

# MDPH Tuesday Infectious Disease Webinar Series

## Tuberculosis for Local Boards of Health

**April 11, 2023**

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# TB Background

## Mycobacterial Disease

# TUBERCULOSIS

Lungs

Bone

Pulmonary

Lymph system

CNS and Brain

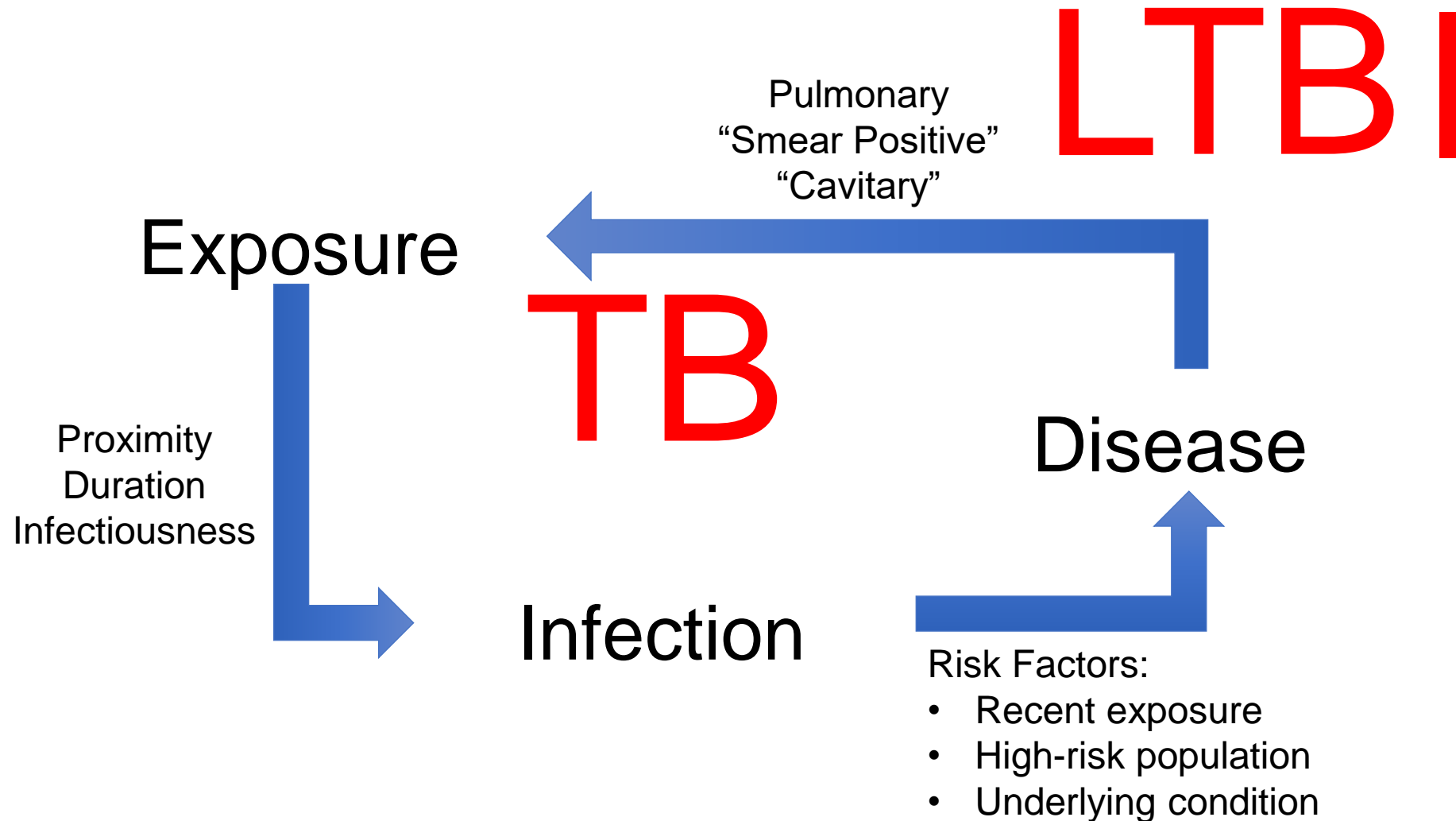
“Infectious” Blood

Pleural Spaces

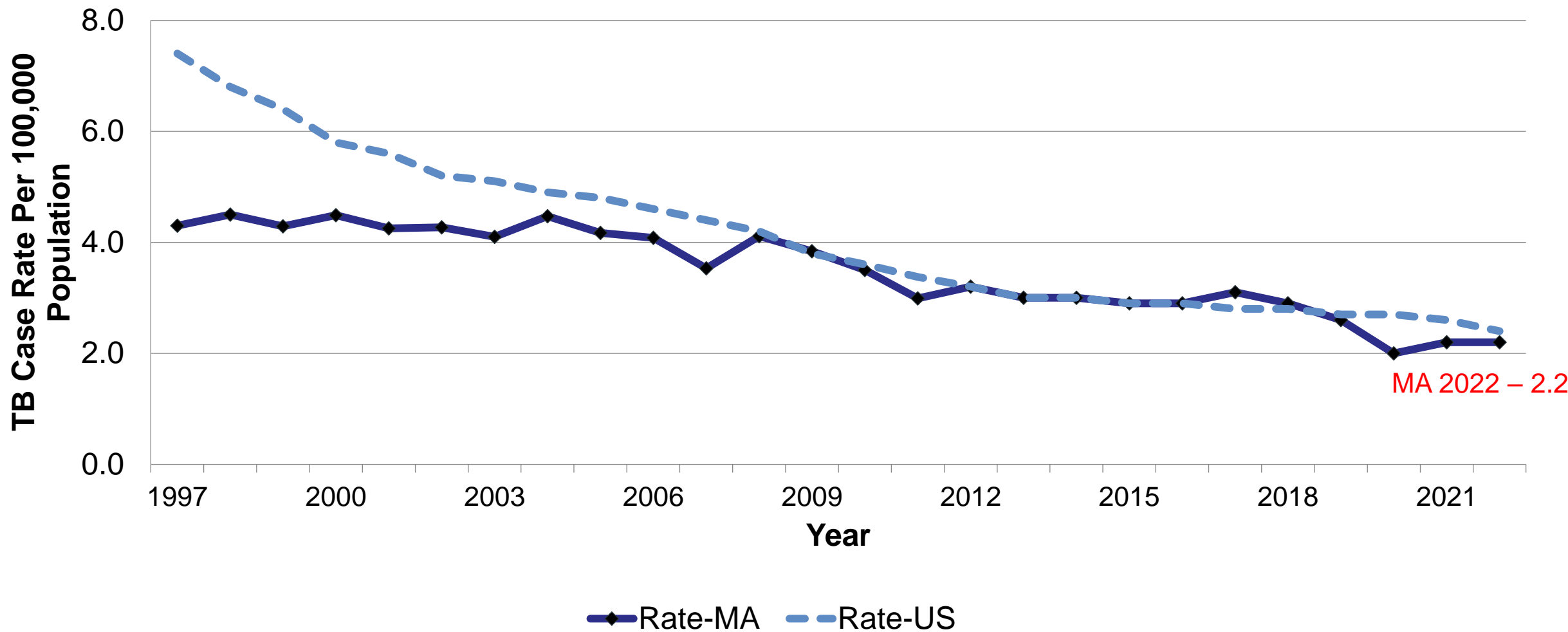
Eyes

Reproductive system

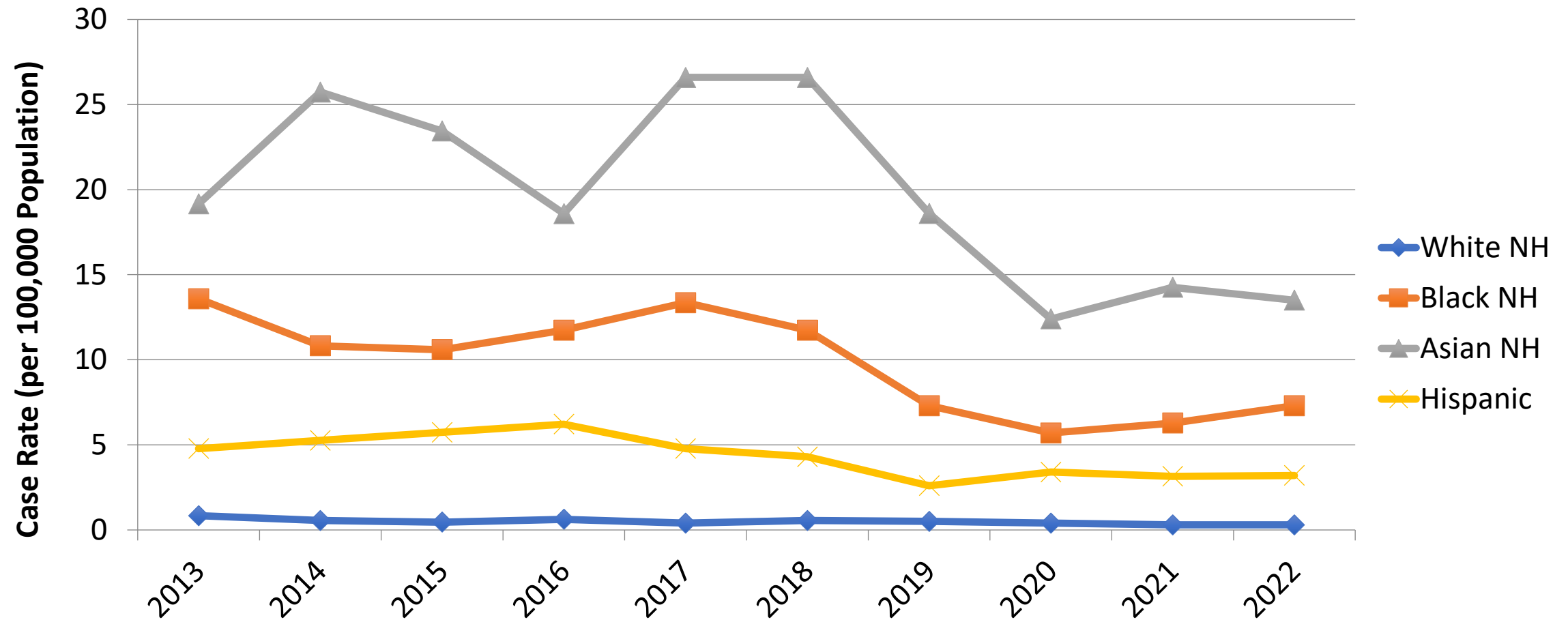
# It's a continuum



# Rate of Tuberculosis Cases, United States and Massachusetts, 1997-2022



# Rate of Tuberculosis Cases by Race/Ethnicity Massachusetts 2013-2022



Data current as of 2 March 2023

Data gathered from Massachusetts Virtual Epidemiologic Network

\*NH – Non-Hispanic

# Rate Ratios and Confidence Intervals of the Tuberculosis Case Rate by Race/Ethnicity, Massachusetts, 2022

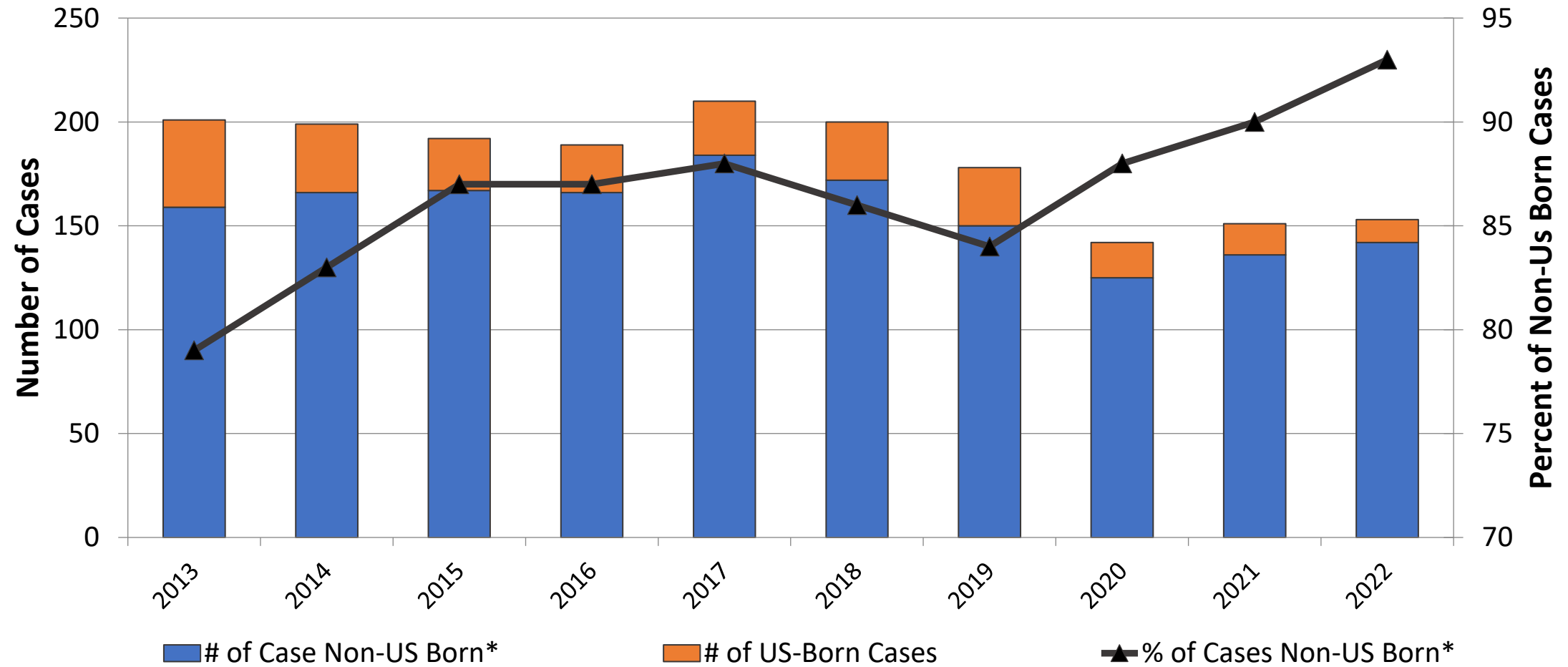
<b>Race/Ethnicity**</b>	<b>TB Cases</b>	<b>TB Case Rate*</b>	<b>TB Rate Ratio (95% Confidence Interval)</b>
White, Non-Hispanic	12	0.3	1.0 (reference)
Black, Non-Hispanic	35	7.3	29.5 (CI 15.3 to 56.9)
Hispanic	28	3.2	12.8 (CI 6.5 to 25.2)
Asian, Non-Hispanic	69	13.5	54.4 (CI 21.5 to 100.4)

Data current as of 2 March 2023  
Data gathered from Massachusetts Virtual Epidemiologic Network

(N=153)

\*Rate per 100,000 population

# Trends in Tuberculosis Cases among Non-US Born\* Persons, Massachusetts, 2013-2022



Data current as of 2 March 2023  
Data gathered from Massachusetts Virtual Epidemiologic Network

\*US Born cases include Puerto Rico

# Summary of Massachusetts TB Regulations and Laws

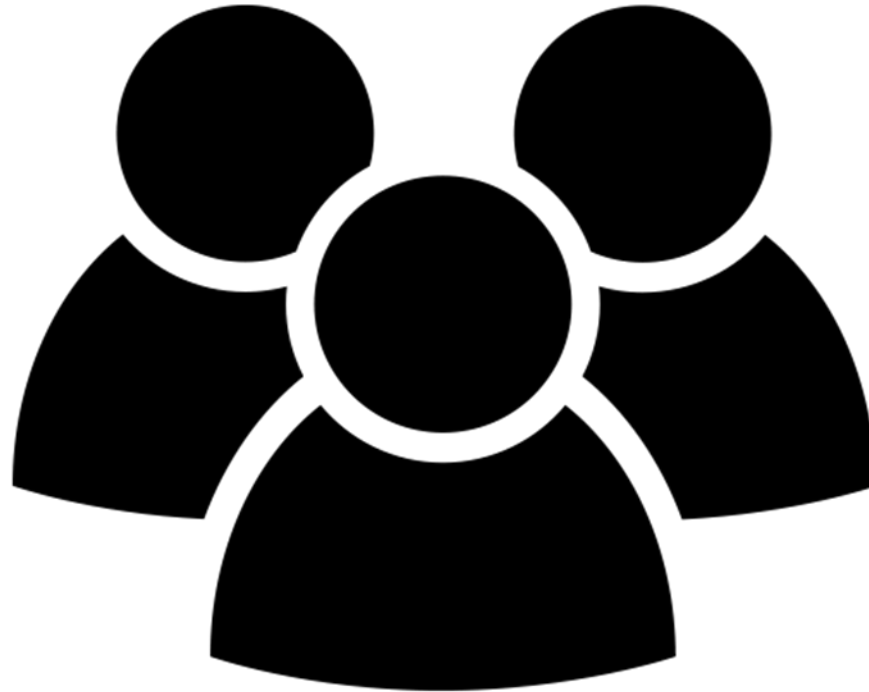
- 105 CMR 300: TB infection and disease are reportable
  - Laboratories: Report positive NAAT or culture. Electronic Laboratory Reporting (ELR) facilitates timely reporting to DPH (but not all labs are on ELR)
  - Healthcare providers: Report suspected active TB and confirmed active TB cases directly to DPH (including extra-pulmonary TB)
- 105 CMR 365: Standards of management of TB outside hospitals
  - 365.200: Case management
  - 365.600: Discharge planning from hospital into out-patient setting
- MGL Chapter 111 Section 94A-C: Compulsory hospitalization of person with infectious TB



# The Division's Team Approach

State Epidemiologists

State Community  
Health Workers/  
CHW supervisors



State and Local Public Health Nurses

# Collaboration for Successful Follow-Up

- Local Public Health Nurses
- Community Health Workers
- Epidemiology staff
- Tuberculosis Public Health Nurses
- State-supported TB outpatient services, clinics
- Sponsoring Refugee Resettlement Organizations

# TB Case Management

## Indirect Case Management

- Consultation and support for LPH
- Consultation to clinical providers and inpatient facilities
- Consultation to Corrections
- Review nursing assessments
- Discuss updates and changes to care plan
- Assure patient has access to treatment
- Collects and verifies data that is reportable to the CDC and for tracking patient care and disposition of contacts

## Direct Case Management

- Initial and ongoing assessment
- Monitor for adverse reactions and adherence
- Monitor for improvement
- Provide DOT
- Provide appropriate education and information
- Verify completion of therapy
- Document activities

# Shared TB Case Management Activities

- Educate patients and providers
- Ensure infection control
- Consideration of social determinates of health
- Consult with community agencies and organizations
- Partnership with care providers, state and local public health, if legal orders are necessary to prevent community transmission
- Maintain a shared surveillance record of each patient in MAVEN that is accurate and up-to-date

# Outreach Support

- The team approach engages CHWs/CHW supervisors (DST Region Coordinators) early in the case management process
- CHWs support includes:
  - Basic TB education
  - Adherence and meds side effect monitoring via Directly observed therapy (in-person or State approved technology-based platform)
  - Cultural brokering
  - Sputum collection
  - Transportation arrangement
  - Listening support

# Outreach Support

- If outreach support is needed:
  - Request outreach through “Care Plan Follow-up” Question Package in MAVEN or by calling DST Region Coordinator/CHW supervisor directly
- All requests are reviewed on a case-by-case basis based on:
  - Available CHW resources
    - In addition to active TB patients, CHWs provide services to:
      - Newly arrived refugees
      - Newly arrived refugees and immigrants with Class A/B notifications
      - Priority LTBI, including refugees diagnosed with TB infection
      - Pregnant moms with Hep B positive diagnosis
  - Geographic location of patients (remote areas may present challenges)

# TB related stigma, considerations for healthcare workers

## 2023 Thomas Q. Garvey Lecture

- Dr. Ruvandhi Nathavitharana keynote presentation
- <https://globaltb.njms.rutgers.edu/educationalmaterials/aa/audioarchive/s.php>
- Drivers and manifestation of stigma experienced by people with TB
  - Anticipated stigma
  - Internal stigma and fear due to TB diagnosis
  - Enacted stigma from health systems, healthcare workers
- Resilience among patient in the face of stigma
  - “Anyone can get TB”
  - How health workers can contribute to de-stigmatizing TB

# We Are TB



## Anyone can get tuberculosis.

**We Are TB** is here for **YOU**. Talk to someone who understands.

**We Are TB** volunteers have been where you are right now. We understand. We're here to support you during diagnosis and treatment, through your struggles, triumphs, and fears.

During and beyond treatment, members of **We Are TB** can serve as advocates, raising awareness about TB, and sharing their personal story to educate and reduce the stigma of TB.

- Weekly PEER Support groups, available in English & Spanish

<https://www.wearetb.com/>



# Epidemiologist Support

- Contact investigations
  - Work with Team EPI to Identify Exposure sites, infectious periods and identify exposed individuals
  - Epi's can make quest-lab orders for IGRA testing identified contacts and assist with finding TB clinic appointments
  - Can help facilitate contact testing events at sites where there are many potentially exposed individuals in the same place
- Surveillance
  - Manages data related to TB cases including requesting additional details for required data elements

# TB Contact Investigation

- Factors to consider
  - Disease presentation
  - Site of disease
  - Symptoms (and symptom onset)
  - Risk factors
  - Possible exposure sites
- Identify need for contact investigation
- Partnership with local health and clinical providers
- **See webinar in MAVEN help for more information about contact investigations**

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# Tuberculosis and MAVEN

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# TB suspect/case notification

New Suspect Tuberculosis case in MAVEN.



MavenHelp (DPH) <mavenhelp@r

To ● Hippchen, Anna C (DPH)



Fri 3/31

Event 129220468 - suspected Tuberculosis for TB\_DISEASE. Access event at <https://sso.hhs.state.ma.us/vgportal/login> Please coordinate follow-up with MDPH. If this link does not work copy and paste to your Browser!

## Immediate Notifications

### Workflow Queue



TB suspect/case notification not acknowledged

# Follow-up First Steps

## Local Health and Investigation Steps (1 - 5)

Step 1 - LBOH acknowledged:

Yes

LBOH acknowledged date

04/22/2022



Step 2 - Investigation started:

Step 3 - LBOH/Agency Investigator: **Assign To Me**

Step 4 - Case Report Form Completed: <sup>1</sup>

Yes

Case Report Form complete date:

04/22/2022



## Notifications

Disease State <sup>1</sup>

Disease State: TB Disease

Event/Status/Date/Type Notifier <sup>3</sup>

Event Status: Confirmed

Event Date: 04/22/2022

Event Type: Report Date

Workflow Status <sup>1</sup>

Event ID is in workflows [\[View List\]](#)

Person Summary <sup>1</sup>

[Patient Summary](#)

Case Classification <sup>1</sup>

MDPH Team: 5

Attachments:

25 (Add) (View)

In MOST cases the Case Reporting Form and other information will be attached. (If the case reporting form came through electronically, you can get the same information by viewing the TB Case Report Form Wizard)

Communicate with your DPH case management team. If you don't know who your team is, call the main TB office line and ask for the nurse or Epi from the team listed in MAVEN

# Other TB Workflows

Online LBOH TB Notifications	
Workflow Queue	
☆	LBOH TB Labs for review
☆	LBOH LTBI Priority Follow-Up
☆	LBOH TB Class A/B Worksheet Complete
☆	LBOH TB Needs final review
☆	LBOH TB Outreach requested and not assigned

The diagram illustrates the workflow queue for LBOH TB notifications. It features a table with five items, each preceded by a star icon. Three blue arrows point from the table items to explanatory text boxes on the right. The first arrow points from 'LBOH TB Labs for review' to the box 'New TB Labs, can be cleared by bulk action'. The second arrow points from 'LBOH TB Class A/B Worksheet Complete' to the box 'Clears once completed TB worksheet is received and processed'. The third arrow points from 'LBOH TB Needs final review' to the box 'Step 5 in the Admin package'.

New TB Labs, can be cleared by bulk action

Clears once completed TB worksheet is received and processed

Step 5 in the Admin package

# High Priority Latent TB Infection (LTBI) workflow

- **Persons who are close contacts to someone with active TB disease**
  - Testing, referrals may be needed, in collaboration with DPH
- **Persons arriving with a Class A/B notification**
  - LBOH provides case management including making contact, recommending next steps, referral, monthly phone calls for treatment adherence support
- **Refugees**
  - First steps are taken by DPH Direct Services Team and refugee health assessment provider
  - LTBI treatment adherence support by LBOH is very helpful
- **Children**
  - Prioritize < age 5, call provider to ensure there is a referral for X-ray and appropriate medical evaluation, DOPT support may be needed
  - Age 5-17: if you have time call provider to confirm there is a referral for X-ray and care

# Contacts

Identified Contacts living in your Jurisdiction (whether from your own tracing efforts or others!) must be

- Tested (TST, Quest referral, or PCP)
- Referred to Clinic if positive (or evaluated by PCP)
- Hopefully treated, with some adherence support
- Process recorded in MAVEN



# New Arrivals with Class A/B notification

- CDC provides direction and technical assistance to overseas panel sites for medical screening of applicants for permanent residence in the US, including refugees
- Medical screening includes TB assessment
- Outcome of the screening determines the classification
  - Class A – Active TB, travel is deferred until after treatment completion
  - Class B1 – Persons (usually adults) with abnormal CXRs, but negative sputum AFB smears and mycobacterial cultures
  - Class B2 – Children with positive TSTs/IGRAs and normal CXRs

# Responsibilities for Class A/B arrivals

- Identify and contact arrival
- Facilitate testing
- Refer to TB clinic
- If treatment is recommended, provide adherence support and education
- Coordinate with Direct Services Team for outreach support
- Cooperate with clinic and DPH to fill out the Class B worksheet attached to MAVEN event
- **See Webinar in MAVEN Help for additional details**

# Tips & Tricks for MAVEN and TB

- Team Epi's are responsible for MAVEN variables that go to CDC for TB Disease cases
- When requesting IGRA for contact testing – epis need: First Name, Last name, Gender, Date of Birth, Phone number, and Address
  - LBOH can create and link contacts, put notes in the index case or get contacts' info to epi in a different way
- If contact, TB case, or LTBI is moving to another state/city/country, epi's need new address and contact info before we can make transfer

# MAVEN and Data Resources

## Global Populations and Refugee Resources

[Class A/B](#) UPDATED

[TB DOT](#)

[General Information](#)

[Presentations](#)

[Overview of Tuberculosis for LBOHs](#) NEW

[Tip Sheets](#)

[FAQ TB Workflows\\_02.01.2023](#) NEW

[LBOH TB Reports Tip Sheet\\_1-31-23](#) NEW

[March 2017 - New TB Model Tip Sheet](#)

[New arrivals](#)

Maven Help GL

## Tuberculosis

Tuberculosis (TB) is caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs. TB can be cured. TB can be prevented.

Here you can find information about TB disease (the condition when a person is sick with TB) and about latent TB infection (the condition when a person has TB germs in their body but is not sick at this time).




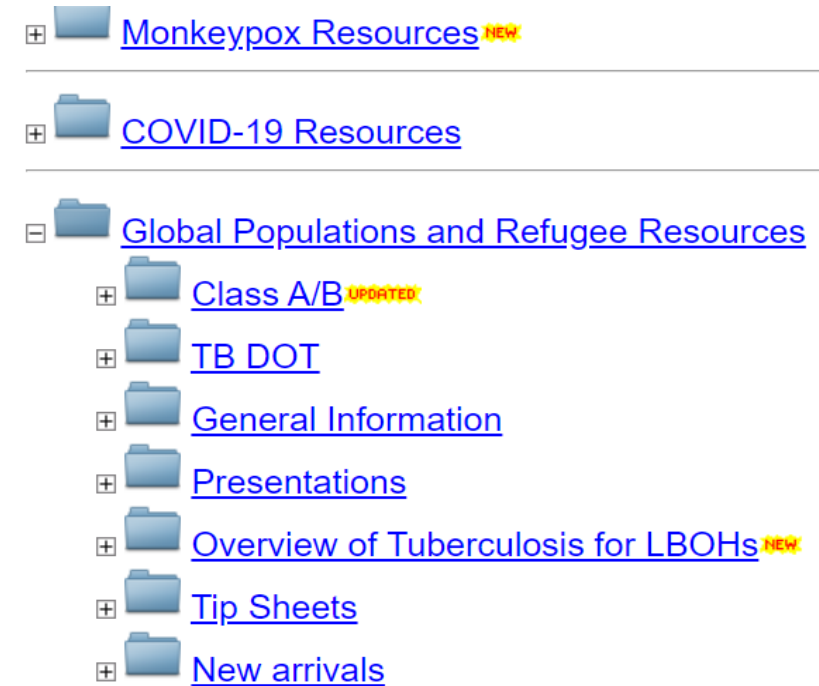
General MA TB program website

[www.mass.gov/Tuberculosis](http://www.mass.gov/Tuberculosis)

Lots of information for public and medical professionals as well as data and statistics

# Division's TB program resources

- Technical assistance and consultation
  - Contact investigation support with TST or IGRA testing
  - Available throughout course of treatment
  - From early diagnosis to completion of therapy
- Community Health Worker support
- MAVEN Help Section 
- Health education materials for patients
  - <https://www.mass.gov/lists/tb-information-for-your-patients-in-english-and-other-languages>



# Additional, external resources

- TB Centers of Excellence for Training, Education, and Medical Consultation
  - Rutgers Global TB Center: <https://globaltb.njms.rutgers.edu/>
- CDC – Division of Tuberculosis Elimination
  - <https://www.cdc.gov/tb/default.htm>
  - Continuing education modules, including case management
- CDC's Health education materials for patients
  - [https://www.cdc.gov/tb/education/patient\\_edmaterials.htm](https://www.cdc.gov/tb/education/patient_edmaterials.htm)
- Stop TB
  - <https://www.stoptb.org/>
  - Words, language matters: <https://www.stoptb.org/words-matter-language-guide>

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# Questions ?

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