



World Health  
Organization

# Early detection of Tuberculosis

AN OVERVIEW OF  
APPROACHES,  
GUIDELINES AND TOOLS





# **Early detection of tuberculosis**

**An overview of approaches, guidelines and tools**



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# 1. Introduction

## 1.1 Purpose of this document

Too many people have undetected tuberculosis (TB) for too long; late detection of TB increases their risk of transmitting the disease to others, having poor health outcomes, or that they and their family will suffer distress and economic hardship. The burden of TB is declining slowly worldwide, but progress in controlling TB and mitigating its consequences could be expedited if programmes focused on providing early diagnosis and treatment.

There are many entry points for interventions to improve early detection of TB. The Stop TB Strategy, as well as published guidelines and tools, provide guidance on approaches of proven effectiveness (Annex 1). Additional material is being developed, but is not available for several intervention areas with potential for positive impact.

This document provides an overview of approaches, guidelines and tools to improve early detection of TB. It presents a framework to assess pathways and barriers for early detection of TB from which prioritization of interventions can be based. The document also highlights areas for which additional research and guideline development are required.

A key next step for those planning national efforts in TB care and control is prioritizing interventions for early detection of TB. Prioritization will depend on the national TB epidemiology, existing treatment and control efforts, and available resources and capacity. This document does not attempt to guide prioritization but rather to provide an overview of the approaches that should be considered.

The main target audience for this document is managers and other staff of national TB control programmes (NTPs) and their partners in TB care and control, including nongovernmental organizations, all public and private health-care providers and civil society.

## 1.2 Rationale for intensified and early TB case detection

Despite the scale up of quality-assured TB services in line with the *Stop TB Strategy* (1) and the *International Standards for Tuberculosis Care* (2), TB case detection is incomplete, the global TB burden remains high and TB incidence is declining slowly worldwide (3). Ensuring **universal access** to quality-assured diagnosis and treatment and early detection of TB will diminish transmission, avert deaths and prevent suffering caused by TB, and help countries to move towards elimination of the disease (3, 4).

From both an equity perspective, as well as a TB care and control perspective, it is essential that the **poorest and most vulnerable groups** have access to quality-assured diagnosis, treatment, care and support. Poor and vulnerable populations are those most likely to contract infection, develop disease, have poor treatment outcomes, and experience severe social and economic hardship from the disease. If TB is not effectively diagnosed and treated among these groups, it can perpetuate the epidemic and put the whole population at continuous risk of TB (5). Specific action is therefore required to ensure equity (6), linked to broader efforts to **strengthen health systems** (7), **especially at the community level**. This should be coupled with efforts to **increase awareness of TB and health among communities** (8).

All people with TB have a right to good-quality care. To ensure this right, and to achieve rapid progress in control and elimination of the disease, early detection should be accelerated for **all types of TB** by implementing existing approaches for early diagnosis and effective treatment (1, 2, 3, 9, 10) for **all TB patients** in **all age groups** (11) in **all settings**. Although sputum smear-positive TB is the most infectious form of TB, the risk of transmission in other forms of TB should be acknowledged (12). **Multidrug-resistant TB (MDR-TB) and HIV-associated TB** require special efforts to ensure early diagnosis (13, 14).

**Basic diagnostic and treatment services** require strengthening in many settings in line with existing guidelines. Strengthening of laboratory services (for sputum-smear microscopy, culture, drug-susceptibility testing and new diagnostics) (15) and X-ray services (16, 17) is essential. Sputum smear microscopy is inexpensive and feasible in most field conditions and effectively identifies the most infectious TB cases.

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