



Department of Health and Human Services  
Maine Center for Disease Control and Prevention  
286 Water Street  
11 State House Station  
Augusta, Maine 04333-0011  
Tel: (207) 287-8016; Fax (207) 287-9058  
TTY Users: Dial 711 (Maine Relay)

## Maine Health Alert Network (HAN) System

### PUBLIC HEALTH ADVISORY

**To:** Health Care Providers  
**From:** Dr. Isaac Benowitz, State Epidemiologist  
**Subject:** **Increase in Tuberculosis Cases and Close Contacts Needing Assessment for Latent Tuberculosis Infection in Maine**  
**Date / Time:** Wednesday, November 29, 2023, at 11:13AM  
**Pages:** 6  
**Priority:** Normal  
**Message ID:** 2023PHADV041

### Increase in Tuberculosis Cases and Close Contacts Needing Assessment for Latent Tuberculosis Infection in Maine

#### Summary

In Maine, cases of tuberculosis (TB) disease have increased in 2023 throughout the state, and the number of contact investigations at schools, health care settings and other facilities has also increased. Many individuals exposed to TB are now seeking screening for latent tuberculosis infection (LTBI). Health care providers in all parts of Maine should know how to screen close contacts of individuals with TB disease, manage LTBI treatment, and recognize the differences between LTBI and TB disease.

*Please join Maine CDC for a webinar on management of persons exposed to tuberculosis:*

**Close contacts of persons diagnosed with TB disease:  
What primary care providers need to know**  
*Monday, December 4, 2023, at 12pm*

Registration link:

<https://mainestate.zoom.us/meeting/register/tZYpdO2qrT4tHNfO7PQRkLeu31XMb5YjU7Ai>

## Background

During 2018–2022, Maine had an average of 16 new cases of TB disease per year. As of November 28, 2023, Maine has identified 24 new cases, representing a 41% increase in cases compared to 2022.<sup>1</sup> Twelve of these new cases have been diagnosed since September 2023, and may have exposed people in schools, churches, shelters, health care settings, and other facilities.

TB is a bacterial infection caused by *Mycobacterium tuberculosis* (*M. tuberculosis*) and can cause disease in any part of the body, including the spine, brain, and lymph nodes, but most commonly in the lungs, causing pulmonary disease. Patients infected with *M. tuberculosis* can have LTBI or TB disease.

- **Individuals with LTBI** are asymptomatic and noninfectious. Bacteria are present within the lungs but are contained and unable to spread to others. Left untreated, approximately 5-10% of individuals with LTBI will progress to TB disease during their lifetime.
- **Individuals with TB disease** are symptomatic and infectious until treated. TB disease can be fatal if not recognized and treated.

An individual with LTBI may be infected for weeks, or more commonly months or years, before developing TB disease. Some never develop TB disease. Prolonged exposure is normally necessary for people to become infected with *M. tuberculosis*, such as to family members, coworkers, colleagues, or friends.

More details about LTBI and TB disease can be found in a recent Maine CDC health advisory [Think. Test. Treat Tuberculosis \(TB\) in Maine](#) (March 24, 2023) and on [U.S. CDC's website](#).

## Recommendations for Clinicians Caring For Patients Who are Close Contacts of an Individual with TB Disease (see Figure)

If a patient received a letter or was otherwise notified that they were identified as a close contact, they should be evaluated as outlined below. If a patient believes they were exposed to TB disease but were not notified that they were a close contact, the following general close contacts definition may assist in determining if evaluation is necessary. Close contacts are persons who have shared airspace (within 6 feet) with a person with infectious TB disease for a cumulative 8 or more hours. These persons may include household members, friends, coworkers, classmates, and others. Maine CDC performs contact tracing and works with sites of exposures (e.g., schools, churches, shelters, etc.) to identify and notify individuals who are close contacts about recommendations for testing and evaluation.

### *Obtain a comprehensive past medical history, and ask patients about:*

- History of BCG vaccination
- Report/documentation of previous tuberculin skin test (TST) or Interferon-Gamma Release Assays (IGRA) results
- Previous diagnosis and treatment of LTBI or TB disease
- Medical conditions or [risk factors](#) making TB disease more likely (e.g., immunocompromised)
- Type, duration, and intensity of TB exposure
- Current symptoms of TB illness (e.g., cough  $\geq 3$  weeks, chest pain, hemoptysis, fever, chills, night sweats, loss of appetite, weight loss, malaise, easy fatigability)
  - *There are many reasons why someone may be coughing or sneezing. If a close contact is coughing or sneezing, it is important to follow general recommendations for when to stay*

---

<sup>1</sup> Data for 2023 are preliminary and are subject to change.

*home and preventing the spread of respiratory infections (stay up to date on vaccines for respiratory infections, wear masks, wash hands often, and cover coughs and sneezes).*

### **Screen for *M. tuberculosis* infection**

- Close contacts should be screened twice: as soon as possible following the exposure and, if the initial test was negative, 8–10 weeks following the most recent exposure.
- If the most recent exposure was  $\geq 8$ –10 weeks prior, only 1 test is needed.
- Close contacts with previous LTBI or TB disease do not require additional screening but should receive a medical evaluation if symptoms develop.
- A TST or IGRA can be used to screen for infection with *M. tuberculosis*.
  - *Considerations for TST (skin test):*
    - Individuals who received BCG vaccine should avoid a TST if possible, as it is not possible to distinguish a TST reaction caused by previous BCG or by infection. **In contact investigations, if TST is used, a positive TST should be interpreted as infection with *M. tuberculosis*.**<sup>2</sup>
    - Preferred for close contacts <5 years old.
    - $\geq 5$  mm<sup>3</sup> is considered positive in all close contact evaluations; and signifies evidence of *M. tuberculosis* infection. Further medical evaluation is necessary.
    - Requires 2 office visits: 1 to plant the TST and 1 to read the TST (48-72 hours after planting).
  - *Considerations for IGRA (blood test):*
    - Appropriate for all close contacts >5 years old.
    - Preferred for close contacts who received BCG vaccine.
- Regardless of the screening test results, close contacts who are asymptomatic do not need to be excluded from school or work and can travel. Likewise, asymptomatic family members and roommates of close contacts are not at risk and do not need to be excluded from work or travel.

### **Evaluate Patients with a Positive TST or IGRA Test Result**

- A chest x-ray should follow a positive TST or IGRA test result. A normal chest x-ray may be used to rule out the possibility of pulmonary TB disease in an individual who had a positive TST or IGRA and who has no symptoms of TB disease.
- If the chest x-ray is **abnormal**, collect 3 sputum samples for acid-fast bacilli (AFB) smear and culture. Please notify Maine CDC about any patient for whom sputum samples are ordered. Maine CDC may be available to assist with sputum collection. The patient should be isolated until sputum results are available. If isolation cannot be carried out at the patient's home or a hospital, please contact Maine CDC.

### **Treat for LTBI**

For close contacts with a positive TST or IGRA who have had a normal chest x-ray and who have no symptoms of TB disease, consider treatment for LTBI. Treatment of LTBI substantially reduces the risk

---

<sup>2</sup> *Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis*, December 16, 2005:

<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5415a1.htm>

<sup>3</sup> For an individual tested as part of a TB contact investigation,  $\geq 5$  mm is positive in contact investigation; positivity varies by group for other screening situations. For more information, see U.S. CDC's *Tuberculin Skin Testing Fact Sheet*, November 2, 2020: <https://www.cdc.gov/tb/publications/factsheets/testing/skintesting.htm>

of LTBI converting to TB disease. Short-course (3-4 months) therapies for LTBI are safe and effective and can be managed by [primary care practitioners](#).<sup>4</sup>

### ***Special Considerations***

- *Children under 5 or individuals who are immunosuppressed (e.g., HIV)* who are identified as close contacts of an individual with TB disease should be medically assessed, including chest x-ray, regardless of a history of LTBI or TB disease, or initial negative TST or IGRA, in collaboration with Maine CDC and pediatric or adult infectious disease clinicians.<sup>2</sup> Because of the increased risk of active TB disease present in these populations, they may need to receive LTBI treatment even if an initial TST or IGRA is negative.
- *Drug Resistance:* Drug susceptibility testing is performed on a specimen from every individual with TB disease in Maine. If drug resistance is identified, Maine CDC will attempt to contact health care providers caring for close contacts with positive TST or IGRA results.

### ***Reporting to Maine CDC***

- TST and IGRA results are not reportable to Maine CDC. However, when related to a contact investigation, Maine CDC would like to receive results by electronic laboratory reporting, fax 1-800-293-7534, or by calling 1-800-821-5821.
- Suspicion of TB disease is reportable and should be reported to Maine CDC immediately upon suspicion at 1-800-821-5821.

### ***Paying for Screening of Close Contacts and LTBI Treatment***

- Maine CDC can pay for costs associated with screening close contacts and LTBI treatment.
  - For costs associated with screening close contacts who are uninsured or underinsured, please contact Maine CDC at 1-800-821-5821.
  - For costs associated for LTBI treatment, the treating provider should fill out [Maine CDC's LTBI referral form](#) and send to Maine CDC.

## **Recommendations for Health Care Facilities**

### ***Have a TB Control Plan***

- Administrative controls, such as prompt identification of symptoms (screening) and testing
- Environmental controls, such as ventilation & high efficiency particulate air (HEPA) filtration, airflow control, and use of airborne infection isolation rooms (AII)
- Personal Protective Equipment such as N95s or higher-level respirators

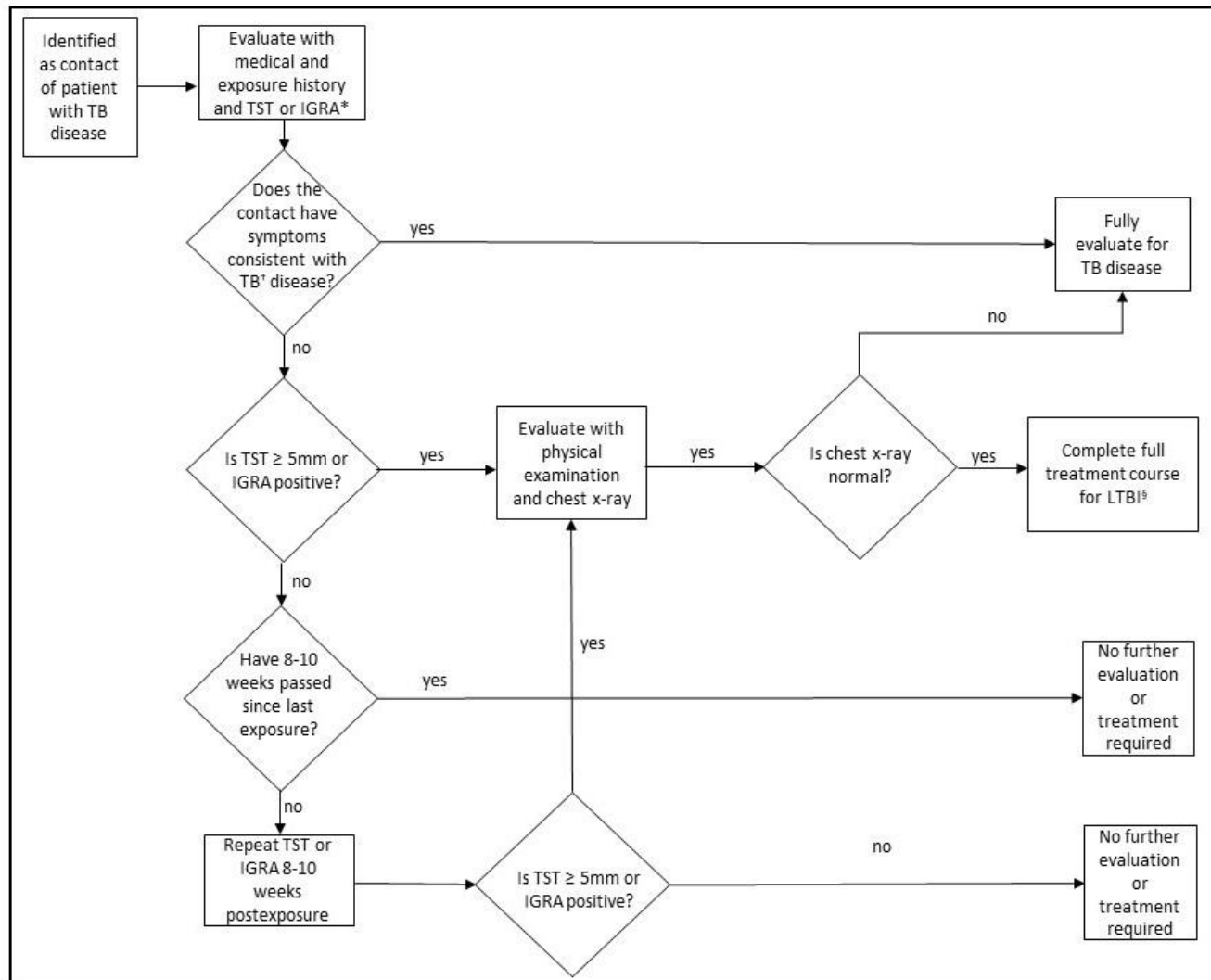
### ***For more details:***

- [U.S. CDC TB Infection Control in Health Care Settings](#)
- [U.S. CDC TB Health Care Settings](#)
- [U.S. CDC TB Core Curriculum](#)

---

<sup>4</sup> Due to rifapentine shortages, current available short-course treatments are with isoniazid and rifampin for 3 months, or rifampin for 4 months. Longer 6-9 month treatment with isoniazid is also available. For more information, see U.S. CDC's *Treatment Regimens for Latent TB Infection*, February 13, 2020: <https://www.cdc.gov/tb/topic/treatment/ltbi.htm>

**Figure. Evaluation, treatment, and follow-up of immunocompetent adults and children  $\geq 5$  years following exposure to TB disease**



\*TST = tuberculin skin test; IGRA = Interferon-Gamma Release Assay

†Tuberculosis

§ Latent Tuberculosis Infection

Flowchart adapted from *Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis*, December 16, 2005: <https://www.cdc.gov/mmwr/pdf/r/rr5415.pdf>

## Additional Information

- [Maine CDC health advisory: Think. Test. Treat Tuberculosis \(TB\) in Maine](#) (March 24, 2023)
- Maine CDC LTBI Treatment Referral <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/tuberculosis/documents/LTBI-Treatment-Referral.pdf>
- Maine CDC TB resources for Healthcare Providers <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/tuberculosis/health-care.shtml>
- Webinar: Latent Tuberculosis for the Primary Care Clinician (Northern Light Health in collaboration with Maine CDC): [https://www.youtube.com/watch?v=\\_LAYFpqLbHY](https://www.youtube.com/watch?v=_LAYFpqLbHY)
- U.S. CDC Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis <https://www.cdc.gov/mmwr/pdf/rr/rr5415.pdf>
- U.S. CDC Treatment Regimens for Latent TB Infection <https://www.cdc.gov/tb/topic/treatment/ltbi.htm>
- U.S. CDC Latent Tuberculosis Infection: a guide for primary health <https://www.cdc.gov/tb/publications/ltbi/pdf/LTBIbooklet508.pdf>
- U.S. CDC Deciding When to Treat Latent TB Infection <https://www.cdc.gov/tb/topic/treatment/decidelmbi.htm>
- U.S. CDC Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020 [https://www.cdc.gov/mmwr/volumes/69/rr/rr6901a1.htm?s\\_cid=rr6901a1\\_w](https://www.cdc.gov/mmwr/volumes/69/rr/rr6901a1.htm?s_cid=rr6901a1_w)
- U.S. CDC Tuberculin Skin Testing Fact Sheet <https://www.cdc.gov/tb/publications/factsheets/testing/skintesting.htm>