
GCS Tuberculosis Screening & Testing Policy

DEFINITION: Defined by the Center for Disease Control (CDC)

Tuberculosis (TB) is a disease caused by bacteria called Mycobacterium tuberculosis. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB disease was once the leading cause of death in the United States. TB is spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected.

However, not everyone infected with TB bacteria becomes sick. People who are infected, but not sick, have what is called latent TB infection. People who have latent TB infection do not feel sick, do not have any symptoms, and cannot spread TB to others. But some people with latent TB infection go on to get TB disease.

There is good news. People with TB disease can be treated if they seek medical help. Even better, most people with latent TB infection can take medicine so that they will not develop TB disease.

PURPOSE

Tuberculosis continues to be a highly infectious, potentially life-threatening disease. According to the World Health Organization and the Centers for Disease Control, active TB disease can be prevented if screening is provided for those at high risk. Minimizing exposure to TB starts by identifying those with active and latent tuberculosis in our student population. Glenelg Country School has implemented the following prevention and treatment policies and requirements.

REQUIREMENTS:

All new students & returning students who need an annual physical exam (6th THRU 12TH grades)

- Complete the TB Screening on the Physical Exam Form
- The TB Screening needs to be completed with the Physical Exam and by a Physician or Nurse Practitioner
- If your provider needs further assistance in conducting the TB Screening, the GCS Pediatric Tuberculosis Risk Assessment, the GCS Pediatric Risk Assessment User Guide, and the list of Countries with High Burden of Active TB are provided as attachments to the Physical Exam Form
 - TB testing is recommended if any of the following criterion are met:
 - 1) Birth, travel, or residence in a country with an elevated TB rate for at least **1 month** within the past year,
 - 2) Immunosuppressed (current or planned), and
 - 3) Close contact to someone with infectious TB disease during lifetime

TUBERCULIN SKIN TEST:

- If TB testing is required, testing must be done **in the United States** and **prior to the first day of school**
- If the student has not had a previous positive TB skin test, a Mantoux tuberculin skin test (TST) can be done (results read within 48-72 hours)
 - A TST reaction of >10mm of induration is considered positive and requires follow-up (with a chest x-ray and/or the Interferon-gamma release assay [IGRA] blood test)
 - A TST that was not measured and recorded in millimeters (mm) of induration must be repeated
- If the student has had a positive skin test previously, **DO NOT REPEAT THE TEST**. A documented positive reaction to a past tuberculosis skin test is contraindicated to further skin tests

INTERFERON-GAMMA RELEASE ASSAY (IGRA):

- The IGRA does not cross-react to bacilli Calmette-Guerin (BCG) vaccine and is the preferred method of testing for persons who have received the BCG vaccination

TREATMENT & FOLLOW UP:

- Treatment for **active TB** (as diagnosed by a positive chest x-ray) must start prior to the first day of school
- Treatment for **latent TB** (as diagnosed by positive Interferon-gamma release assay [IGRA]) must start immediately
- Parents/guardians need to assume responsibility for adherence to any treatment plan
- Treatment options are to be discussed and determined with your physician
- Physician documentation of completion of treatment is required

POSITIVE TST:

- A TST reaction of >10mm of induration is considered positive and requires follow up with an IGRA blood test and/or chest x-ray
- Results of the chest x-ray need to be submitted to school prior to starting

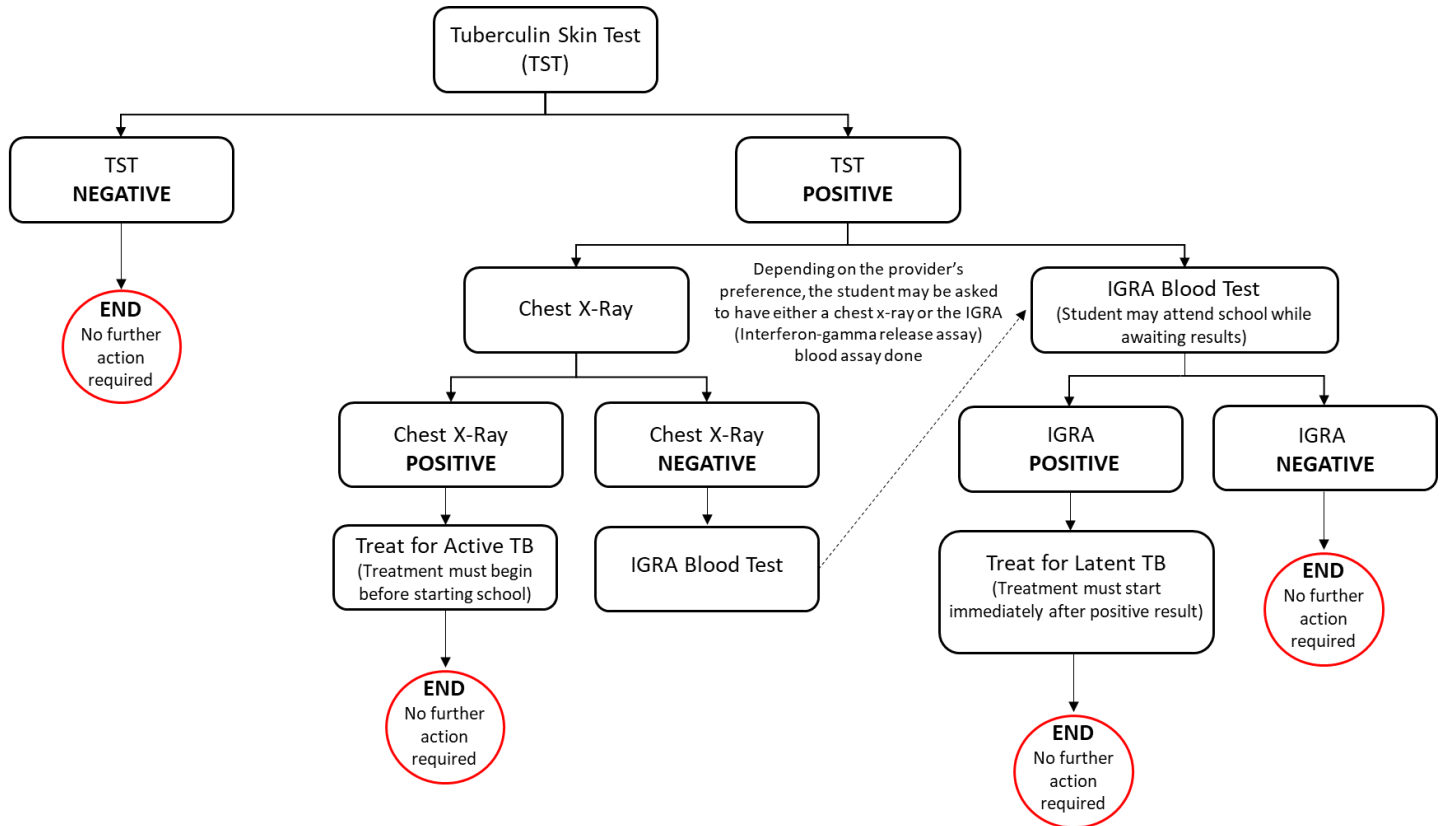
POSITIVE Chest X-Ray:

- Indicates active disease and immediate treatment must be implemented
- Treatment must start prior to starting school

POSITIVE IGRA:

- Requires treatment for latent TB, even if the chest x-ray is negative for active disease
- May attend school while waiting for results but must start treatment immediately following results

See below flowchart for further details:



GCS 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 the last test.
If initial negative screening test occurred prior to 6 months of age, repeat testing should occur at age 6 months or older.
- Do not treat for LTBI until active TB disease has been excluded:
For children with TB symptoms or abnormal chest x-ray consistent with active TB disease, evaluate for active TB disease with a chest x-ray, symptom screen, and if indicated, sputum AFB smears, cultures and nucleic acid amplification testing.

LTBI Testing is recommended if any of the boxes below are checked.	
<input type="checkbox"/>	Birth, travel, or residence in a country with an elevated TB rate for at least 1 month
	<ul style="list-style-type: none"> • Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe. • If resources require prioritization within this group, prioritize patients with at least one medical risk for progression (see Attachment B, Pediatric Risk Assessment User Guide for this list). • Interferon Gamma Release Assay is preferred over Tuberculin Skin Test for non-US born persons ≥ 2 years old.
<input type="checkbox"/>	Immunosuppression , current or planned
	<ul style="list-style-type: none"> • HIV Infection, organ transplant recipient, treated with TNF-alpha antagonist (e.g. infliximab, etanercept, others), steroids (equivalent of prednisone ≥ 2mg/kg/day, or ≥ 15mg/day for ≥ 2 weeks) or other immunosuppressive medication.
<input type="checkbox"/>	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 Name: _____

Assessment Date: _____

Patient Name: _____

Date of Birth: _____

GCS Pediatric Tuberculosis Risk Assessment based off the California Pediatric Tuberculosis Risk Assessment (September 2018) and guidance from the Howard County Health Department and the Maryland Department of Health.

GCS Pediatric Tuberculosis Risk Assessment User Guide

Avoid testing persons at low risk

Routine testing of persons without risk factors is not recommended and may result in unnecessary evaluations and treatment because of falsely positive test results.

Local recommendations, mandated testing and other risk factors

Several risk factors for TB that have been used to select children for TB screening historically or in mandated programs are not included among the 3 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 recommendations should also be considered in testing decisions. Local TB control programs and clinics can customize this risk assessment according to local recommendations. **Providers should check with local TB control programs for local recommendations.** Please visit the CTBCP website for more information.

(<https://phpa.health.maryland.gov/OIDPCS/CTBCP/pages/Home.aspx>)

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 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. Children who volunteer or work in health care settings might require annual testing and should be considered separately. Retesting 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.

Immunosuppression

The exact level of immunosuppression that predisposes 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 (ACIP) 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 1 consecutive month to trigger testing is intended to identify travel most likely to involve TB exposure. TB screening tests can be falsely negative within the 8 weeks after exposure, so are best obtained 8 weeks after a child's return.

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

Because 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, however,

there is an overall lack of data in this age group, which complicates interpretation of test results. 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. A negative TST or IGRA in a patient with active TB disease can be a sign of extensive 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 for treatment of 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. Use of these shorter regimens is preferred in most patients, although the 12-week regimen is not recommended for children <2 years of age or children on antiretroviral medications. It is under study in pregnancy. Drug- drug interactions and contact to drug resistant TB are other contra-indications for shorter regimens.

Shorter duration LTBI treatment regimens

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

* 11-12 doses in 16 weeks required for completion.

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 6 months from the initial evaluation for children 5 years or older and 3 months for children less than 5 years of age.

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.

Resources

Fact Sheets for LTBI Regimens, Isoniazid+Rifapentine, Rifampin, and Isoniazid are available on the TBCB LTBI Treatment page. (www.cdph.ca.gov/LTBITreatment)

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

Abbreviations

AFB= acid-fast bacilli BCG= Bacillus Calmette-Guérin CXR= chest x-ray DOT= directly observed therapy
 IGRA=interferon gamma release assay LTBI= latent TB infection MDR =multiple drug resistant NAAT= nucleic acid amplification testing SAT= self-administered therapy TST= tuberculin skin test

Countries with High Burden of Active Tuberculosis

- The following countries are TB “high burden” countries.
- These countries have been given the highest priority at the global level.
- The high burden countries accounted for approximately 80% of all estimated incident cases worldwide.

High Burden Countries (used for the period 2016-2020)
Angola
Bangladesh
Brazil
China
Democratic Peoples Republic of Korea
Democratic Republic of Congo
Ethiopia
India
Indonesia
Kenya
Mozambique
Myanmar
Nigeria
Pakistan
Philippines
Russian Federation
South Africa
Thailand
Tanzania, United Republic of
Viet Nam
Cambodia
Central African Republic
Congo
Lesotho
Liberia
Namibia
Papua New Guinea
Sierra Leone
Zambia
Zimbabwe

Source: <http://www.stoptb.org/countries/tbdata.asp>; The material on this page was developed by the World Health Organization (WHO)