

Welcome to Session 1 of the  
Latent TB Infection  
Virtual Provider Learning Sessions

**We will begin in a moment!**

**While you are waiting...**

*Please use the chat to share the following information:*

- What is your name?
- What is your title/role?
- What organization are you from?
- What is your favorite Thanksgiving food?

# Latent Tuberculosis Infection Virtual Provider Learning Session #1: Risk Assessment and Testing

Thursday, November 12, 2020  
12 – 2pm





# Session Schedule

## Risk assessment and testing

- Thursday 11/12 from 12-2pm

## Adherence support

- Thursday 11/19 from 9:30-11:30am

## Reporting and analysis

- Thursday 12/10 from 10-12pm

*To register for future events, see email from Molly Rafferty*



## The objectives of the Virtual Provider Learning Sessions are to:

- *Update providers' knowledge and review resources that describe latent TB infection services, including risk assessment, testing, adherence support, and reporting*
- *Prepare agencies to plan for initiating or enhancing these services*
- *Share lessons learned*

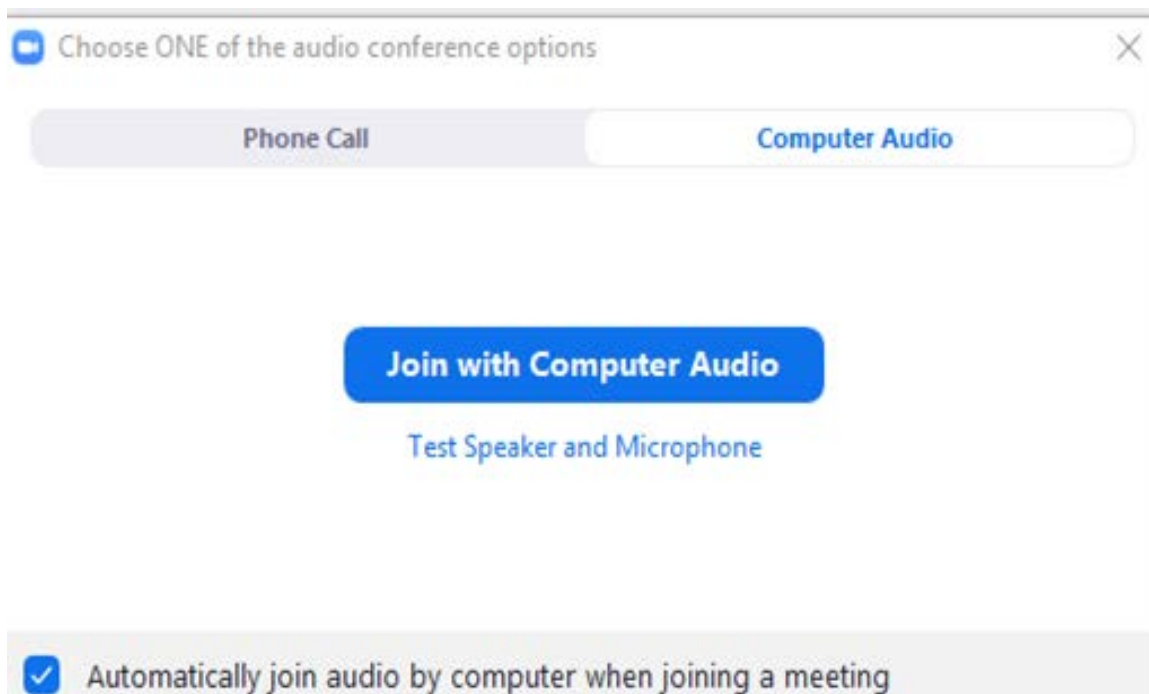
# Session #1 Agenda

- Introductions
- Risk assessment and testing
  - Overview
  - Operationalization
- Questions and discussion
- Break
- Breakout rooms
  - Pre-process mapping
- Wrap-up



# Housekeeping: How to Connect to Audio by Computer

- Join using **computer audio** and a plug-in headset or computer speakers
- Please mute your line when you're not speaking
- If you're having audio issues, please chat the host

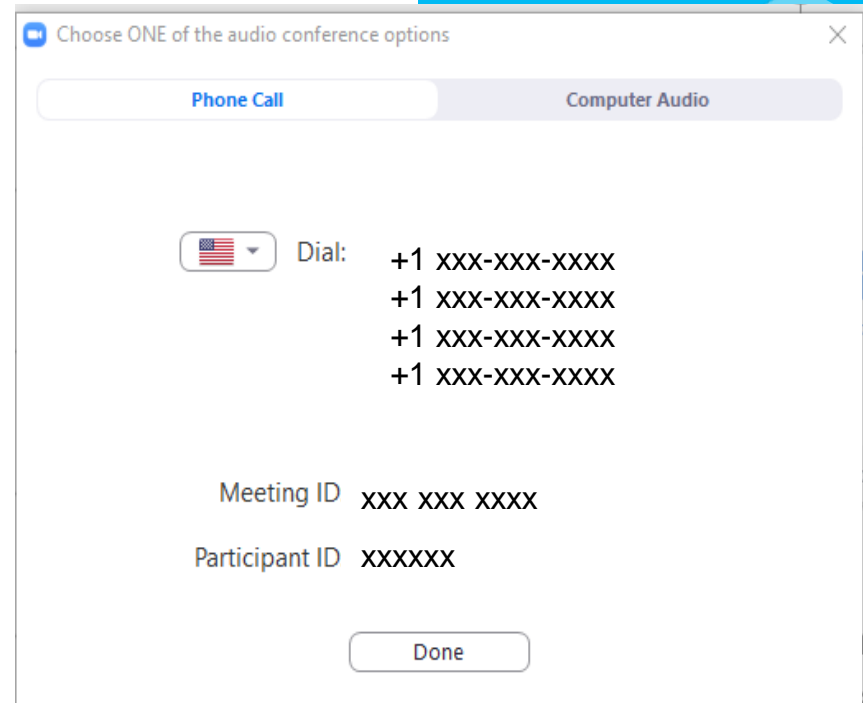
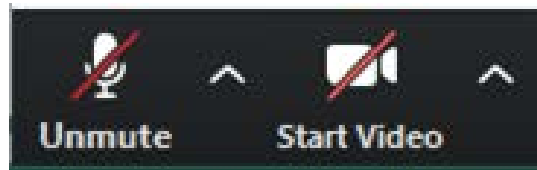


# Housekeeping: Connecting by Phone, Using Video

Join by **phone**: Click **Join Audio, Phone Call** tab, dial the desired phone number, **Enter Meeting ID & Participant ID**

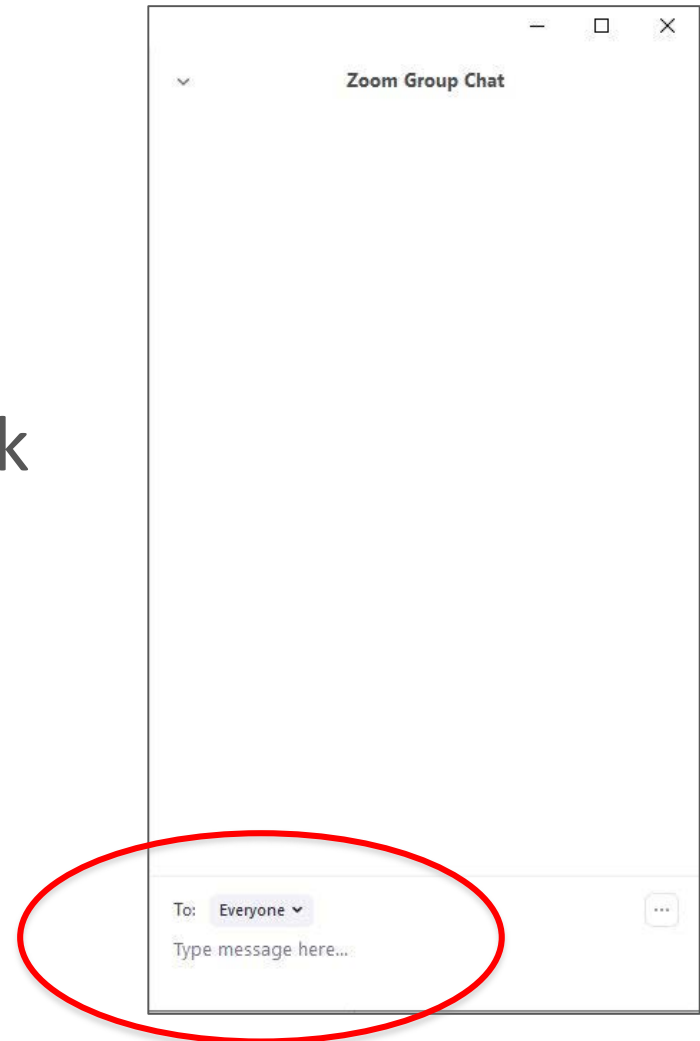
You will begin muted. To **unmute/mute** click the **Microphone icon**

Click **Start Video** to join by webcam




# Housekeeping: Chat function

- Ask questions and join the discussion by using the chat feature or raising your hand to speak







# Introductions – Bureau of Infectious Disease and Laboratory Sciences, Massachusetts Department of Public Health

## Office of HIV/AIDS

- Dawn Fukuda
- Linda Goldman\*
- Zakaria Ahmed-Gas\*
- Denise Sanderson\*
- Edward DeBortoli
- Emily Levine
- Frederick Kiggundu
- Kevin Gavit
- Perla Roberts
- Darien Leta

*\* MDPH staff  
involved  
facilitation of this  
session.*

## Division of Global Populations and Infectious Disease Prevention

- Jennifer Cochran\*
- Marisa Chiang\*
- John Bernardo\*
- Andrew Tibbs
- Pat Iyer

## Office of Health Care Planning

- Liisa Randall\*
- Sophie Lewis\*
- Laura de Mondesert\*
- Monica Morrison



## Introductions -- JSI/TA4SI

- Amy Sgueglia, Consultant\*
- Sabrina Eagan, Technical Advisor\*
- Molly Rafferty, Project Associate\*
- Mira Levinson, Project Director
- Molly Higgins-Biddle, Project Manager
- Mikey Davis, Consultant
- Christine Luong, Consultant

\* *Latent TB infection team leads*



# Fact Sheets

- Series of 9 Fact Sheets on latent TB infection services
- **Purpose:** Address key considerations for each component of testing and treating individuals with latent TB infection
- **Audience:** Intended for agencies receiving funding from MDPH BIDLS to provide infectious disease services, including TB testing and latent TB infection services

# Components for Testing and Treatment of Individuals with Latent Tuberculosis (TB) Infection



## Risk assessment

- Identify individuals appropriate for TB testing because they are:
  - at increased risk for infection; and/or
  - at increased risk of disease progression
- Explain the result of the risk assessment and next steps to the individual
- Document assessment result



## Testing

- Choose an appropriate tuberculosis test
- Administer tuberculosis test
- Confirm and document that test result was read or received by healthcare provider
- Provide test result to the individual



## Evaluation

- Link to provider to clinically evaluate for latent TB infection or TB disease
- Confirm and/or document linkage to evaluation services
- Confirm whether a diagnosis was given to the individual



## Treatment

- Link to treating provider
- Confirm and document linkage to treatment services
- Confirm and document date treatment was started



## Adherence support

- Assess/reassess treatment adherence support needs
- Provide support for adherence to treatment and retention in care



## Reporting and analysis

- Report cases of latent TB infection; report TB disease/suspected TB disease to Massachusetts Department of Public Health
- Report treatment outcomes, including date and reason stopped
- Assess quality of services and make improvements as needed

# Components for Testing and Treatment of Individuals with Latent Tuberculosis (TB) Infection



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The Fact Sheets will be posted  
on the TA4SI website:

[https://ta4si.jsi.com/latent-tb-  
infection-components-and-  
resources/](https://ta4si.jsi.com/latent-tb-infection-components-and-resources/)




*Please share use the chat to share the following information:*

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## Poll Question:

What is your agency's stage of implementation for latent TB infection (LTBI) services?





# Risk assessment and testing

## Overview

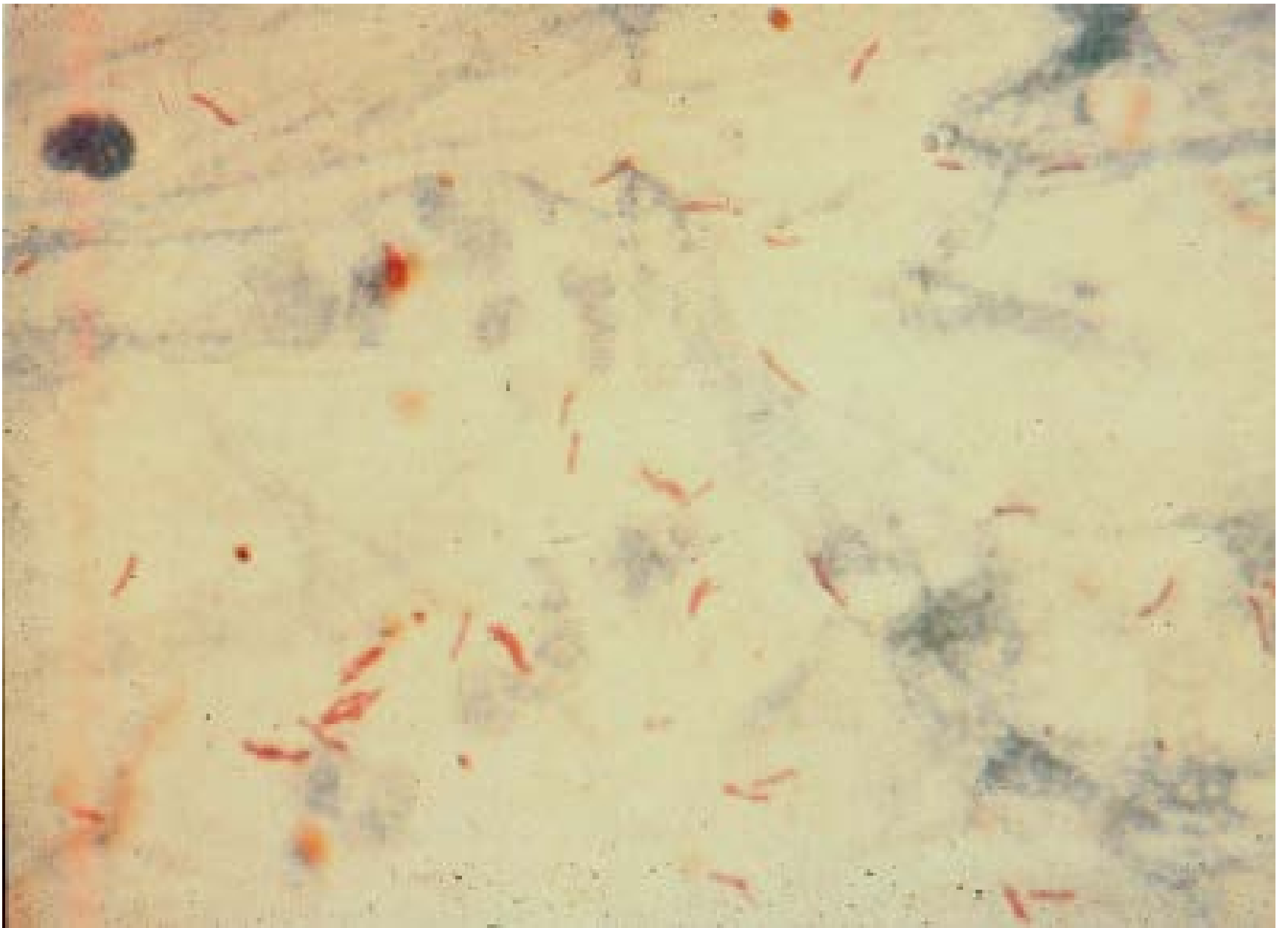
Jennifer Cochran  
John Bernardo, MD  
MDPH BIDLS

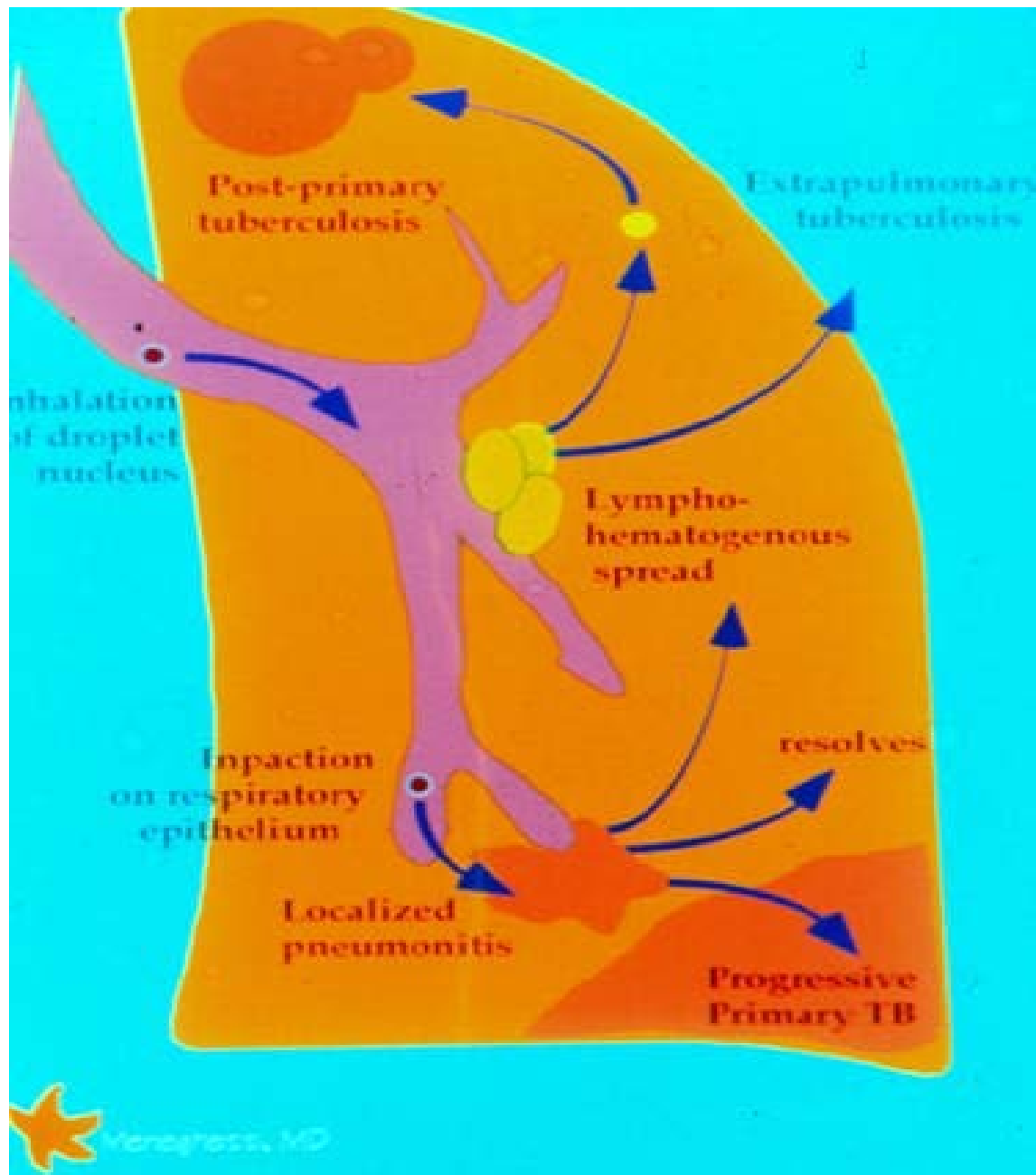




**How does one get TB???**

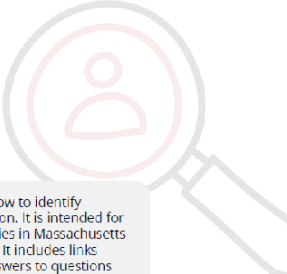






# Overview: Risk Assessment

## COMPONENT A: Risk Assessment



**Components for Testing and Treatment of Individuals with Latent Tuberculosis (TB) Infection**

- Risk assessment**
  - Identify individuals at increased risk of TB infection
  - Assess the level of risk
  - Identify individuals who are not at increased risk
- Testing**
  - Identify individuals who are at increased risk
  - Identify individuals who are not at increased risk
  - Identify individuals who are not at increased risk
- Evaluation**
  - Identify individuals who are at increased risk
  - Identify individuals who are not at increased risk
  - Identify individuals who are not at increased risk
- Treatment**
  - Identify individuals who are at increased risk
  - Identify individuals who are not at increased risk
  - Identify individuals who are not at increased risk
- Adherence support**
  - Identify individuals who are at increased risk
  - Identify individuals who are not at increased risk
  - Identify individuals who are not at increased risk
- Reporting and analysis**
  - Identify individuals who are at increased risk
  - Identify individuals who are not at increased risk
  - Identify individuals who are not at increased risk

This resource provides an overview of how to identify individuals at increased risk of TB infection. It is intended for clinical and non-clinical staff from agencies in Massachusetts that provide latent TB infection services. It includes links to tools and resources, and provides answers to questions including:

- What puts someone at increased risk for TB infection?
- What tools can my agency use to identify individuals at increased risk?
- I've identified someone at increased risk, what are the next steps?
- How should I communicate with individuals about risk for latent TB infection?
- What data considerations should I be aware of for linking individuals to TB evaluation services?

**What puts someone at increased risk for TB infection?**


The first step to providing services for latent TB infection is to identify individuals appropriate for testing.

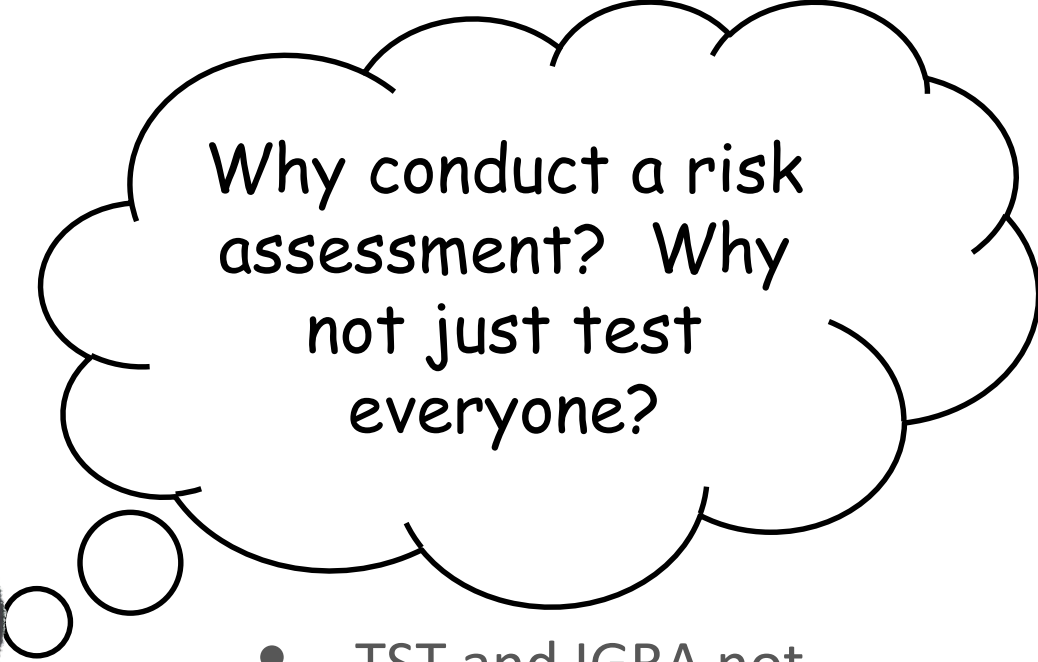
The Massachusetts Department of Public Health (MDPH) [recommends only doing TB testing for people determined to be at increased risk of infection.](#)

Assessing individuals for increased risk of TB infection is critical to finding and treating TB infection, and preventing the spread of TB disease.

**Factors that put individuals at increased risk for TB infection:**


- Being born or having lived in a country with an elevated TB rate. This includes any country other than the United States, Canada, Australia, New Zealand, or any country in western or northern Europe.
- Experiencing or about to experience immunosuppression. Certain medical conditions and medications can make a person immunosuppressed, and therefore more susceptible to infection. These medical conditions and medications include: HIV infection; organ transplant recipient; planned treatment with TNF-alpha antagonist (e.g., infliximab, etanercept, others); steroids (equivalent of prednisone  $\geq 15$  mg/day for  $\geq 1$  month); or other immunosuppressive medication.
- Being in close contact with someone with active (infectious) TB since their last TB assessment.





Why conduct a risk assessment? Why not just test everyone?

- TST and IGRA not 100% sensitive nor 100% specific
- A positive TB test in persons at low risk for TB infection is unlikely to represent true TB infection



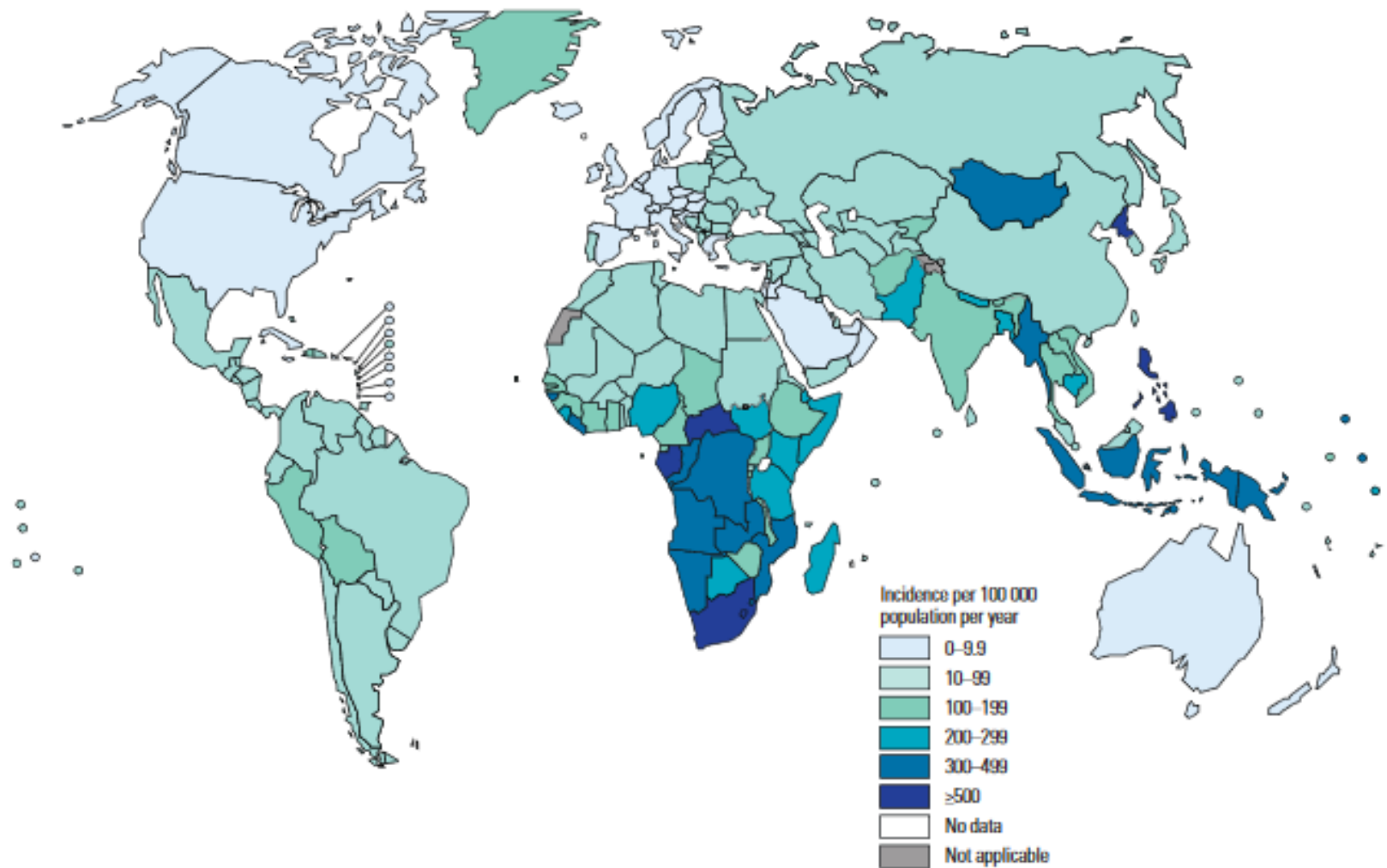
# What puts someone at increased risk for TB infection?

- Being born or having lived in a country with an elevated TB rate
- Experiencing or about to experience immunosuppression
- Being in close contact with someone with active (infectious) TB since their last assessment



**FIG. 4.4**

**Estimated TB incidence rates, 2019**





# MDPH TB Risk Assessment Tools

- TB Risk Assessment – Adult and Pediatric Versions available
- User guides for Adult and Pediatric assessments also available

Adult: <https://www.mass.gov/doc/massachusetts-tuberculosis-risk-assessment-1/download>

Pediatric: <https://www.mass.gov/doc/massachusetts-tuberculosis-risk-assessment-pediatrics/download>

## Massachusetts Tuberculosis Risk Assessment

- Use this tool to identify asymptomatic **adults and children** for testing for latent TB infection (LTBI).
- Re-testing should only be done in persons who previously tested negative, and have new risk factors since the last assessment.
- For TB symptoms or abnormal chest X-ray consistent with active TB disease → Evaluate for active TB disease

*Evaluate for active TB disease with a chest X-ray, symptom screen, and if indicated, sputum AFB smears, cultures and nucleic acid amplification testing (NAAT). A negative tuberculin skin test or interferon gamma release assay does not rule out active TB disease.*

Check appropriate risk factor boxes below.

Latent TB infection testing is recommended if any of the 3 boxes below is checked.

If latent TB infection test result is positive and active TB disease is ruled out, treatment of latent TB infection is recommended.

REPORT Latent TB Infection and Active or Suspected Active TB Disease

Go to [www.mass.gov/tuberculosis](http://www.mass.gov/tuberculosis) for reporting forms

**Born or lived in a country with an elevated TB rate**

- Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe.
- If resources require prioritization within this group, prioritize patients with at least one medical risk for progression (see User Guide for list).
- Interferon Gamma Release Assay (IGRA) is preferred over Tuberculin Skin Test (TST) for foreign-born persons  $\geq 2$  years old. The TST is an acceptable test for all ages when administered and read correctly.

**Immunosuppression, current or planned**

HIV infection, organ transplant recipient; treated with TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent of prednisone  $\geq 15$  mg/day for  $\geq 1$  month) or other immunosuppressive medication

**Close contact to someone sick with infectious TB disease since last TB Risk Assessment**

No TB risk factors. TB test not indicated; no TB test done.

Provider: \_\_\_\_\_


Patient Name: \_\_\_\_\_

Assessment Date: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

See the **Massachusetts Tuberculosis Risk Assessment User Guide** for more information about using this tool.

Massachusetts Department of Public Health | Bureau of Infectious Disease and Laboratory Sciences | Division of Global Populations and Infectious Disease Prevention | [www.mass.gov/tuberculosis](http://www.mass.gov/tuberculosis) | Adapted from the California Tuberculosis Risk Assessment see [www.cdph.ca.gov](http://www.cdph.ca.gov) August 2018



# MDPH TB Risk Assessment User Guides

Adult: <https://www.mass.gov/doc/massachusetts-tuberculosis-risk-assessment-user-guide-1/download>

Pediatric: <https://www.mass.gov/doc/massachusetts-pediatric-tuberculosis-risk-assessment-user-guide/download>

## Massachusetts Tuberculosis Risk Assessment User Guide

### Avoid testing persons at low risk

Testing among low risk populations in the absence of new exposure is not recommended, and may result in unnecessary evaluations and treatment because of falsely positive test results.

### Among persons born outside the US, prioritize patients with risk for progression

If health system resources do not allow for testing of all persons born in a country with an elevated TB rate, prioritize patients with at least one of the following medical risks for progression:

- Diabetes mellitus
- Smoker within past 1 year
- End stage renal disease
- Leukemia or lymphoma
- Silicosis
- Cancer of head or neck
- Intestinal bypass/gastroectomy
- Chronic malabsorption
- Body mass index <20
- History of chest X-ray findings suggestive of previous or inactive TB (no prior treatment). Includes fibrosis or non-calcified nodules, but does not include solitary calcified nodule or isolated pleural thickening. In addition to latent TB infection testing, evaluate for active TB disease.

### United States Preventive Services Task Force (USPSTF) recommendation

The USPSTF has recommended testing persons born in, or former residents of, a country with an elevated tuberculosis rate and persons who live in or have lived in high-risk congregate settings, such as homeless shelters and correctional facilities. Because the increased risk of exposure to TB in congregate settings varies substantially by facility and local health jurisdiction, clinicians are encouraged to follow local recommendations when considering testing among persons from these congregate settings. USPSTF did not review data supporting testing among close contacts to infectious TB nor among persons who are immunosuppressed because it is recommended to screen these persons as part of public health programs or as a clinical standard of care.

### Local recommendations

Local epidemiologic circumstances, recommendations and mandates should also be considered in testing decisions. Local public health programs can customize this risk assessment according to local recommendations.

### Mandated testing and other risk factors

Several risk factors for TB that have been used to select patients historically or in mandated programs for TB screening are not included among the 3 components of this risk assessment. This is purposeful in order to focus testing on patients at highest risk. However, specific populations may be locally mandated for testing by regulation or policy. This risk assessment does not supersede any locally mandated testing. Examples of these populations include: healthcare workers, residents or employees of correctional institutions, homeless shelter guests and staff, and others.

### Age as a factor

Age (among adults) is not considered in this risk assessment. However, younger adults have more years of expected life during which progression from latent infection to active TB disease could develop. Some programs or clinicians may additionally prioritize testing of younger, non-US-born persons when all non-US-born are not tested. An upper age limit for testing has not been established, but could be appropriate depending on individual patient TB risks, comorbidities, and life expectancy.

### Children

This risk assessment tool is valid for children. A pediatric focused risk assessment tool is also available and may be used, if preferred.

### Travel outside the United States

Travel to countries with an elevated TB rate may be a risk for TB exposure in certain circumstances (e.g., extended duration, likely contact with infectious TB cases, high TB prevalence in travel location, non-tourist travel).

### When to repeat a test

Re-testing should only be done in persons who previously tested negative, and have new risk factors since the last assessment. In general, this would include new close contacts of an infectious TB case or someone with new immunosuppression, but could also include persons with foreign travel in certain circumstances.

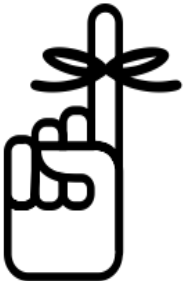
### When to repeat a risk assessment

The risk assessment should be administered at least once. Persons can be screened for new risk factors at subsequent preventive health visits.

# Next steps



- An individual at increased risk for TB infection needs a TB test
- Understand patient perceptions of disease and prevention (in general and for TB)
- Communicate the assessment result and the need for testing to the individual
- Document the assessment result and the next steps
- Persons not at increased risk should be informed
- Document record
- Repeat the risk assessment at least annually





# Talking with individuals about risk assessment

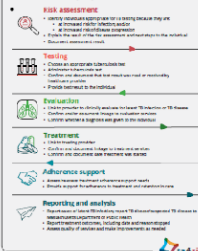
- Explain the risk factors for TB infection
- Explain BCG vaccine
- Explain the benefits of testing for TB infection
- Discuss the differences between active TB disease and latent TB infection
- Address concerns about exposing others to TB
- Take time to answer questions
- Make sure you have explained things in a way the individual understands

# Overview: Testing

## COMPONENT B:

## Testing

### Components for Testing and Treatment of Individuals with Latent Tuberculosis (TB) Infection



This resource provides an overview of diagnostic tests for TB infection for clinical and non-clinical staff from agencies in Massachusetts that provide latent TB infection services. It includes links to tools and resources, and provides answers to questions, including:

- What is the purpose of a TB test?
- What TB tests are available and how do they work?
- Where can I find more information on testing for TB infection?
- What are the next steps after TB testing is completed?
- What messages should I give to individuals about testing for TB infection?
- What data considerations should I be aware for testing individuals for TB?

## What is the purpose of a TB test?

A tuberculosis (TB) diagnostic test is done to determine whether or not a person has TB infection. The Massachusetts Department of Public Health (MDPH) recommends only doing TB tests for people determined to be at increased risk of having TB infection. Your agency should first assess the individual's risk (see *Fact Sheet, Component A: Risk Assessment*). For individuals found to be at increased risk, your agency can administer one of two types of diagnostic tests: (1) a TB blood test or (2) a tuberculin skin test.

These TB tests help inform the clinician whether an individual likely has TB infection or not. However, additional evaluation is needed to determine whether the infection is latent or active. Therefore, for individuals with a positive test result, your agency's next step will be to ensure they are evaluated by a clinician to distinguish between latent TB infection and active TB disease (see *Fact Sheet, Component C: Evaluation*). This Fact Sheet describes the tests used to diagnose TB infection and information on next steps, communicating with individuals, and data considerations related to the TB test. The Fact Sheet also describes where to find more detailed information.

# What is the purpose of a TB test?

- Determines whether or not a person has TB infection
- Additional evaluation is needed to determine if it is latent or active TB

**TAKE ON  
LATENT TB  
INFECTION** Treating latent tuberculosis (TB)  
infection prevents TB disease.




**A TB skin test or TB blood test  
can find TB infection.**

# Test option for TB infection: Tuberculin skin test (TST)

- Also known as “PPD”
- Small amount of testing fluid injected in top layer skin on the lower part of arm
- Reaction of skin measured by trained healthcare work in 48-72 hours
- Measure to interpret the reaction:
  - Positive or negative
- Can be used in BCG-vaccinated persons








# Test option for TB infection: TB blood test (IGRA)

- IGRA = Interferon-Gamma Release Assay
- Only one visit required
- "Preferred" method of testing for people 2 years of age and older who have received bacillus Calmette-Guerin (BCG) vaccine
- Two IGRA tests are approved by the FDA: QuantiFERON-TB Gold in-Tube PLUS (QFT-G) and T-SPOT TB
- Results are quantitative




# Operational opportunities and challenges: TST

- Have to purchase, store, and monitor PPD supply
- Staff need to be trained to administer and read
- Injection of test material into forearm
- Requires two visits:
  - 1) administration
  - 2) reading by trained personnel
- Inexpensive
- Patient prior understanding of test and infection




# Operational opportunities and challenges: IGRA

- Laboratory to store tubes and process specimens correctly
- Blood draw
- Requires single visit
- Requires access to a laboratory
- More expensive
- “New test” is quantitative and doesn’t react with BCG



# What are the next steps after TB testing is complete?

- Positive test requires further evaluation to rule out TB disease
  - history, physical exam, chest x-ray
- If your agency doesn't provide these services, the individual must be linked to a clinic/agency that does
- If your agency administered the positive TST or IGRA, ITLS form must be completed ASAP



# Talking with individuals about testing

- Conversation will be customized based on type of test to be administered (TST vs IGRA)
  - Cultural and linguistic competencies
- “The test is being done to see if you have TB infection”
- “If the test is positive, we will connect you to a provider for further evaluation to know what the next steps are”
- Leave time for questions the individual might have.



# For more information:

- MDPH:
  - [Tuberculosis](#)
  - [Testing](#)
  - [Tuberculosis information for health care providers and public health professionals](#)
  - [Screening and Testing for TB infection](#)
  - [Model Standing Orders for Tuberculin Skin Testing](#)
  - [Policy for distribution of DPH-purchased PPD](#)
  - [Booster or Recall Effect and Two-Stage Tuberculin Skin Testing](#)
- CDC:
  - [Latent TB infection resources](#)
  - [Summary of U.S. Recommendations for Latent TB Infection Testing and Treatment in 2020](#)
- TA4SI:
  - [Latent TB Infection Components and Resources](#)

# Risk assessment and testing

Operationalization

Alaina Theocles, RN

Rebecca Thal, NP


Family Health Center of Worcester



# Operationalizing risk assessment services in your agency

- When is a risk assessment completed?
- Who is responsible for completing the risk assessment?
- How is the risk assessment documented?
- What if the risk assessment is positive?





# Operationalizing testing services in your agency

- Who is responsible for testing?
- How/where are results documented?
- What happens after a positive result?
- Talking with patients/ clients about testing



**Questions?**

**Break**

*5 minutes!*



# Breakout rooms

Pre-process mapping





# Breakout room instructions

- Introductions
- Web-based interactive tool: Padlet
- Discussion



# Wrap-up and next steps

- Post-session activity
  - Process map for risk assessment
  - Process map for testing
- Reminder to register for upcoming sessions!

## Adherence support

- Thursday 11/19 from 9:30-11:30am

## Reporting and analysis

- Thursday 12/10 from 10-12pm



**ta4si**

**TECHNICAL ASSISTANCE  
FOR SERVICE INTEGRATION**

# Thank you!

Contact us at  
[TA4SI@jsi.com](mailto:TA4SI@jsi.com)



Implemented by JSI under contract # INTF4971M04500824092 with the Massachusetts Department of Public Health, Bureau of Infectious Diseases and Laboratory Sciences.

