

Pediatric Tuberculosis Risk Assessment

- Use this tool to identify asymptomatic **children** for latent TB infection (LTBI) testing.
- **Do not repeat testing** unless there are **new risk factors** since last test.
- Do not treat for LTBI until active TB disease has been excluded:
For patients with TB symptoms or an abnormal chest x-ray consistent with active TB disease, further evaluation may be needed such as: sputum AFB smears, cultures and nucleic acid amplification testing. A negative tuberculin skin test or interferon gamma release assay does not rule out active TB disease.

LTBI testing is recommended if any of the three boxes below are checked.

Born, live, or travel in a country with an elevated TB rate for at least one month.

- The duration of at least one consecutive month to trigger testing is intended to identify travel most likely to involve TB exposure.
- Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe
- TB testing should occur at least 8 weeks after the child left the country with elevated TB prevalence
- Interferon Gamma Release Assay is preferred over Tuberculin Skin Test for non-U.S.-born persons ≥ 2 years old

Immunosuppression, current or planned.

HIV infection, organ transplant recipient, treated with TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent of prednisone ≥ 2 mg/kg/day, or ≥ 15 mg/day for ≥ 2 weeks) or other immunosuppressive medication

Close contact to someone with infectious TB disease during lifetime.

Treat for LTBI if LTBI test result is positive and active TB disease is ruled out.

None; no TB testing is indicated at this time.

Provider: _____

Assessment Date: _____

Patient Name: _____

Date of Birth: _____

(Place sticker here if applicable)

See the **Pediatric TB Risk Assessment User Guide** (page 2 and 3) for more information about using this tool.

Pediatric TB Risk Assessment User Guide

Avoid testing persons at low risk

Routine testing of low risk populations is not recommended and may result in unnecessary evaluations and treatment because of falsely positive test results.

Local recommendations, mandated testing & risk factors

Several risk factors for TB that have historically been used to select children for TB screening, or in mandated programs, are not included among the components of this risk assessment. This is purposeful in order to focus testing on children at highest risk. However, certain populations may be mandated for testing by statute, regulation, or policy. This risk assessment does not supersede any mandated testing. Testing can also be considered in children with frequent exposure to adults at high risk of TB infection, such as those with extensive foreign travel in areas with high TB rates. Local TB control programs and clinics can customize this risk assessment according to local recommendations. **Providers should check with local TB control programs for more information.** Local health jurisdictions contact information can be found on the online at: <https://www.doh.wa.gov/AboutUs/PublicHealthSystem/LocalHealthJurisdictions>

Most patients with LTBI should be treated

Most patients with LTBI should be treated. Persons with risk factors who test positive for LTBI should generally be treated once active TB disease has been ruled out with a physical exam, chest radiograph and, if indicated, sputum smears, cultures, and nucleic acid amplification testing (NAAT). However, clinicians should not feel compelled to treat persons who have no risk factors but have a positive test for LTBI.

When to repeat a risk assessment and testing

Risk assessments should be completed for new patients, patients with 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 frequent health care settings might require annual testing and should be considered separately. People 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. In general new risk factors would include new close contact with an infectious TB case or new immunosuppression, but could also include foreign travel.

Immunosuppression

While immunosuppression does increase the risk of disease progression, it does not increase the risk of TB exposure. The exact level of immunosuppression that predisposes a person to increased risk for TB progression is unknown. The threshold of steroid dose and duration used in the Pediatric TB Risk Assessment are based on data in adults and in accordance with Advisory Committee on Immunization Practices recommendations for live vaccines in

children receiving immunosuppression.

Foreign travel or residence

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 persons with infectious TB, high prevalence of TB in travel location, non-tourist travel). The duration of at least one consecutive month to trigger testing is intended to identify travel most likely to involve TB exposure. TB screening tests can be falsely negative within eight weeks after exposure, so are best obtained eight weeks after the last exposure, or return from travel.

IGRA preference in non-U.S.-born children ≥ 2 years old

Since IGRA has increased specificity for TB infection in children vaccinated with BCG, IGRA is preferred over the tuberculin skin test for non-U.S.-born children ≥ 2 years of age. IGRAs can be used in children < 2 years of age. In BCG vaccinated, immunocompetent children with a positive TST, it may be appropriate to confirm a positive TST with an IGRA. If IGRA is not done the TST result should be considered the definitive result.

Negative test for LTBI does not rule out active TB

It is important to remember that a negative TST or IGRA result does not rule out active TB disease. 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.

Emphasis on short course treatment regimens for LTBI

Shorter regimens for treating latent TB infection have been shown to be as effective as 9 months of isoniazid, and are more likely to be completed. Recent literature suggests that two shorter LTBI regimens (daily rifampin for 4 months and once-weekly isoniazid and rifapentine [3HP] for 12 weeks) have higher rates of treatment completion and lower rates of side effects, especially drug-induced hepatitis. The choice between rifampin daily for 4 months, vs. INH and rifapentine once weekly for 12 weeks depends on the patient's and medical provider's preference.

The American Academy of Pediatrics considers any of the three regimen options adequate, depending on the circumstances for individual patients. Most experts consider 3HP to be the preferred regimen for treatment of LTBI for children 2 years and older. However, 3HP is not recommended for children under 2 years old because the safety and pharmacokinetics of rifapentine have not been established for this age group. Consider the use of Isoniazid in children under 2 years of age.

For more information, refer to the *LTBI Treatment Guidance in Washington State* and one-page *LTBI Treatment Quick Reference Sheet* online at: <https://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Tuberculosis/TBProviderToolkit> Have questions or need consultation on a LTBI or TB patient? TB ECHO® is a weekly videoconference

meeting for healthcare professionals to get TB education, consultation, and mentoring. Learn more at: www.doh.wa.gov/TBECHO.

Refusal of recommended LTBI treatment

Refusal should be documented. Recommendations for treatment should be made at future encounters with medical services. If treatment is later accepted, TB disease should be excluded and chest x-ray repeated if it has been more than 3 months from the initial evaluation.

Symptoms that should trigger evaluation for active TB

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.

Resource

American Academy of Pediatrics, Red Book Online, Tuberculosis is available online at: <https://redbook.solutions.aap.org/chapter.aspx?sectionid=189640207&bookid=2205>