**Massachusetts Pediatric Tuberculosis Risk Assessment**

**User Guide**

**Avoid testing persons at low risk**

Testing among low risk populations, in the absence of new exposure, is not recommended, and may result in unnecessary evaluation and treatment because of falsely positive test results.

**Local recommendations, mandated testing and other risk factors**

Local epidemiologic circumstances, recommendations and mandates should also be considered in testing decisions. Public health programs can customize this risk assessment according to local recommendations. This risk assessment does not supersede any locally mandated testing.

**Travel or residence outside the United States**

Travel or residence in countries with an elevated TB rate may be a risk for TB exposure in certain circumstances (e.g., extended duration, likely contact with infectious TB cases, high TB prevalence in travel location, non-tourist travel). The duration of stay of at least one month to trigger testing is intended to identify travel most likely to involve TB exposure. TB screening tests can be falsely negative within 8 weeks after exposure, so are best obtained 8 weeks after a child’s return.

**Immunosuppression**

The exact level of immunosuppression that predisposes to increased risk for TB progression is unknown. The threshold of steroid dose and duration used here are based on data in adults and are in accordance with ACIP recommendations for live vaccines in immunosuppressed children.

**When to repeat a risk assessment and testing**

The risk assessment should be completed on new patients, patients thought to have new potential exposures to TB since last assessment, and during routine pediatric well-child visits. Repeat risk assessments should be based on the activities and risk factors specific to the child. High-risk children who volunteer or work in health care settings might require annual testing and should be considered separately. Re-testing should only be done in persons who previously tested negative, and have new risk factors since the last assessment (unless they were <6 months of age at the time of testing). In general, new risk factors would include new close contact with an infectious TB case or new immunosuppression, but could also include foreign travel.

**IGRA preference in BCG-vaccinated children >2 years old**

Because IGRA has increased specificity for TB infection in children vaccinated with BCG, IGRA is preferred over the TST in children >2 years old with a history of BCG vaccination or who are from countries where BCG vaccination is routinely practiced. The primary care provider may presume that most children born outside the United States may have been vaccinated with BCG. The TST is acceptable, if the patient is able to return to the provider for the reading, and the test is administered and read by a trained provider.

**Chest X-ray and medical evaluation required to rule out active TB and diagnose latent TB infection**

A medical evaluation and 2-view chest radiograph (posterior/anterior and lateral) help differentiate between latent TB infection and TB disease. Active disease must be excluded before treatment for latent TB infection is initiated because failure to do so may result in inadequate treatment and development of drug resistance.

**Negative test for latent TB infection does not rule out active TB disease**

It is important to remember that a negative TST or IGRA result does not rule out active TB. In fact, a negative TST or IGRA in a patient with active TB can be a sign of extensive disease and poor outcome. Any suspicion for active TB disease or extensive exposure to TB should prompt an evaluation for active TB disease, including physical exam, symptom review, and 2-view chest X-ray.

**Symptoms that should trigger evaluation for active TB disease in persons of any age**

Patients with any of the following symptoms, that are otherwise unexplained, should be evaluated for active TB disease: cough for more than 2-3 weeks, fevers, night sweats, weight loss, lymphadenopathy, hemoptysis or excessive fatigue.

**Decision to test requires commitment to connect patients with evaluation and treatment resources**

Because testing of persons at low risk of latent TB infection should not be done, persons who test positive for latent TB infection should generally be treated once active TB disease has been ruled out with a symptom screen, chest radiograph and, if indicated, sputum smears, cultures, and nucleic acid amplification testing. However, clinicians should not feel obligated to treat low risk person with a positive test for latent TB infection.

**Emphasis on short course for treatment of latent TB infection**

Shorter regimens for treating latent TB infection have been shown to be more likely to be completed, and the 12-week isoniazid/rifapentine regimen has been shown to be as effective as 9 months of isoniazid. Use of these shorter regimens is preferred in most patients, although the 12-week regimen is not recommended for children <2 years of age, children on antiretroviral medications, or pregnant adolescents. Drug-drug interactions and contact to drug resistant TB are also reasons these shorter regimens cannot be used.

**Shorter duration latent TB infection treatment regimens**

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| **Medication** | **Frequency** | **Duration** |
| Rifampin | Daily | 4 months |
| Isoniazid + rifapentine\* | Weekly | 12 weeks |

\*MDPH recommends DOT for this regimen.

**Report latent TB infection to the Massachusetts Department of Public Health**

Latent TB infection and Active/Suspected Active TB disease are reportable conditions (105 CMR 300.000). Case reporting forms are on-line: [www.mass.gov/tuberculosis](http://www.mass.gov/tuberculosis)

**Document Risk Assessment and latent TB infection test results in the [electronic] medical record**

Results ideally should be easily retrievable from the medical record.

**ACIP** = Advisory Committee on Immunization Practices; **BCG** = bacillus Calmette-Guerin; **DOT** = Directly observed therapy; **IGRA** = Interferon gamma release assay (e.g., QuantiFERON-TB Gold, T-SPOT.TB); **LTBI** = latent TB infection; **MDPH** = Massachusetts Department of Public Health; **TST** = tuberculin skin test