

TB Clinical Summary Sheet: WHO & CDC Guidelines (2024–2026)

I. Clinical Manifestations

Tuberculosis (TB) is caused by *Mycobacterium tuberculosis*. It primarily affects the lungs (pulmonary) but can disseminate to any organ.

Feature	Latent TB Infection (LTBI)	Active TB Disease
Symptoms	None; person feels well.	Cough, fever, weight loss, night sweats.
Transmission	Cannot spread to others.	Can spread to others via respiratory droplets.
Skin/Blood Test	Usually positive.	Usually positive.
Chest X-Ray	Typically normal.	Typically abnormal (infiltrates/cavities).
Infectiousness	Not infectious.	Infectious until treated (approx. 2 weeks).

II. Diagnostic Pathway

Per **WHO 2024 guidelines**, the diagnostic focus has shifted toward rapid molecular testing over traditional microscopy.

1. Screening

- **IGRA (Interferon-Gamma Release Assay):** Preferred blood test; more specific than the skin test, especially in BCG-vaccinated populations.
- **TST (Tuberculin Skin Test):** Measures the delayed-type hypersensitivity reaction to PPD.

2. Confirmatory Testing (Bacteriology)

- **Rapid Molecular Tests (e.g., Xpert MTB/RIF Ultra):** The WHO-recommended initial diagnostic test. Simultaneously detects TB and resistance to Rifampicin.
- **Sputum Culture:** The "Gold Standard" for definitive diagnosis and comprehensive Drug Susceptibility Testing (DST).
- **Smear Microscopy:** Detection of Acid-Fast Bacilli (AFB). Fast, but less sensitive than molecular tests.

3. Imaging

- **Chest Radiograph:** Visualizes opacities, cavities, or miliary patterns. Often used as a triage tool.

III. Treatment Regimens

Modern TB therapy focuses on "Shorter is Better" to ensure patient completion.

A. Drug-Susceptible TB (DS-TB)

- **The 4-Month Regimen (CDC/WHO):** 4 months of Rifapentine (PHT) + Isoniazid (H) + Pyrazinamide (Z) + Moxifloxacin (M).
- **The 6-Month Regimen (Standard):** 2 months of RIPE (Rifampin, Isoniazid, Pyrazinamide, Ethambutol) followed by 4 months of RI.

B. Drug-Resistant TB (DR-TB)

- **BPaLM Regimen (WHO Preferred):** A 6-month, all-oral regimen consisting of Bedaquiline, Pretomanid, Linezolid, and Moxifloxacin.

C. Latent TB (LTBI) Prevention

- **3HP:** 3 months of once-weekly Isoniazid and Rifapentine.
- **4R:** 4 months of daily Rifampin.

IV. References

- **WHO (2024):** *Consolidated guidelines on tuberculosis. Module 3: Diagnosis - Rapid diagnostics for tuberculosis detection.*
- **CDC (2025):** *Treatment of Drug-Susceptible Tuberculosis — United States.*
- **WHO (2024):** *Global Tuberculosis Report 2024.*