentation requirements, refer to the TBDHU resource available at http://bit.ly/tbdhu_tst. The skin test must be read 48-72 hours after administration OR it must be re-administered.

- 1. Inspect:** Note the induration (hard, raised formation) NOT the erythema/redness.
- 2. Palpate & Mark:** Use your fingertips to determine if any induration is present and mark its edges.
- 3. Measure:** Measure the diameter of the induration across the forearm using a caliper ruler in mm. If no induration, record as 0 mm.

Consider viewing this video from the CDC: <https://bit.ly/3Pf3GNI>

A web-based algorithm is available to assist with interpretation at <http://www.tstin3d.com/>.

For more information refer to http://bit.ly/tbdhu_tst.

Reaction size	When the reaction is Positive
0-4mm	Generally negative. NOTE: Positive in children under 5 AND high risk of TB infection
5-9mm	HIV infection, contact with active TB within past 2 years, fibronodular disease on CXR, organ transplantation, tumor necrosis factor alpha inhibitors and other immunosuppressive drugs, end-stage renal disease
≥10mm	All others

ALL ABOUT IGRAs

IGRAs (Interferon Gamma Release Assays) are blood tests that measure T-cell release of interferon – gamma following stimulation by antigens **specific to mycobacterium tuberculosis bacteria** and not to non-tuberculous mycobacteria. Positive IGRAs **MUST** to be reported to TBDHU using the appropriate reporting form.

Situations where IGRAs are used:

- Persons from groups that historically have poor return rates for TST reading (only single visit required)
- Persons who have received BCG vaccination after 1 year of age and/or have had BCG vaccination more than once (often from endemic countries, may not know age BCG was received)

- Clarifying LTBI diagnosis in low-risk person with positive TST to assist in treatment decision by provider and person

IGRA Testing: Life Labs on 1040 Oliver Road from Monday-Thursday
Cost is \$100; NOT COVERED by OHIP.

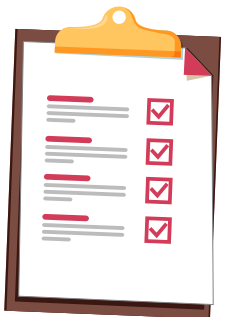
REPORTING POSITIVE RESULTS

Under Ontario's *Health Protection and Promotion Act*, (sec. 26; reporting carrier of disease) all cases of active and LTBI are reportable to the TBDHU. This includes positive TSTs and IGRAs. You can find our reporting forms at TBDHU.com/LTBIreportingform.

POSITIVE TST OR IGRA: NEXT STEPS

HCP:

- **Rule out active TB disease** through symptom assessment, CXR, sputum samples if indicated (i.e., productive cough).
- **Report to TBDHU** using appropriate reporting form; TBDHU.com/LTBIreportingform
- **Provide prescription** if LTBI medication is indicated.
- **Order pre-treatment labs.**
- **Order follow up labs;** usually 1 month post-treatment initiation.
- **Provide follow up/referral if side effects present.**
- **Refer** to TB or ID specialists when warranted.



NOTE: The most up-to-date treatment and monitoring guidelines are available in the 8th edition of the *Canadian Tuberculosis Standards*, published in 2022.

The TBDHU

- **Provides client education.**
- **Dispenses prescribed medication** at no charge.
- **Follows and supports client** until the end of treatment.
- **Acts as a resource to HCPs.**

NOTE: The TBDHU cannot prescribe medication, order/interpret/monitor lab work or make changes to a treatment plan without HCP consultation.

MEDICAL SURVEILLANCE

TB screening is included in all immigration medical examinations prior to departure for any individual 11 years of age and older who is newly arriving to Canada and may be staying for 6 months or longer.

A referral for post-landing medical surveillance is provided to those with an abnormal chest x-ray or a history of TB treatment. These individuals are required to check in with the local public health unit where they intend to reside and undergo a local clinical assessment. The TBDHU may follow these clients for a period of up to five years (if not treated for active TB or LTBI).

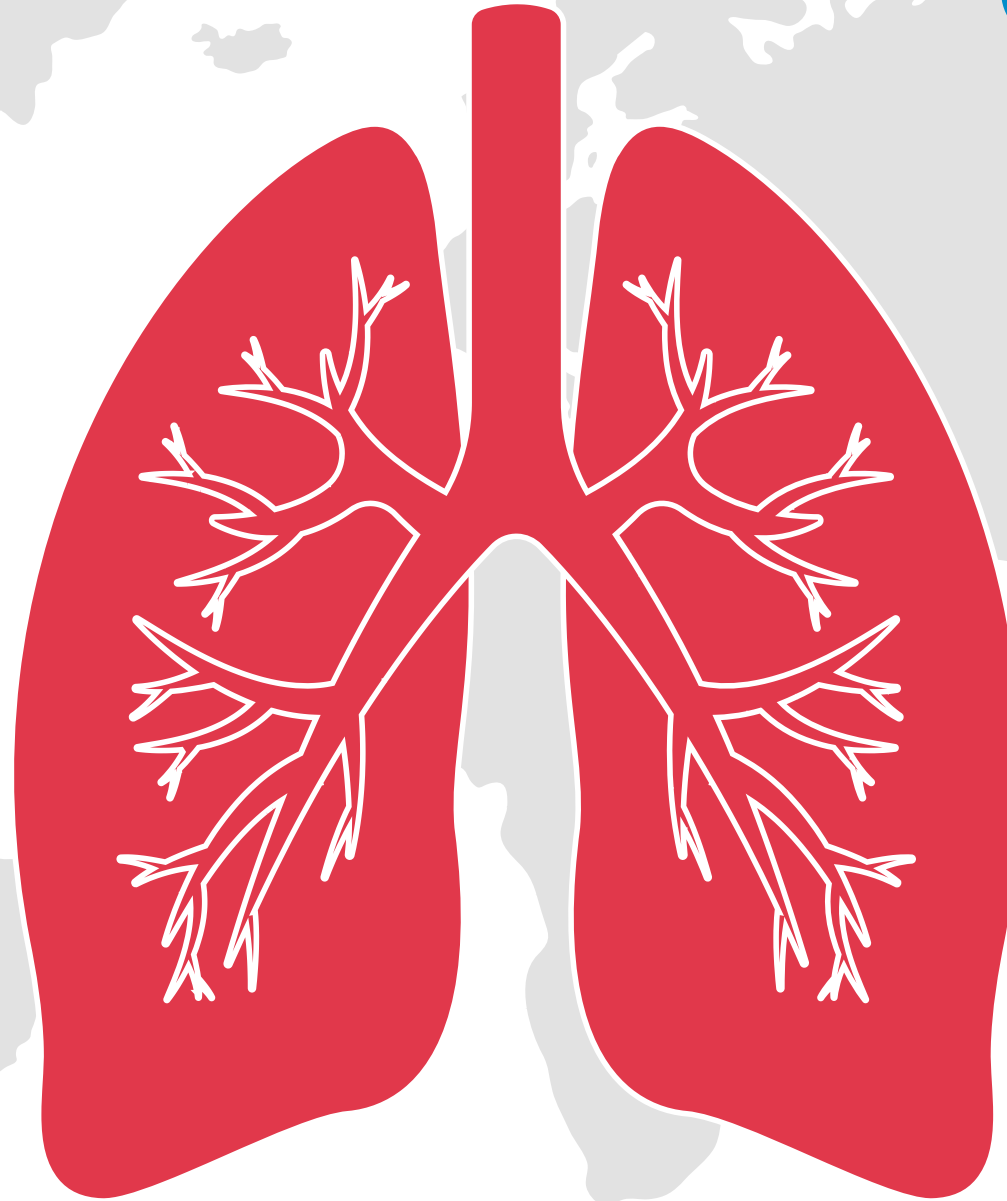
TBDHU has observed a recent increase in the reports of medical surveillance cases, with many of the cases newcomers to Canada (refugees, immigrants, students, workers) from endemic countries.

We thank clinicians for keeping TB as a differential diagnosis when assessing clients who have recently immigrated to Canada.



TUBERCULOSIS UPDATE 2024

THUNDER BAY & DISTRICT



QUESTIONS?

Contact TBDHU Infectious Diseases Program
(807) 625-8318 or
Toll Free at 1-888-294-6630 ext. 8318.

