International Platform of Registered Systematic Review and Meta-analysis Protocols



INPLASY

# Patient-Facing Workforce Requirements for Tuberculosis (TB) Programs: A Scoping Review Protocol

INPLASY2025100013

doi: 10.37766/inplasy2025.10.0013

Received: 6 October 2025

Published: 7 October 2025

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**ADMINISTRATIVE INFORMATION**

**Support -** Nil.

**Review Stage at time of this submission -** Preliminary searches.

**Conflicts of interest -** None declared.

**INPLASY registration number:** INPLASY2025100013

**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 7 October 2025 and was last updated on 7 October 2025.

## INTRODUCTION

**Review question / Objective** The objective of this scoping review is to identify and summarise studies that define patient-facing staff requirements to provide care for patients with tuberculosis (TB) in line with the TB cascades/continuum of care. We specifically aim to see whether if variation in staffing changes the effectiveness of TB care.

**Background** Tuberculosis (TB) is a communicable disease caused by the bacteria Mycobacterium tuberculosis. It is estimated to have infected about one quarter of the global population and remains a leading cause of death if untreated. Once infected with TB, the bacteria can lie dormant in the body and approximately 10%-20% of people can progress to develop active TB disease where they become unwell and can spread the infection further.

In response to the needs to address the rates of TB, The World Health Organisation (WHO) End TB Strategy provides a blueprint for the reduction of TB worldwide. Central to the strategy is an integrated, capable and adequately resourced health workforce to be able to deliver and provide functioning TB programs.(3) The WHO highlights that effective service provision relies on the availability of qualified health personnel. These patient-facing professionals are essential for ensuring appropriate diagnosis, treatment adherence and prevention of further spread of disease.

The multidisciplinary workforce is particularly necessary for TB is due to the fundamental characteristics of the disease. TB is caused by Mycobacterium tuberculosis, a slow growing bacteria which necessitates a prolonged course of therapy with multiple antibiotics taken daily for several months. The dormant state is known as TB infection or Latent TB and a shorter course of antibiotics can effectively prevent the development of TB disease. When people develop active symptoms of TB, they are deemed to have TB disease and require a larger combination of, and longer duration of antibiotics to achieve cure. Adherence to the correct duration of treatment is essential to prevent transmission and to also

prevent the emergence of drug resistant TB. Multi-drug resistant TB results in more burden to the patient and the health system with longer treatment duration and more significant side effects and higher mortality. An adequately staffed and trained workforce is vital to ensure that TB patients can access the appropriate support to complete a difficult duration of therapy and to prevent these consequences for other people.

TB incidences vary across the world with the majority cases occurring in low and middle-income countries. As a result, workforce skills and TB program structures differ across regions, impacted by the disease burden and resource availabilities. Despite these variations, the WHO has set a standard of care from evidence based research which provides consistency in treatment and diagnosis for each person. These guidelines allow for a standard of care for health professionals to meet irrespective of resourcing or location.

The TB care cascade is a framework which has been developed to understand and quantify the gaps in care. Also known as a continuum of care, the key components vary slightly for TB infection (non infectious TB) and TB disease. Broadly, the respective steps include identification of individuals with TB symptoms; diagnosis and testing; initiation of treatment; retention in care; completion of therapy and monitoring for relapse. Whilst previous studies have determined resource implications, they have referred to only one aspect of TB care, such as TB infection (latent TB) only. (10)

Patient facing workforce roles in the management of tuberculosis refer to healthcare workers who interact directly with patients throughout the continuum of TB care. Key patient facing roles include medical officers; nurses; outreach workers and allied health staff such as radiologists and pharmacists. This frontline workforce not only helps with therapy completion, but also provides patients with support to address the psychosocial and cultural barriers that hinder access to care or lead to early drop out of treatment. These frontline worker roles are reflective of the direct/essential needs in healthcare.

**Rationale** Current literature recognises the importance of human resources for health (HRH) in TB care pathways however, there is a lack of comprehensive synthesis of the existing evidence around the specific nature and types of workforce needs in TB programs relative to the population needs. A preliminary search was conducted in August 2025 with the Medline (Ovid) database and there are studies which focus on specific aspects of TB care or a particular health care profession. Overall, these individual studies form a fragmented picture of the TB workforce required. Subsequently, health services are unable to adequately assess and request the appropriate skill mix of professionals required.

This gap in evidence is particularly important in the context of the WHO End TB Strategy which outlines the goal for TB elimination by 2050. However, considering the current increasing incidence of TB, there is a disconnect between these targets and current reality. This scoping review aims to help bridge that gap by providing an understanding of current research to date on frontline health workforce.

## METHODS

**Strategy of data synthesis** Electronic Databases included are Medline OVID; Embase; Emcare; CINAHL and Web of Science
Main key words included are:
Tuberculosis; medical staff; nursing staff; pharmacists; radiographer; community health workers; health workforce; continuing education; workforce training; workforce policies and capacities; multidisciplinary care teams. Synonyms and alternative words for these key search terms are developed with assistance from the Women's and Children's Hospital Librarian and Flinders University Librarian. An example search strategy for Medline via OVID and CINAHL has been designed and tested.

**Eligibility criteria**
Population:
What are the qualifications; roles and numbers of patient-facing health workers required in TB programs?
What are the differences in staffing requirements when patients have drug resistant tuberculosis?

Concept:
What staffing models and workforce planning approaches are used for patient facing TB services?
What competencies and ongoing training are required for these patient facing workers in TB care?
Are workforce capacities and gaps identified; measured and addressed in TB programs?
Do variations in workforce change the effectiveness of the delivery of the TB cascade/ continuum of care?

Context:

Do the specific roles address aspects within the TB continuum/cascade of care – identification of individuals with TB disease or TB infection; testing for TB; diagnosis and initiation of treatment; retention in care; completion of therapy.
Define the program location (hospital or community based or both).

**Source of evidence screening and selection** This scoping review will include a broad range of sources including quantitative, qualitative and mixed-methods studies. Grey literature in the form of Government reports and policy briefs and TB strategy documents will also be included.
Following the search, all identified citations will be loaded onto Endnote and duplicates removed. Titles and abstracts will be screened by two independent reviewers for assessment against the inclusion criteria for the review. Relevant studies will be retrieved in full and their citation details imported into Covidence. Reasons for exclusion of studies that do not meet the inclusion criteria will be recorded and reported in the review. Disagreements between the reviewers will be resolved through discussion or with a third reviewer. Results of the search will be presented in the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) flow diagrams.

**Data management** Data will be extracted from papers included in the scoping review by two independent reviewers using an instrument based on JBI guidelines for extracting data and results of studies and will include specific details are the population, concept, context. A summary of the study in relation to the review question will be produced. A data extraction data tool will be developed and revised as necessary whilst extracting data from each included evidence source. Modifications will be detailed in the scoping review.

**Presentation of the results** Data will be presented in a diagrams and tables along with a narrative summary of the results. A conceptual framework of patient facing workforce requirements for TB programs may be developed.

**Language restriction** English only.

**Country(ies) involved** Australia.

**Keywords** Tuberculosis; health workforce; patient care team.

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