

# Los Angeles County Adult Tuberculosis Risk Assessment

- Use this tool to identify asymptomatic **adults** for latent TB infection (LTBI) testing.
- Re-testing should only be done in persons who previously tested negative, and have new risk factors since the last assessment.
- For TB symptoms or abnormal chest x-ray consistent with active TB disease → Evaluate for 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. A negative tuberculin skin test or interferon gamma release assay does not rule out active TB disease.*

Check appropriate risk factor boxes below.

LTBI testing is recommended if any of the 5 boxes below are checked.

If LTBI test result is positive and active TB disease is ruled out, LTBI treatment is recommended.

**Foreign-born person from a country with an elevated TB rate**

- Includes countries other than the United States, Canada, Australia, New Zealand, or Western and North European countries.
- If resources require prioritization within this group, **prioritize** patients with at least one medical risk for progression (see Fact Sheet for list)
- Interferon Gamma Release Assay is preferred over Tuberculin Skin Test for foreign-born persons.

**Immunosuppression, current or planned**

HIV infection, organ transplant recipient, treated with TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent of prednisone  $\geq 15$  mg/day for  $\geq 1$  month) or other immunosuppressive medication

**Close contact to someone with infectious TB disease at any time**

**History of homelessness**

**History of incarceration**

Provider: \_\_\_\_\_

Assessment Date: \_\_\_\_\_

Patient Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

*(Place sticker here if applicable)*

See the [Los Angeles County Adult Tuberculosis Risk Assessment Fact Sheet](#) for more information about using this tool.

# Los Angeles County Adult Tuberculosis 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.

### Prioritize persons with risks for progression

If health system resources do not allow for testing of all foreign-born persons from a country with an elevated TB rate, prioritize patients with at least one of the following medical risks for progression:

- diabetes mellitus
- smoker within past 1 year
- end stage renal disease
- leukemia or lymphoma
- silicosis
- cancer of head or neck
- intestinal bypass/gastrectomy
- chronic malabsorption
- body mass index  $\leq 20$
- history of chest x-ray findings suggestive of previous or inactive TB (no prior treatment). Includes fibrosis or non-calcified nodules, but does not include solitary calcified nodule or isolated pleural thickening. In addition to LTBI testing, evaluate for active TB disease.

## United States Preventive Services Task Force

The USPSTF has recommended testing foreign born persons born in or former residents of a country with an elevated tuberculosis rate and persons who live in or have lived in high-risk congregate settings such as homeless shelters and correctional facilities. Because the increased risk of exposure to TB in congregate settings varies substantially by facility and local health jurisdiction, clinicians are encouraged to follow local recommendations when considering testing among persons from these congregate settings. USPSTF did not review data supporting testing among close contacts to infectious TB nor among persons who are immunosuppressed because these persons are recommended to be screened by public health programs or by clinical standard of care.

## Local recommendations and other risk factors

Local recommendations and mandates should also be considered in testing decisions and in LAC history of homelessness and incarceration were added.

## Mandated testing

Several risk factors for TB that have been used to select patients for TB screening historically or in mandated programs were not included among the 3 components of the California TB risk assessment. This is purposeful in order to focus testing on patients at highest risk. Certain populations may be mandated for testing by statute, regulation, or policy and have specific documentation forms. This risk assessment does not supersede any mandated testing. Examples of these populations include: healthcare workers, residents or employees of correctional institutions, substance abuse treatment facilities, homeless shelters, and others.

## Age as a factor

Age (among adults) is not considered in this risk assessment. However, younger adults have more years of expected life during which progression from latent infection to active TB disease could develop. Some programs or clinicians may additionally prioritize testing of younger foreign-born persons when all foreign-born are not tested. An upper age limit for testing has not been established but could be appropriate depending on individual patient TB risks, comorbidities, and life expectancy.

## Homeless

Persons experiencing homelessness are particularly vulnerable to TB. Factors such as crowded living situations, lack of access to health care, and delayed diagnosis increase the risk of transmission in this population.

## Incarceration

Persons who have been incarcerated are vulnerable to TB exposure. Factors such as

## Children

The risk assessment form is intended for adults. The American Academy of Pediatrics has created four validated risk assessment questions in children. See: American Academy of Pediatrics. Tuberculosis. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. Red Book®: 2015 Report of the Committee on Infectious Diseases. American Academy of Pediatrics; 2015; 805-831

## Decision to test is a decision to treat

Because testing of persons at low risk of LTBI should not be done, persons that test positive for LTBI should generally be treated once active TB disease has been ruled out with a chest radiograph and, if indicated, sputum smears, cultures, and nucleic acid amplification testing.

## When to repeat a test

Re-testing should only be done in persons who previously tested negative, and have new risk factors since the last assessment. In general, this would include new close contact with an infectious TB case or new immunosuppression, but could also include foreign travel in certain circumstances (e.g., extended duration, likely

# Tuberculosis Risk Assessment Fact Sheet — *continued*

contact with infectious TB cases, high TB prevalence of TB in travel location).

## When to repeat a risk assessment

The risk assessment should be administered at least once. Persons can be screened for new risk factors at subsequent preventive health visits.

## IGRA preference in BCG vaccinated

Because IGRA has increased specificity for TB infection in persons vaccinated with BCG, IGRA is preferred over the TST in these persons. Most persons born outside the United States have been vaccinated with BCG.

## Previous or inactive tuberculosis

Chest radiograph findings consistent with previous or inactive TB include fibrosis or non-calcified nodules, but do not include a solitary calcified nodule or isolated pleural thickening. Persons with a previous chest radiograph showing findings consistent with previous or inactive TB should be tested for LTBI. In addition to LTBI testing, evaluate for active TB disease.

## Negative test for LTBI 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.

## Symptoms that should trigger evaluation for active TB disease

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

## Emphasis on short course for treatment of LTBI

Shorter regimens for treating LTBI have been shown to be more likely to be completed and the 12-dose regimen has been shown to be as effective as 9 months of isoniazid. Use of these shorter regimens is preferred in most patients. Drug-drug interactions and contact to drug resistant TB are frequent reasons these regimens cannot be used.

## Shorter duration LTBI treatment regimens

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

\*The CDC currently recommends DOT for this regimen, however, preliminary data suggests that SAT is non-inferior to DOT in the United States. Many clinicians are using SAT or modified DOT.

### CDPH 12-dose isoniazid + rifapentine regimen Fact Sheet:

<http://cdph.ca.gov/programs/tb/Documents/TBCB-INH-RIF-LTBI-fact-sheet.pdf>

DOT = Directly observed therapy; SAT = Self-administered therapy; IGRA = Interferon gamma release assay (e.g., QuantiFERON-TB Gold, T-SPOT.TB); BCG = Bacillus Calmette-Guérin; TST = tuberculin skin test; LTBI = latent TB infection

Adapted for local use from the California Tuberculosis Risk Assessment available on the PROVIDERS page at [www.ctca.org](http://www.ctca.org)

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