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Latent Tuberculosis Infection (LTBI): A Practical Guide for Primary Care Providers

Introduction

Tuberculosis (TB) remains a significant public health concern, and latent TB infection (LTBI) serves as a critical reservoir for future cases of TB disease. While individuals with LTBI cannot transmit Mycobacterium tuberculosis, an estimated 5–10% will progress to active TB disease in their lifetime without treatment, accounting for approximately 80% of TB cases in the United States. Effective identification and treatment of LTBI are essential to reducing TB transmission and moving toward elimination. However, targeted testing and treatment of LTBI are often underutilized in primary care settings due to concerns about test interpretation, treatment regimens, and patient adherence. This concise guide aims to standardize targeted testing practices, empower healthcare providers (HCPs) with the confidence to screen and treat LTBI, and support the integration of LTBI management into routine clinical care. By prioritizing LTBI treatment among high-risk individuals, primary care providers play a vital role in preventing TB disease and protecting public health.

1. Identifying Candidates for LTBI Testing

Routine testing should focus on individuals at increased risk for TB infection or progression to active disease. We recommend utilizing the California Adult and Pediatric Tuberculosis Risk Assessment Tools to determine who should be tested.

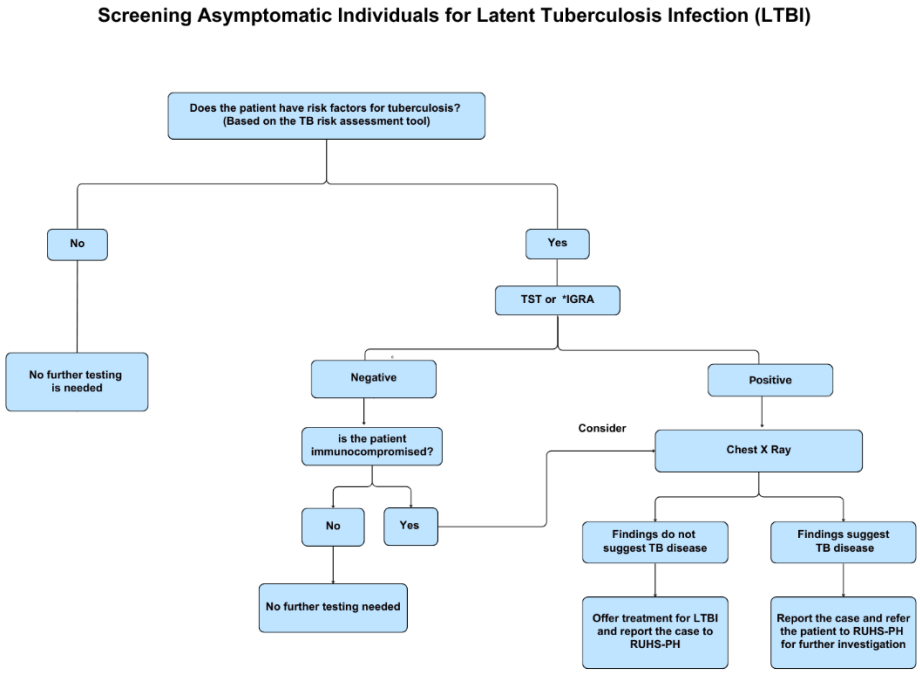

*Figure 1. Diagram about the steps to follow during screening for LTBI. (Adapted from Civil Surgeon Tuberculosis Screening Medical Examination for All Applicants 2 Years of Age or Older, CDC).*IGRA preferred in individuals with history of BCG vaccination. Risk factors for TB include birth, travel, or prolonged residence (at least one month) in a country with an elevated TB rate, individuals with immunosuppression, close contact with someone diagnosed with infectious TB disease, individuals who have experienced homelessness or incarceration, including those who have lived in high-risk congregate settings like homeless shelters or correctional facilities. The screening tool is intended for use in the general public. Please note that screening may be considered, recommended, or required for school, employment, or other purposes even if TB risk assessment tool is negativ*

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2. Regimens recommended for latent tuberculosis infection treatment.

Drug	Duration	Dose and age group	Frequency	Total doses
Isoniazid* and rifapentine†	3 mos	Adults and children aged ≥12 yrs **Isoniazid:** 15 mg/kg rounded up to the nearest 50 or 100 mg; 900 mg maximum **Rifapentine:** 10–14.0 kg, 300 mg 14.1–25.0 kg, 450 mg 25.1–32.0 kg, 600 mg 32.1–49.9 kg, 750 mg ≥50.0 kg, 900 mg maximum **Children aged 2–11 yrs:** Isoniazid*: 25 mg/kg; 900 mg maximum Rifapentine†: see above	Once weekly	12
Rifampin¶	4 mos	**Adults:** 10 mg/kg **Children:** 15–20 mg/kg** Maximum dose: 600 mg	Daily	120
Isoniazid* and rifampin¶	3 mos	**Adults:** Isoniazid*: 5 mg/kg; 300 mg maximum Rifampin¶: 10 mg/kg; 600 mg maximum **Children:** Isoniazid*: 10–20 mg/kg††; 300 mg maximum Rifampin¶: 15–20 mg/kg; 600 mg maximum	Daily	90
Isoniazid*	6 mos	**Daily regimen:** **Adults:** 5 mg/kg **Children:** 10–20 mg/kg†† Maximum dose: 300 mg **Twice weekly regimen:** **Adults:**15 mg/kg **Children:** 20–40 mg/kg†† Maximum dose: 900 mg	Daily Twice weekly§	180 52
Isoniazid*	*9 mos*	***Daily regimen:*** ***Adults:*** *5 mg/kg* ***Children:*** *10–20 mg/kg††* *Maximum dose: 300 mg* ***Twice weekly regimen:*** ***Adults:*** *15 mg/kg* ***Children:*** *20–40 mg/kg†† Maximum dose: 900 mg*	*Daily* *Twice weekly§*	*270* *76*

Table 1. Dosages for recommended latent tuberculosis infection treatment regimens (adapted from CDC LTBI guidelines).
The California DPH emphasizes shorter-course, rifampin-based regimens as preferred options due to higher completion rates and lower hepatotoxicity. While intermittent TB treatment regimens might offer some advantages in terms of reduced pill burden, daily regimens are generally preferred due to their higher efficacy and lower relapse rates.
**Isoniazid is formulated as 100-mg and 300-mg tablets.*
† Rifapentine is formulated as 150-mg tablets in blister packs that should be kept sealed until use.
§ Intermittent regimens must be provided via directly observed therapy (i.e., a health care worker observes the ingestion of medication).
¶ Rifampin (rifampicin) is formulated as 150-mg and 300-mg capsules.
*** The American Academy of Pediatrics acknowledges that some experts use rifampin at 20–30 mg/kg for the daily regimen when prescribing for infants and toddlers.*
†† The American Academy of Pediatrics recommends an isoniazid dosage of 10–15 mg/kg for the daily regimen and 20–30 mg/kg for the twice-weekly regimen.

For additional information visit: **Latent Tuberculosis Infection: A Guide for Primary Health Care Providers by The CDC.**