

# Latent Tuberculosis Infection: A Primary Care Perspective

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12 July 2023

## Quick Poll

Where do you work?

What do you do?

What risk factors for TB do your patients have?

Challenges to screening, treatment?

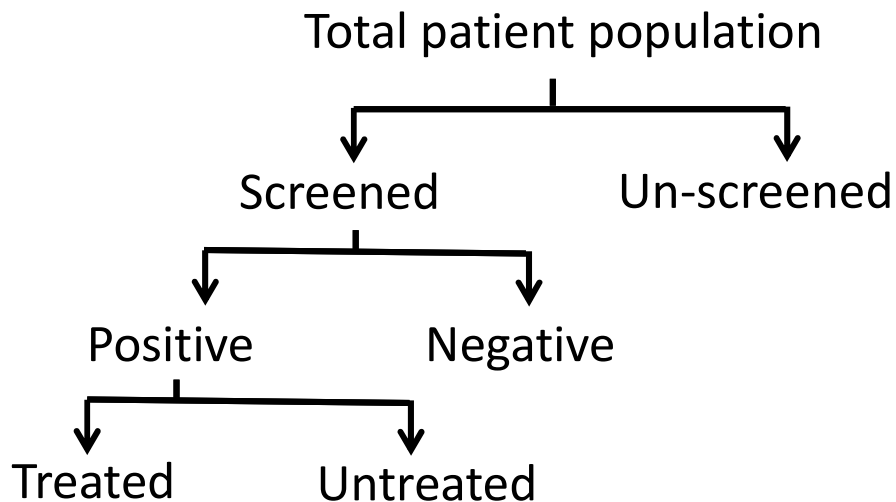
## My Background

- Primary Care Physician
- International clinic: patients mostly from Vietnam, Cambodia, Ethiopia, Eritrea, and Somalia
  - all with incidence of 40 cases per 100,000 persons or greater
- Majority of established patients have been tested at some point, not all have been treated
- Recent immigrants mostly not yet tested for LTBI

## Learning Objectives

- Explain what latent tuberculosis infection means in simple terms
- Counsel patient on reactivation risks and treatment options
- Address common patient concerns which might affect completing course of treatment

## Where are infections missed in clinic?



## Targeted screening: a moving target

### Higher risk for recent infection

- Close contacts with those who have TB disease
- Immigrant from country where TB disease is common (>1 month residence)
- People who live or work in high-risk settings

### Higher risk for progression

- HIV infected
- Abnormal CXR consistent with TB, untreated
- Health care providers
- Infants/children < 5 years of age
- Specific medical conditions

## Risk of progression to TB disease if infected

Low	Intermediate (RR 1.3 – 2.8)	High (RR 2.8 – 10)
No risk Factors	Chronic renal failure 2.4 (2.1 – 2.8); Pablos-Mendez et al	HIV infection, advanced and untreated 9.9 (8.7 – 11); Moss et al
	Treatment with TNF- alpha inhibitor 2.0 (1.1-3.5); Jick et al	Close contact with a person with active TB infection 6.1 (5.5-6.8); Ferebee
	Poorly controlled diabetes 1.7 (1.5 – 2.2); Pablos-Mendez et al	CXR with evidence of prior TB (untreated) 5.2 (3.4 – 8.0); Ferebee
	Smoking 1.5 (1.1 – 2.2); Bates et al	Treatment with >15mg prednisone for > 1 month 2.8 (1.7-4.6); Jick et al

## Risk of progression to TB disease if infected

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	Smoking 1.5 (1.1 – 2.2); Bates et al	<b>Treatment with &gt;15mg prednisone for &gt; 1 month</b> 2.8 (1.7-4.6); Jick et al

## Targeted screening

- What proportion of patients who you care for are tested for TB infection?
- Are there any particular groups which are missed in your practice?

## Considerations for treatment

- What other medical priorities does the patient have?
- Likelihood of progression versus risks of treatment
  - Can use tool such as TSTin3D to estimate lifetime risk
  - Baseline risk of progression between 5% to 15% lifetime risk
- Assess the likelihood of completion
  - Patient motivation
  - Resources for adherence, ability to pick up refills, close follow-up
  - Education

## How do you explain latent TB infections to patients?

- What do you know about tuberculosis infection?
  - Personal/family experience
- Sleeping vs awake analogy
- Normalizing latent TB infection
  - Over 20 percent of the global population has been infected with latent TB
- What concerns do you have about treatment?
  - Treatment for active disease vs latent infections

## Common concerns about latent TB infection

1. Can I infect others?
2. Will I be able to work?
3. Will my community shun me?
4. Why should I undergo treatment now if I feel fine?
5. Side effects of treatment?
6. Will I need to be tested for TB again following treatment?
7. Can I develop TB despite having received the BCG vaccine?

Common concerns about latent TB  
infection

Any other concerns that your  
patients bring up?

## Treatment options

**POLL: What is the most common treatment  
regimen that you prescribe?**

- Rifampin daily for 4 months
- Isoniazid (INH) and rifapentine weekly for 3 months
- Isoniazid and Rifampin daily for 3 months
- Isoniazid (INH) daily for 9 months

## Selecting a course

- Use patient identified priorities to select treatment regimen: duration, side effects, pill burden
- Shorter courses more likely to be completed
- Common side effects: risk of hepatitis with INH, GI symptoms with rifampin
- Comorbidities: underlying liver disease, neuropathy, medications
- Medication interactions with rifampin and rifapentine

## What else can I do to support adherence

- DOT can increase completion rates, but this can also create a barrier based on frequency of visits
- Increased frequency of follow-up during treatment can help ensure course completion
- Incentives do not have clear benefit according to some studies
- **Anything that your clinic does that has been helpful?**



## Special situations

- What is the upper age limit that you would treat a latent TB infection?
- Undocumented/unclear treatment history in the past? When to address LTBI?
- Symptoms / CXR with possible TB disease
- Concern for re-exposure, lengthy visits to high-prevalence TB region


## Case

- 65-year-old Vietnamese woman, emigrated at 40 years old
- Annual risk of development of active TB 0.1%
- Cumulative risk of active TB to age 80: 1.5%
- If treated with INH, likelihood of clinically significant hepatitis: 5%

## Case

- Developed autoimmune hepatitis and required INH treatment prior to transplant.
- Revised active TB risk following transplant:
  - Annual risk 4.6%
  - Cumulative risk to age 80: 69%

## EthnoMed Cultural Resource

- [www.EthnoMed.org](http://www.EthnoMed.org)  EthnoMed
  - Resource for providers treating immigrant patients
  - Based at Harborview Medical Center
  - Tuberculosis information series
  - TB Cultural Profiles (Google: Ethnomed TB Profile)
    - Somalian
    - Ethiopian
    - Vietnamese
    - Cambodian
    - Oromo

# EthnoMed Cultural Resource

- New partnership with Public Health Seattle & King County (PHSKC) TB Program to develop additional TB resources in partnership with immigrant communities
- Planning a number of profiles in the coming months including:
  - Marshallese
  - Iraqi
  - Afghan
  - Ukranian

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## Cambodian Tuberculosis Cultural Profile

**Author(s):** J. Carey Jackson, MD, MPH; Tao Kwan-Gett, MD  
**Community Reviewer(s):** Jeniffer Huong



*Cambodian man. Photo by Sasha Popovic (cc license)*

### Methods

This cultural profile is a compilation of information existing on EthnoMed. Some is from a small structured interview survey of patients at the Harborview Refugee Clinic conducted by Carey Jackson, MD et al in 1990.

### CONTENTS

- Methods
- Treatment
- Translation or Language Equivalents
- Cultural Knowledge and Traditional Treatment
- Other Considerations
- Recommendations for Providers
- References and Further Reading

### RELATED MATERIALS

- Ethiopian Tuberculosis Cultural Profile
- Oromo Tuberculosis Cultural Profile
- Somali Tuberculosis Cultural Profile
- Vietnamese Tuberculosis Cultural Profile

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