PDPH/LTCF Conference Call – Friday, 3/17/23

Agenda

- **SARS-CoV-2 Surveillance Update**
- **Tuberculosis Epidemiology with Relevance to Long Term Care Facilities and the PDPH Tuberculosis Toolkit**
- **Resources and Services**
  - **AHRQ Safety Program for MRSA Prevention**
  - **PDPH Resources Reminder**

Department of Public Health
CITY OF PHILADELPHIA

United States COVID-19 Cases and Deaths

Daily Update for the United States

Cases

New Cases (Weekly Total)

149,955

Case Trends

Jan 2023 Mar 2023

Deaths

New Deaths (Weekly Total)

1,706

Death Trends

Jan 2023 Mar 2023

Hospitalizations

New Admissions (Daily Avg)

2,680

Admission Trends

Jan 2023 Mar 2023

Total Cases

103,801,821

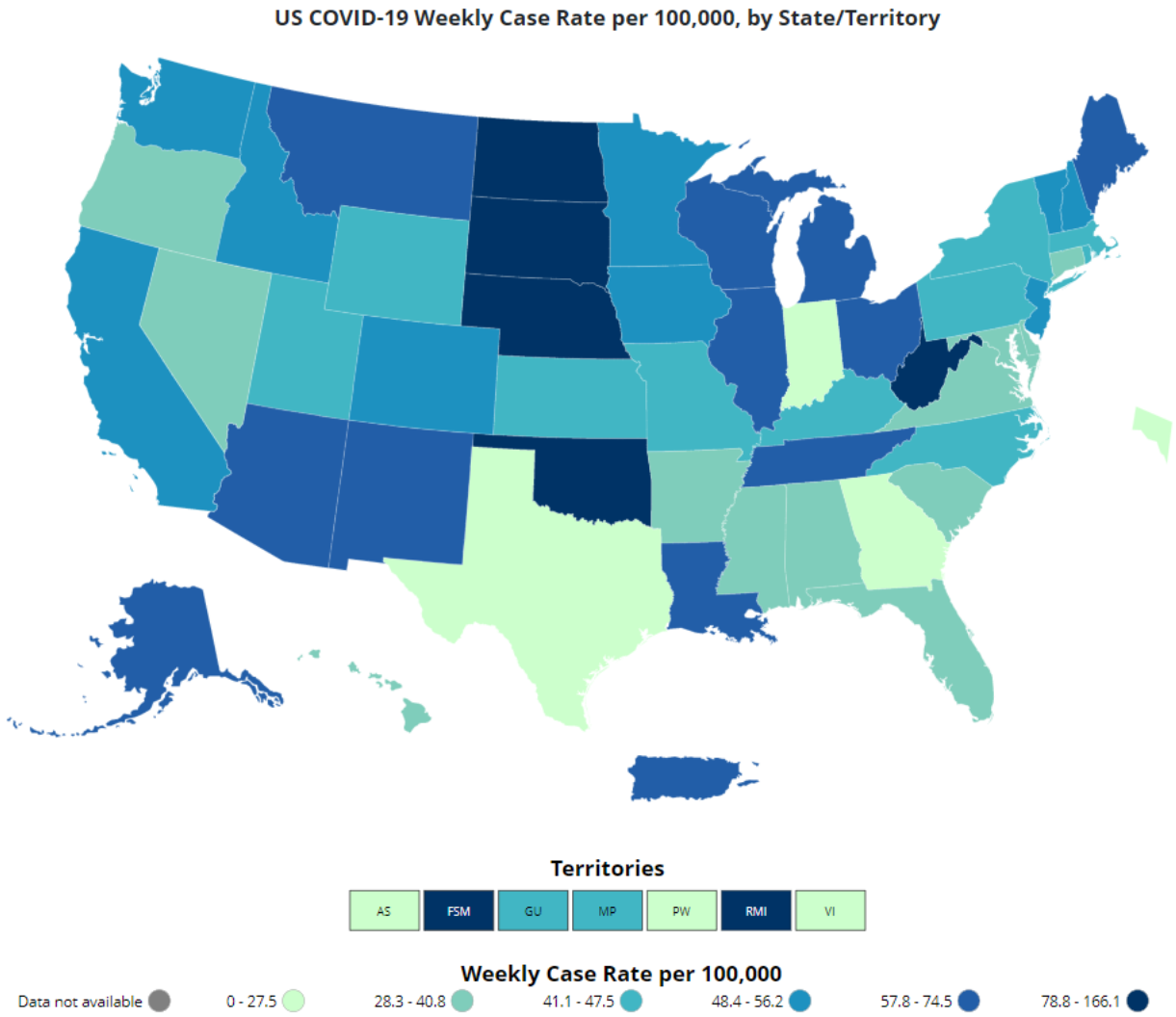
Total Deaths

1,121,512

Current Hospitalizations

16,705

United States COVID-19 Cases by State

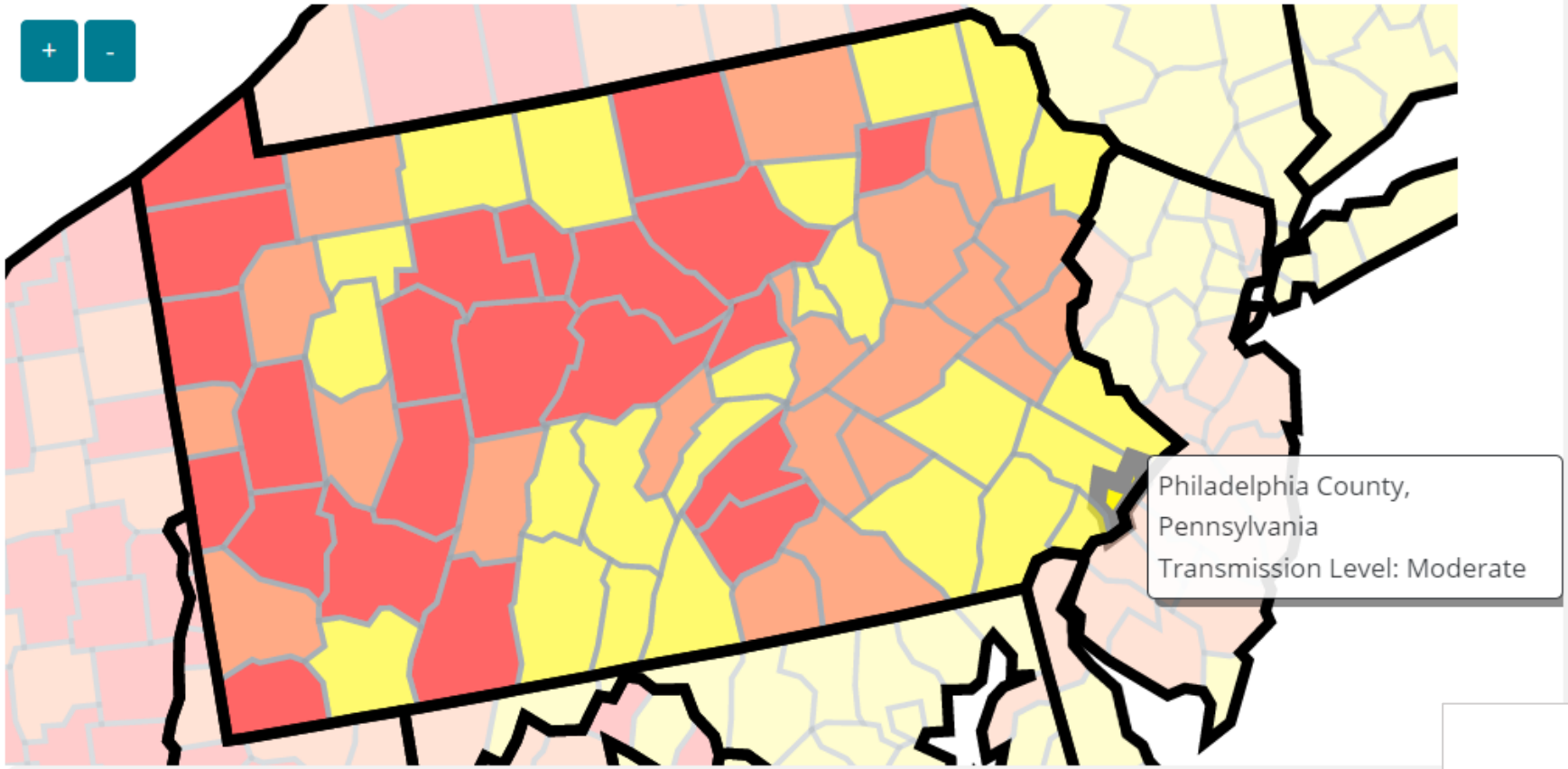


Pennsylvania

Last 7 days:

- 6,083 new cases
- Case rate: 47.5/100K
- PCR % Positivity: 8-9.9%

Philadelphia



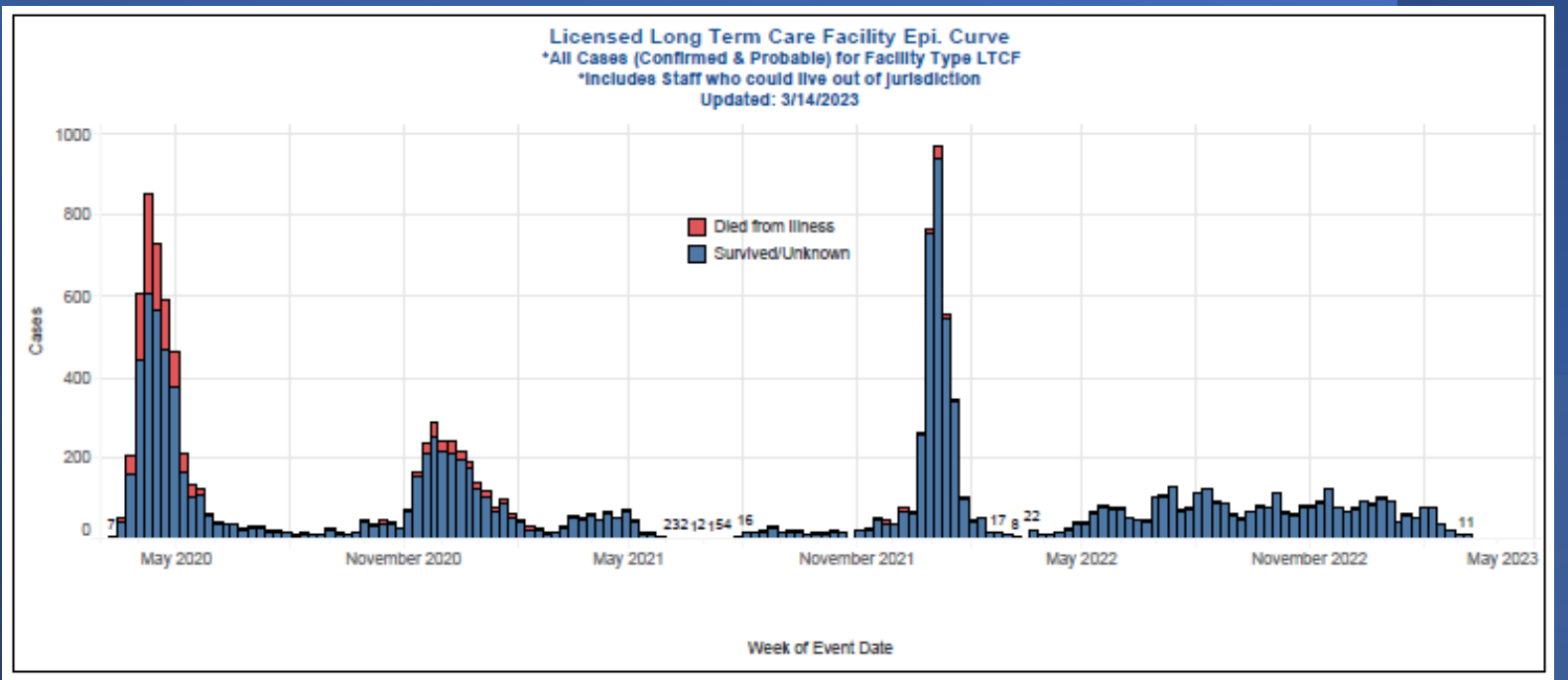
Data through Wed Mar 15 2023

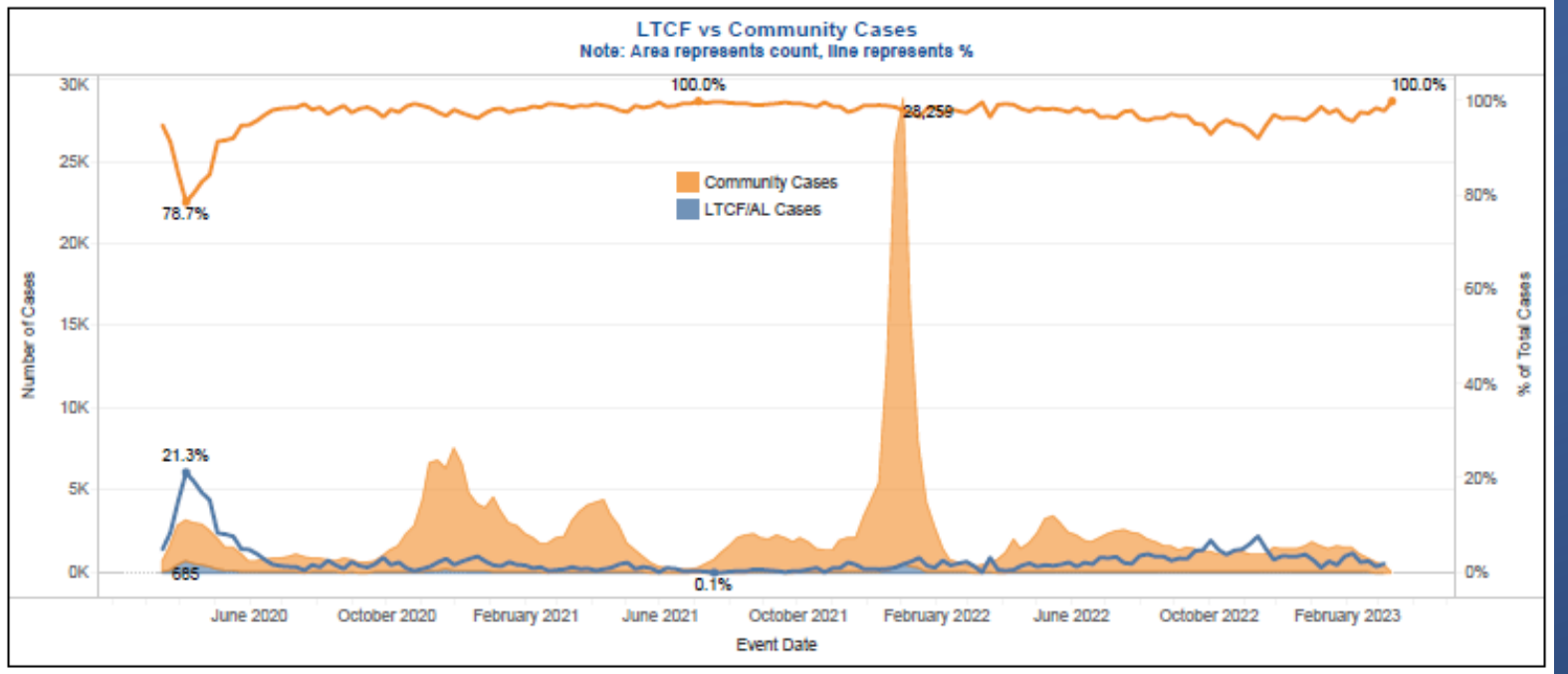
Total Cases	533
Weekly Case rate per 100k	33.65
% Change in past week	-26.07

Data through Mon Mar 13 2023

% Positivity	5.53
% Change (last 7 days)	-0.28

	Low	Moderate	Substantial	High
New cases per 100,000 persons in the past 7 days*	<10	10-49.99	50-99.99	≥100
Percentage of positive NAATs tests during the past 7 days**	<5%	5-7.99%	8-9.99%	≥10.0%


Licensed Long Term Care Facility Epi. Curve
*All Cases (Confirmed & Probable) for Facility Type LTCF
*Includes Staff who could live out of jurisdiction
Updated: 3/14/2023
Died from Illness
Survived/Unknown
Cases
1000
800
600
400
200
0
7
232
12
154
16
17
8
22
11
May 2020
November 2020
May 2021
November 2021
May 2022
November 2022
May 2023
Week of Event Date


LTCF vs Community Cases
Note: Area represents count, line represents %
Community Cases
LTCF/AL Cases
Number of Cases
% of Total Cases
30K
25K
20K
15K
10K
5K
0K
100%
80%
60%
40%
20%
0%
100.0%
100.0%
28,259
78.7%
21.3%
685
0.1%
June 2020
October 2020
February 2021
June 2021
October 2021
February 2022
June 2022
October 2022
February 2023
Event Date

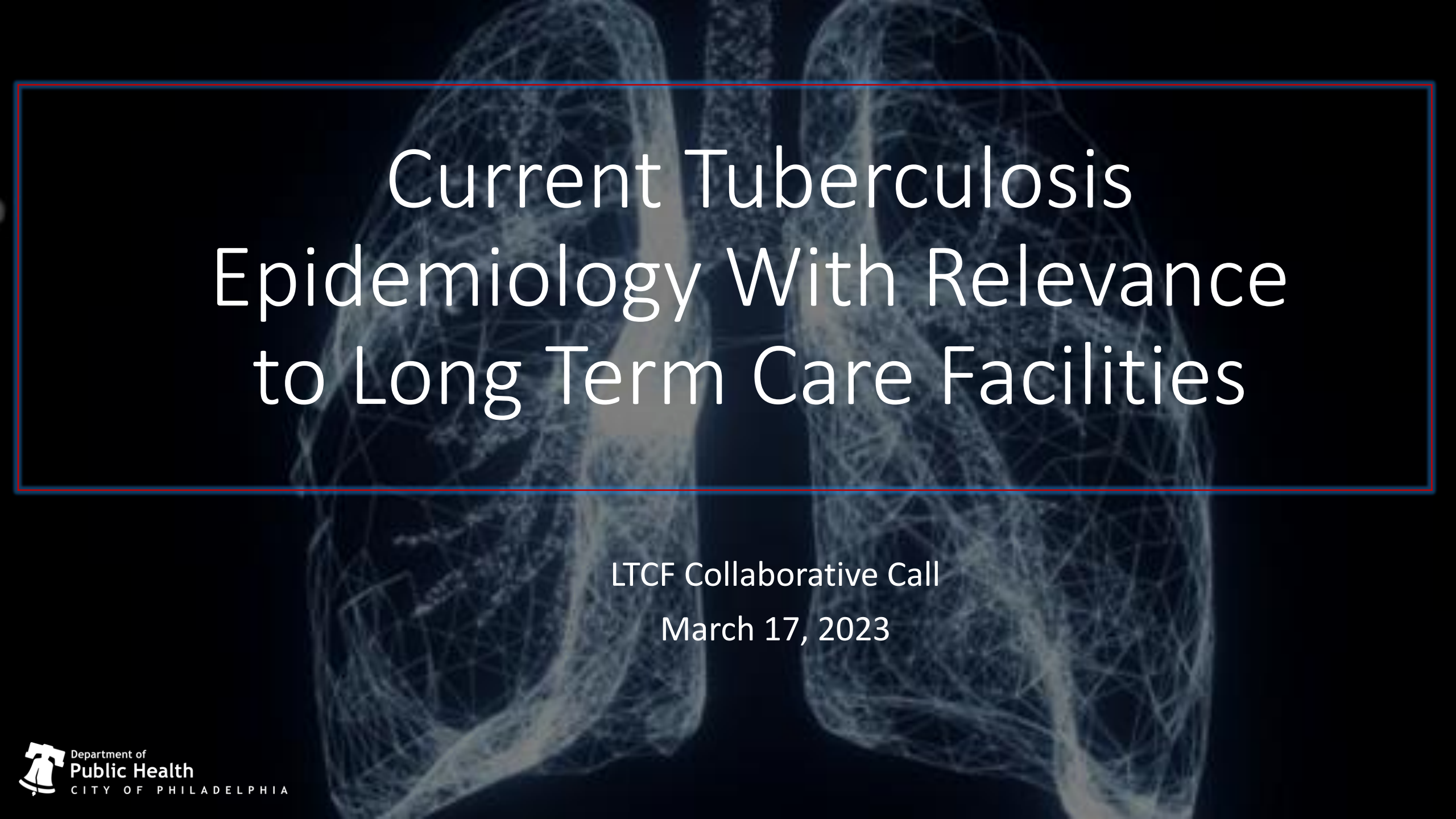
COVID-19 Vaccination Rates

General population over the age of 18

Vaccine type	Philadelphia	Pennsylvania
Primary series	85.6%	82.9%
Bivalent booster	19.1%	21.8%

Skilled Nursing Facilities (NHSN data)

Vaccine type	Residents	Staff
Primary series	83%	96.9%
Bivalent booster	49.2%	29.1%



Current Tuberculosis Epidemiology With Relevance to Long Term Care Facilities

LTCF Collaborative Call

March 17, 2023

Department of Public Health
CITY OF PHILADELPHIA

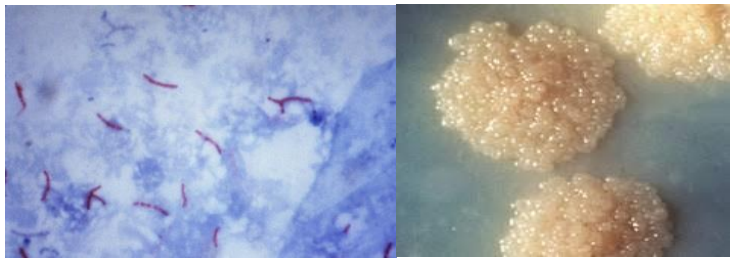
What causes Tuberculosis?

- ***Mycobacterium tuberculosis* complex**
  - ***M. tuberculosis***
  - ***M. bovis***
  - ***M. africanum***
  - *M. canetti*
  - *M. caprae- livestock, deer*

Most common to cause disease in humans

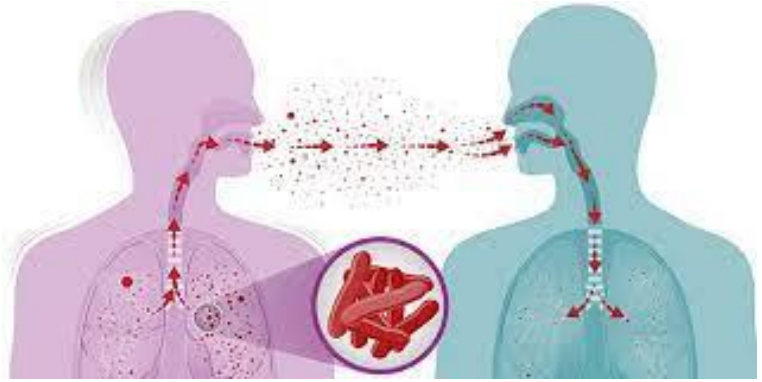
  - *M. microti*- rodents such as voles, mice, shrews
  - *M. pinnipedii*- primarily seals
  - *M. mungi*- banded mongoose
  - *M. suricattae*- meerkats

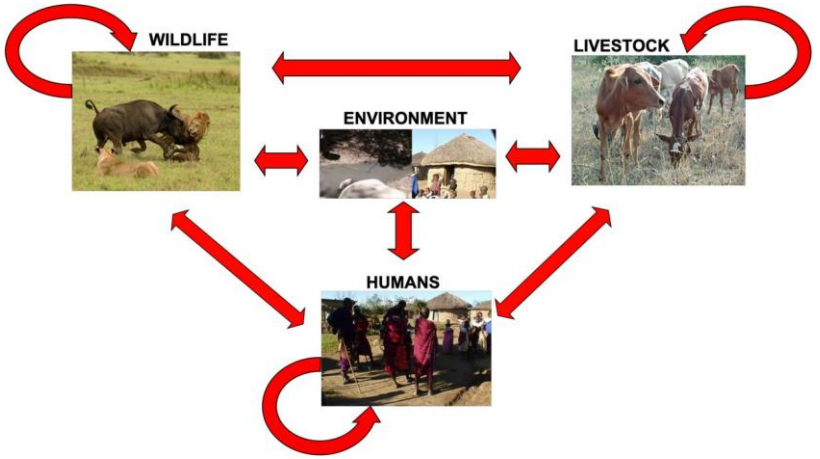
- Acid fast bacillus
- Slow growing



How is Tuberculosis Transmitted?

- *Airborne transmission*- inhalation of droplet nuclei
  - Coughing
  - Talking
  - Singing
- *Congenital transmission*- from mother to fetus
- *Organ transplantation*- lungs, kidneys, other solid organs
- *M. bovis* is transmitted most often by unpasteurized dairy products, rarely airborne





Review of Definitions

- **TB exposure:** person with recent contact (within 3 months) with another person with suspected or confirmed contagious TB (pulmonary, laryngeal, tracheal or endobronchial disease)
- **Latent TB Infection (LTBI=TBI): The Rule**
  - TST or IGRA positive, CXR normal or reveal evidence of healed infection, no signs or symptoms of disease
- **TB disease (TBD): The Exception**
  - Ill person with signs and symptoms or radiographic evidence of disease
  - Pulmonary
  - Extrapulmonary

Who Gets Tuberculosis in the U.S.?

- Close contacts of a contagious case
- Case rates higher in urban, low-income areas and in non-white racial and ethnic groups
- Most U.S. cases occur in non-U.S. born persons
- Higher risk: **diabetes**, substance abuse, homeless, residents of correctional facilities and other congregate settings, immunocompromised
- Recent latent TB infection within past 2 years

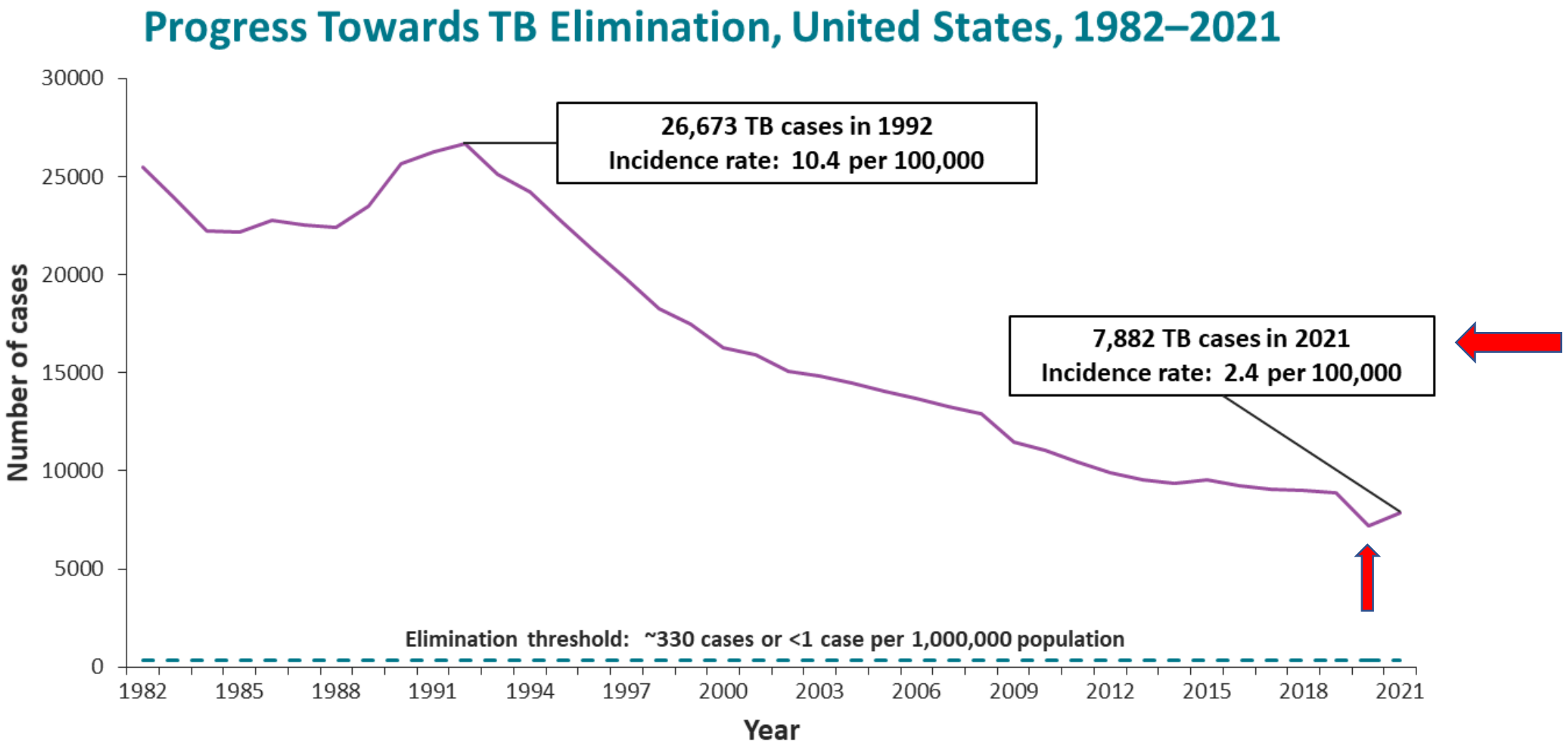
Diabetes Mellitus (DM) and TB

- A total of 422 million people worldwide were living with DM in 2014, expected to increase to 439 million by 2030
- In 2012, DM was the direct cause of 1.5 million deaths
- In 2013, 15% of all adult TB cases **worldwide** were associated with DM (=1 million cases of DM-associated TB per year)
- **In 2021, 24% of all U.S. cases had DM has a risk factor**

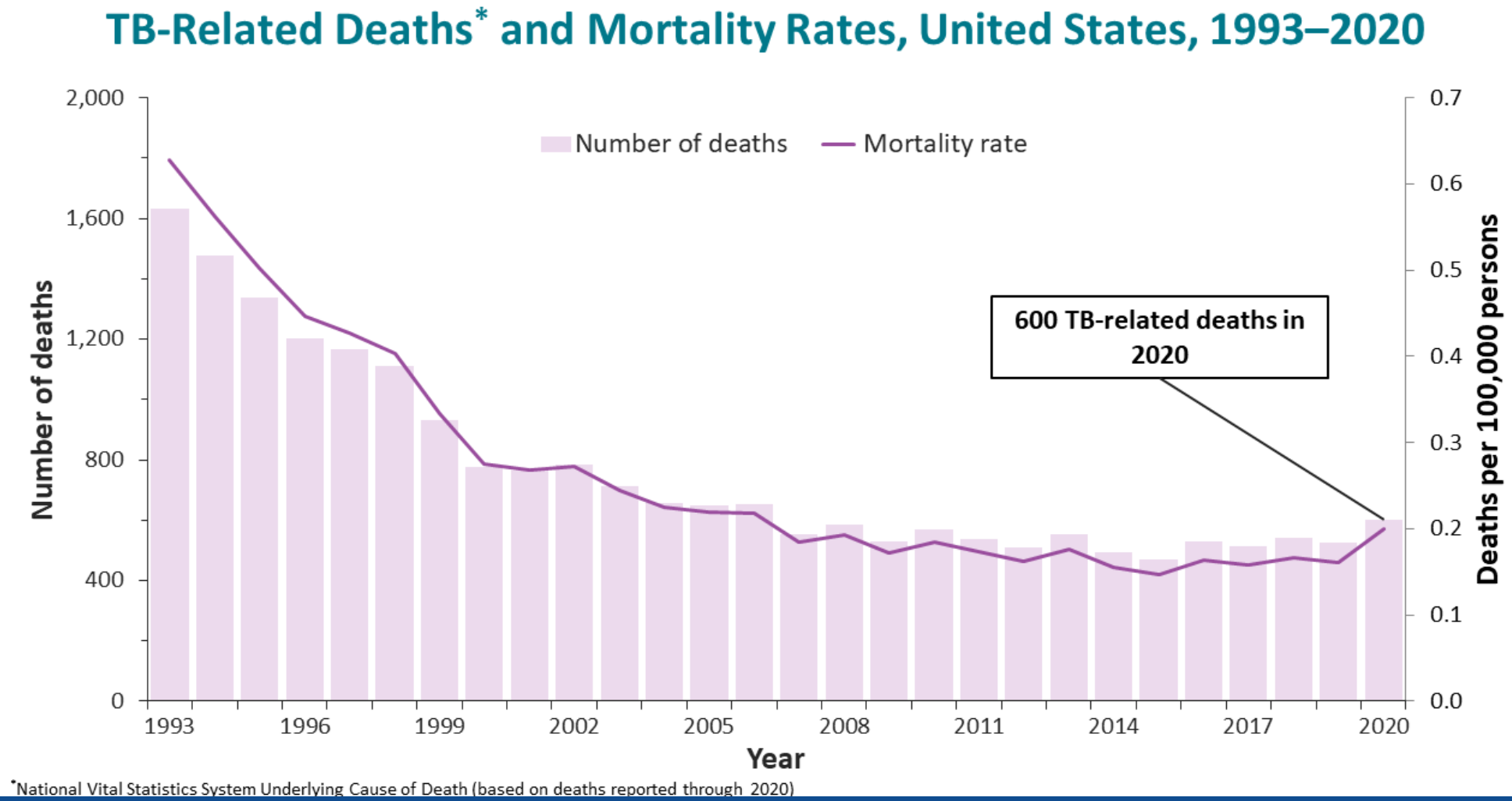
  - Hyperglycemia provides rich growth media for MTB bacilli
  - Immune system effects- Increased IL-10, decreased T-cell function- more difficult to kill MTB bacilli
  - Poorly controlled diabetes- see more advanced TBD, higher relapse rate, higher mortality during TB treatment

WHO Diabetes Summit 2014, *Lancet Diabetes Endocrinology* 2014; 2:730-738, *Thorax* 2010; 65:578-81

Incidence Rates of U.S. TBD Cases



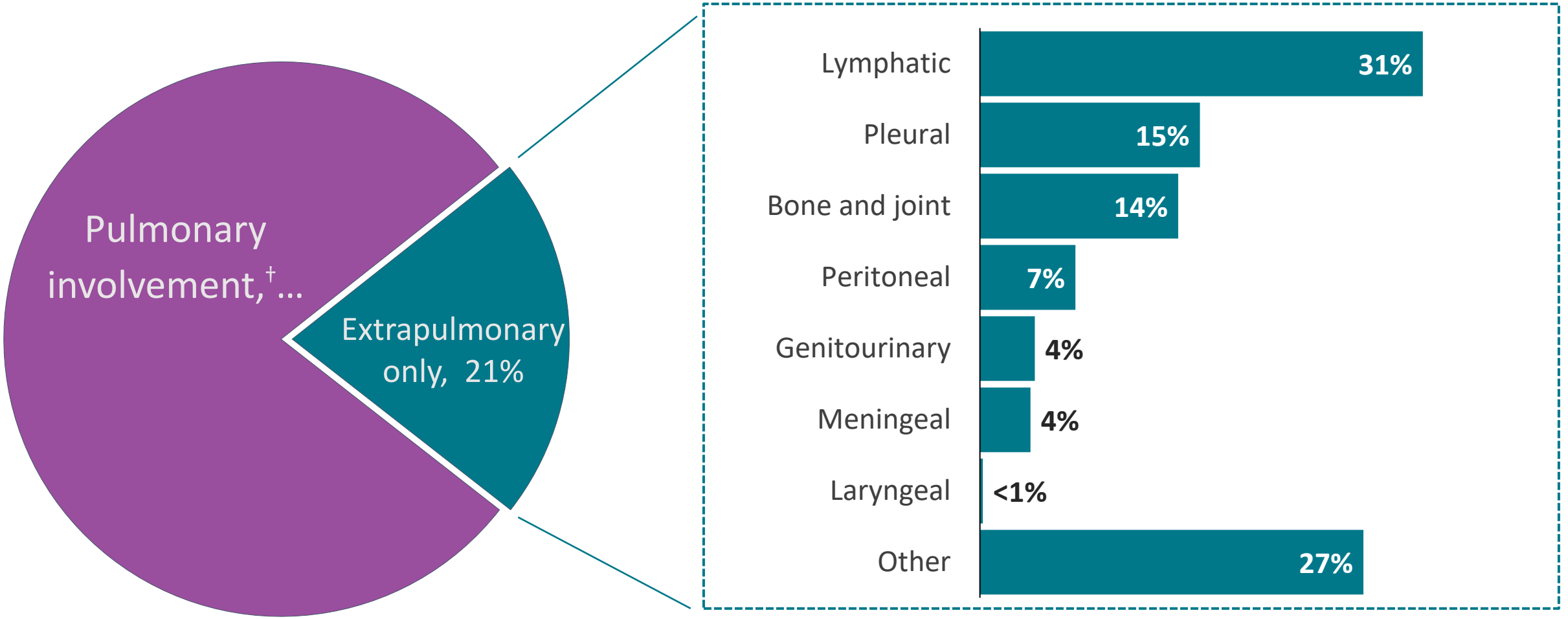
TBD-Related Deaths in U.S.



*National Vital Statistics System Underlying Cause of Death (based on deaths reported through 2020)

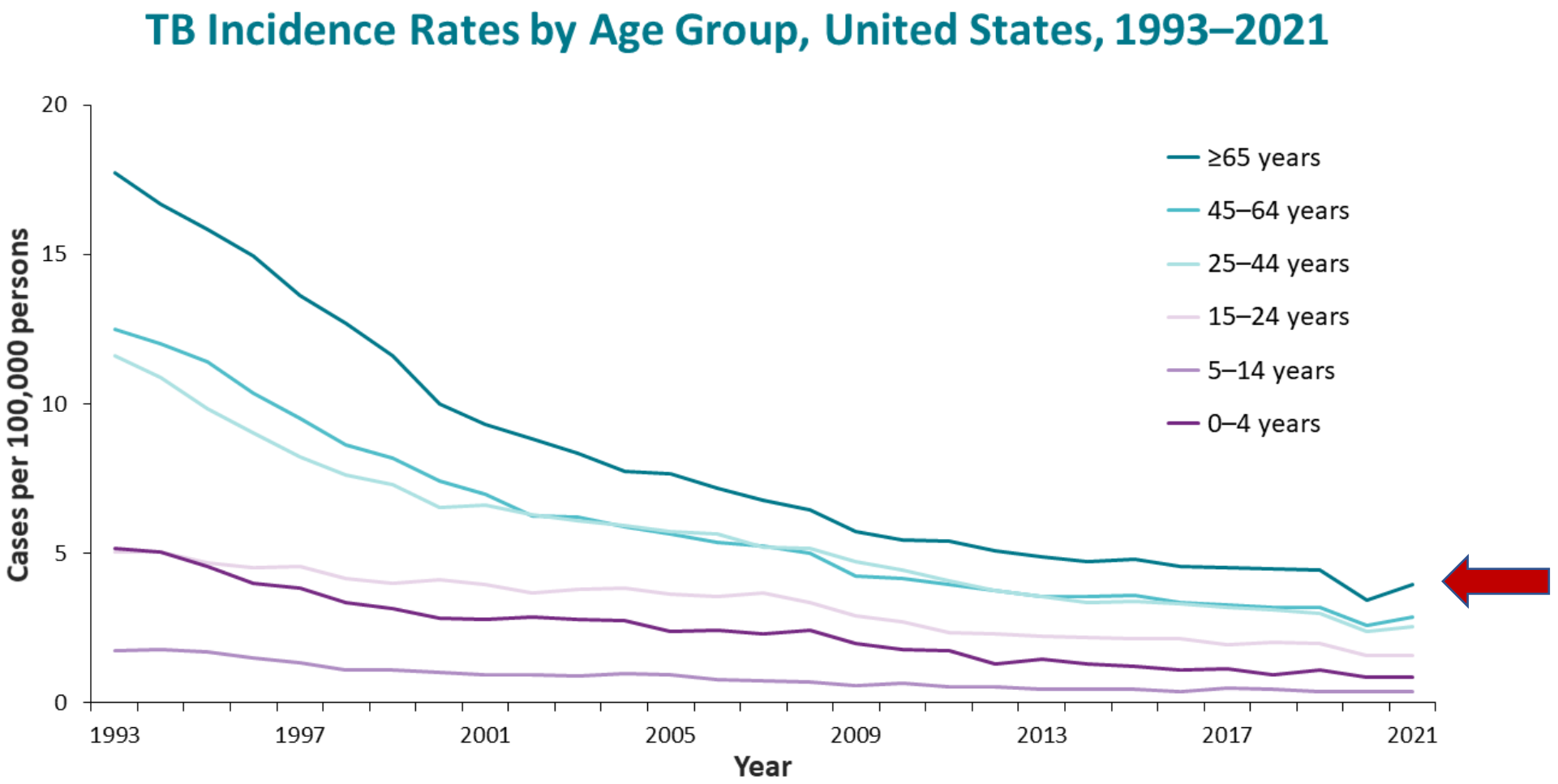
National Vital Statistics System, CDC

Percentage of TB Cases by Site of Disease,* U.S., 2021



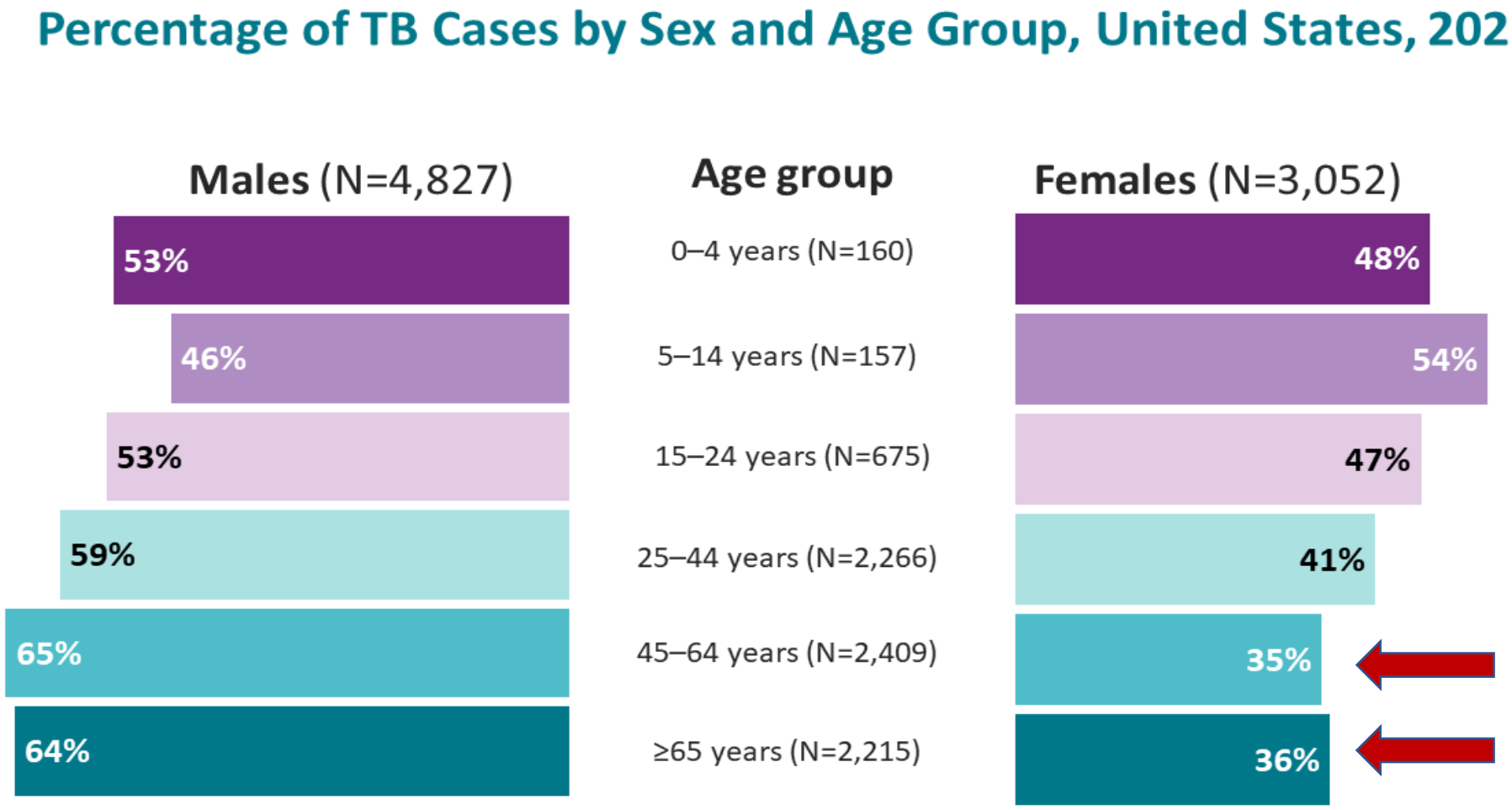
National Vital Statistics System, CDC

TBD Incidence Rates in U.S. by Age Group



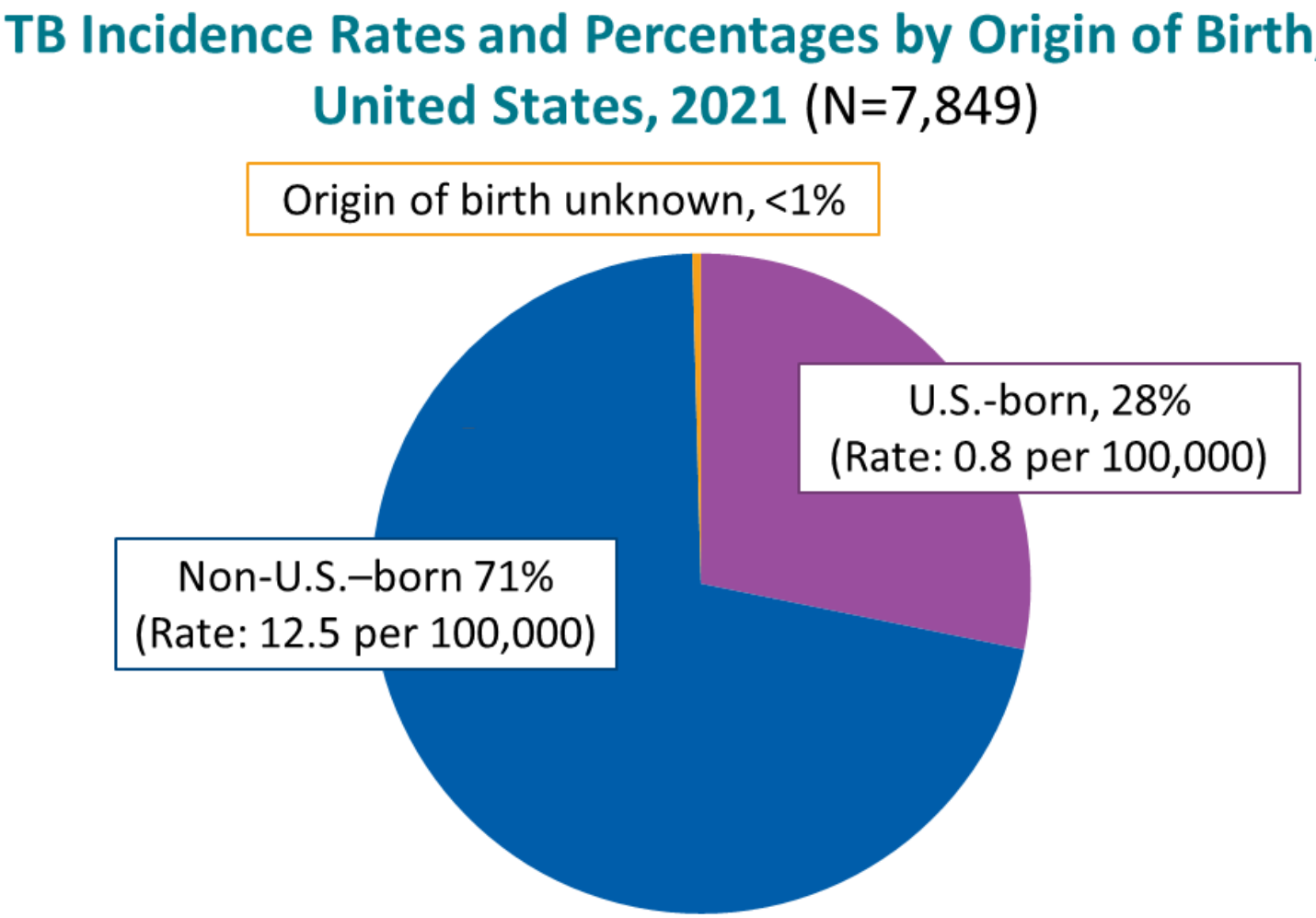
National Vital Statistics System, CDC

Percentage of TBD Cases in U.S by Sex and Age Group



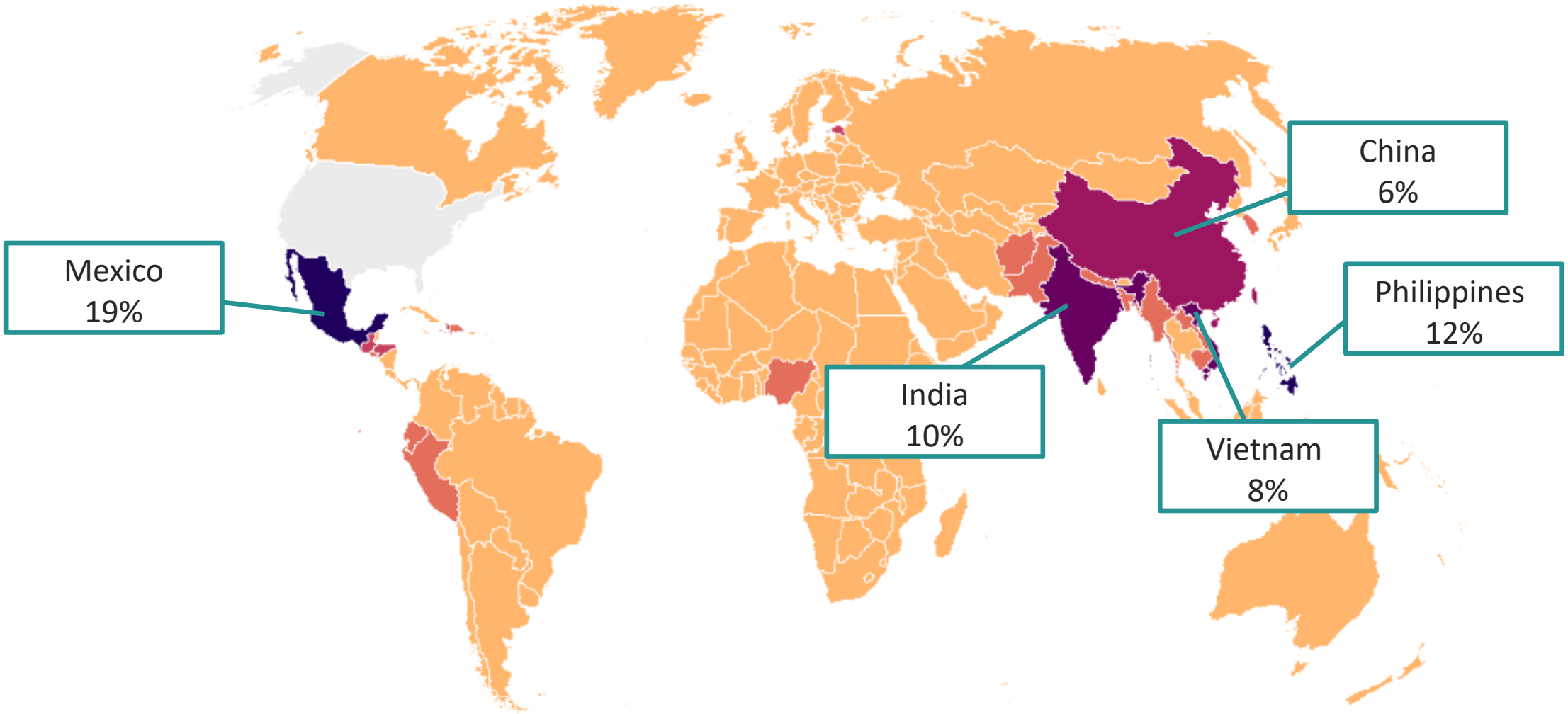
National Vital Statistics System, CDC

Incidence Rates and Origin of Birth of U.S. TBD Cases



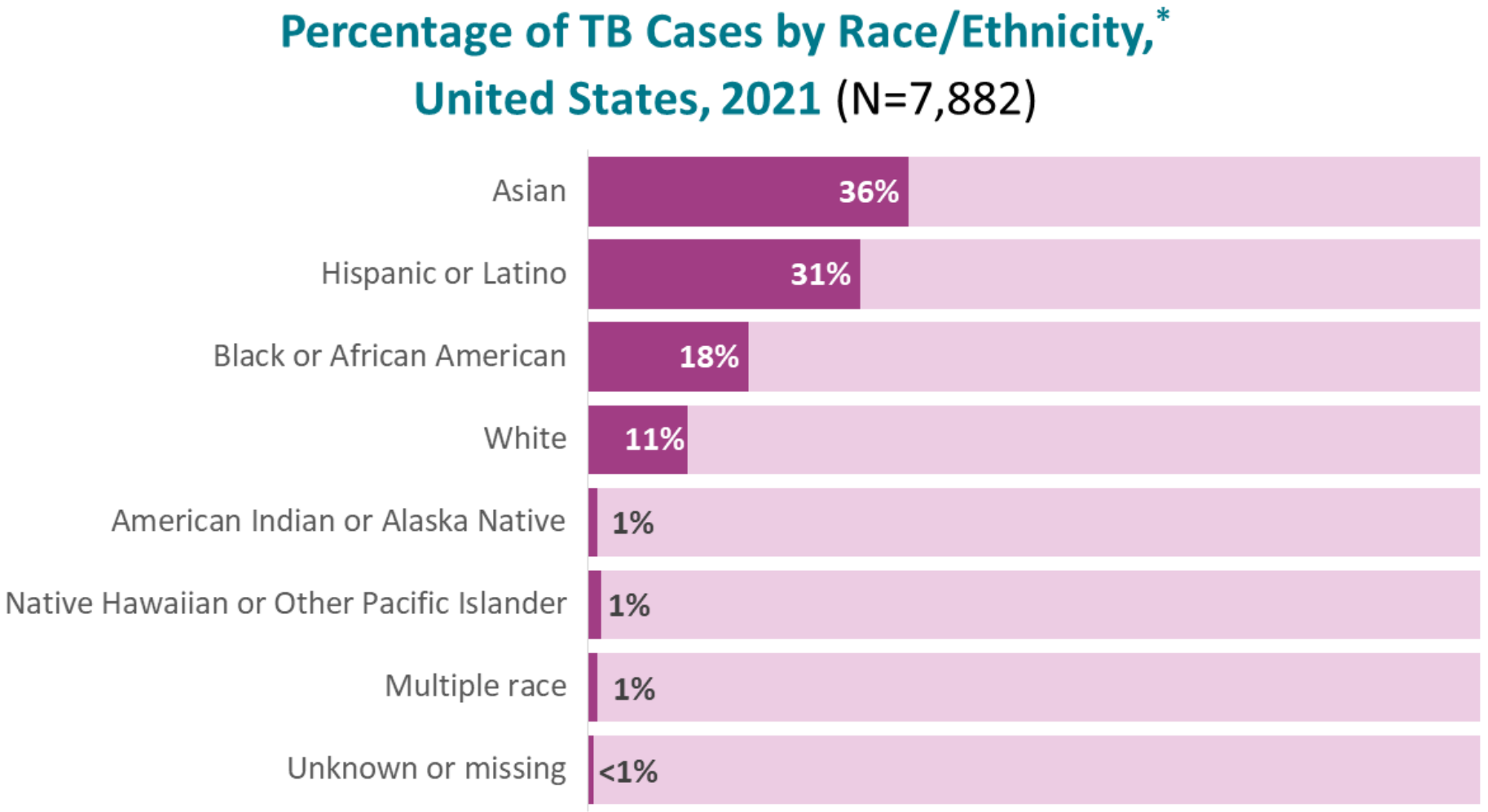
National Vital Statistics System, CDC

TB Cases by Countries of Birth Among Non-U.S.–Born* Persons with TB, U.S., 2021 (N=5,626)



National Vital Statistics System, CDC

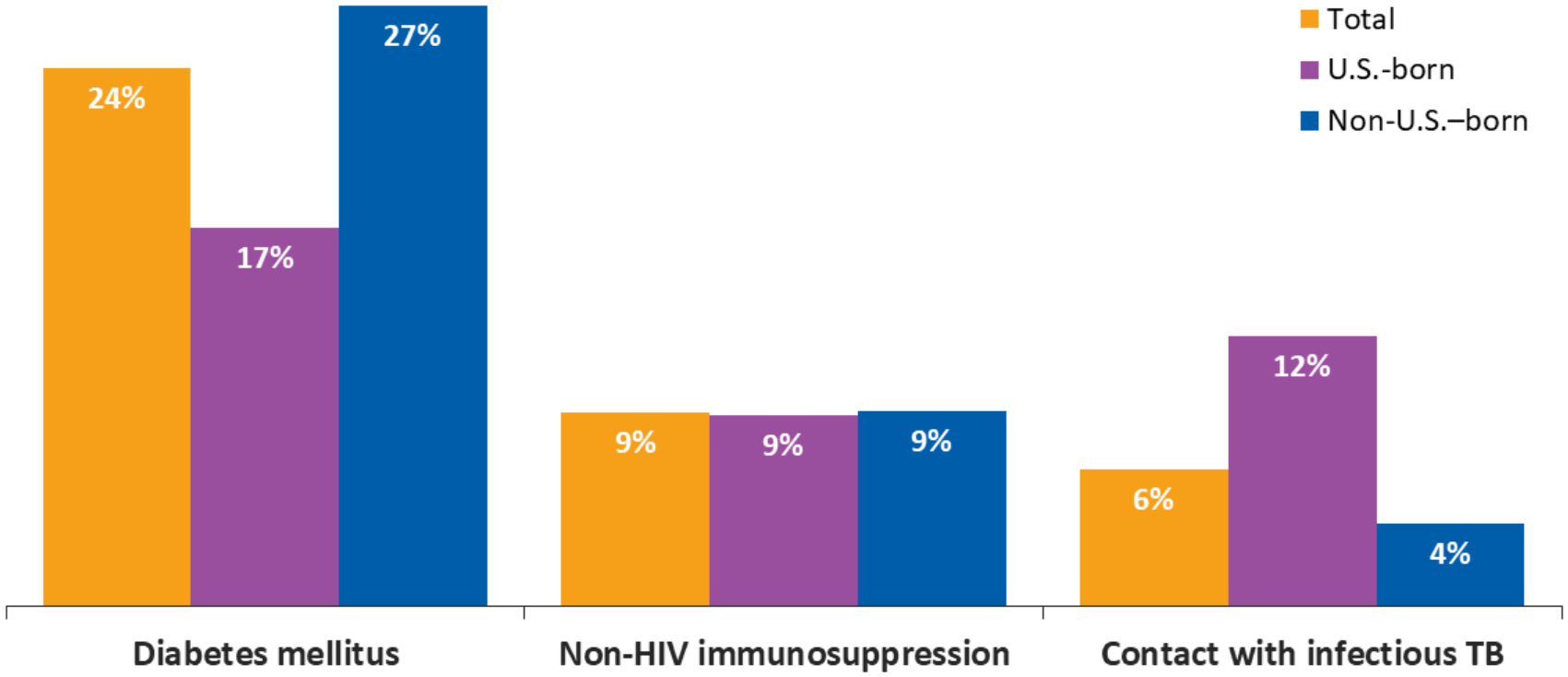
Percentage of U.S. TBD Cases by Race/Ethnicity



National Vital Statistics System, CDC

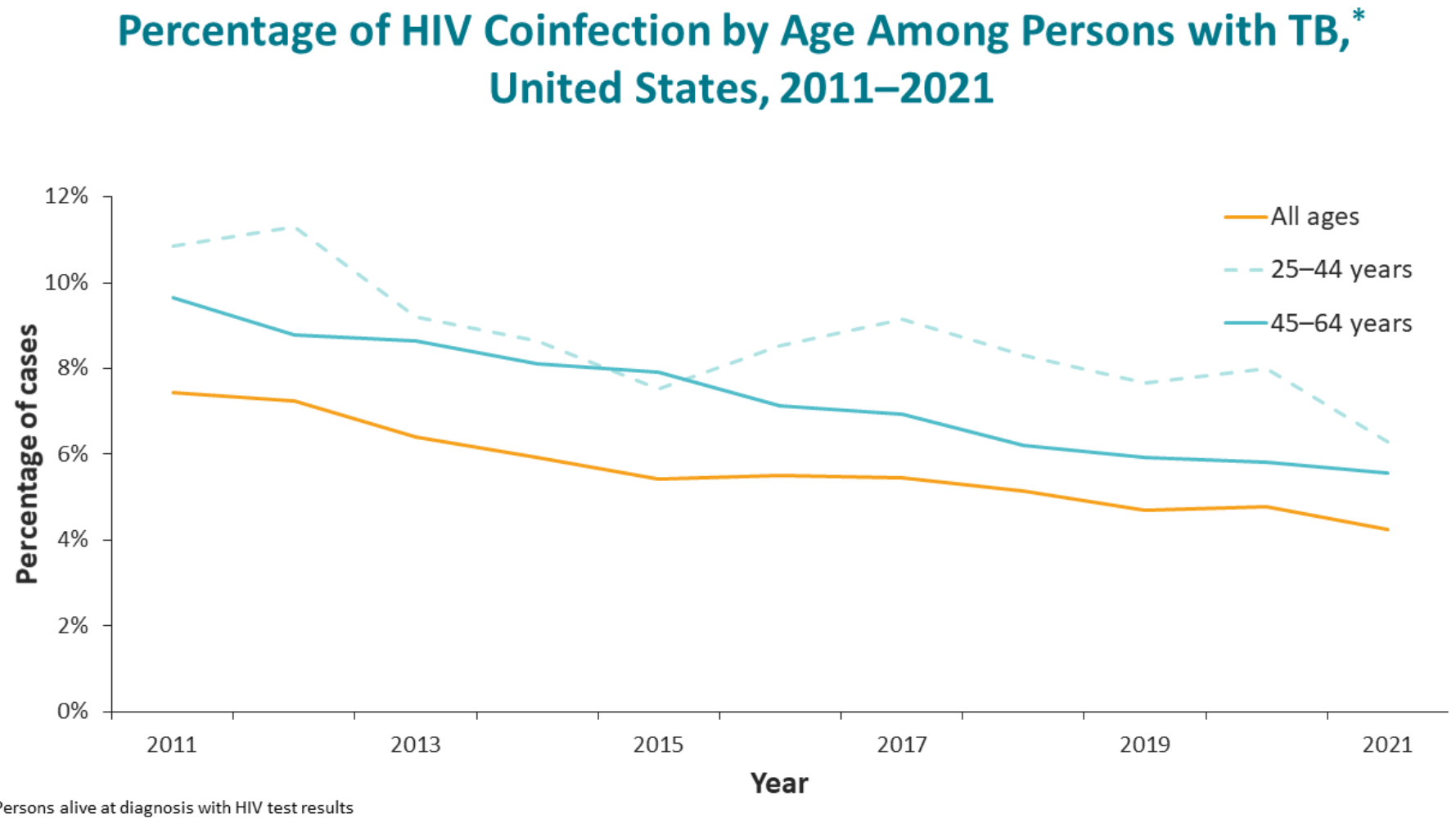
Risk Factors of U.S. TBD Cases by Origin of Birth

Percentage of Selected Risk Factors Among Persons with TB by Origin of Birth,* United States, 2021



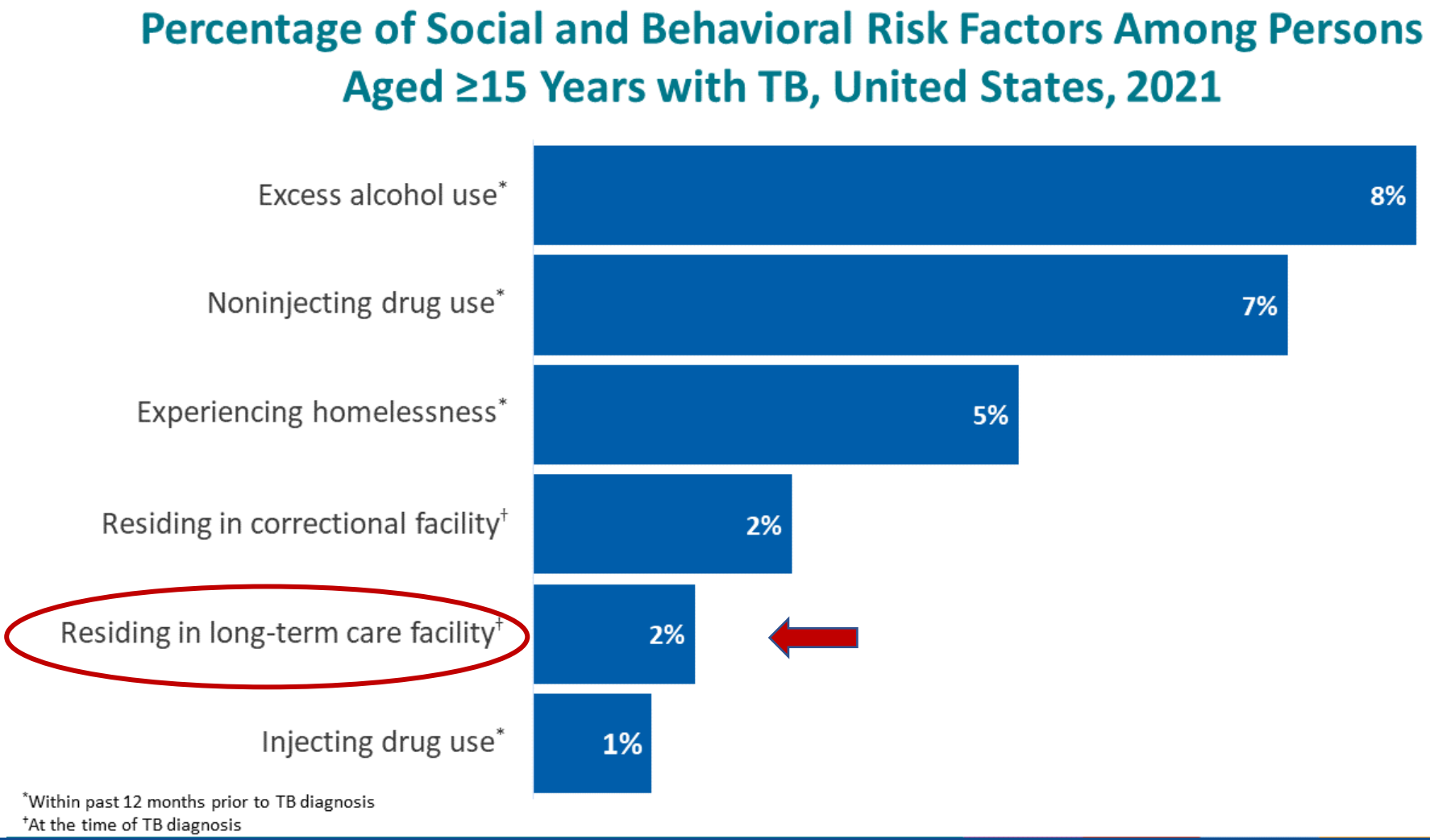
National Vital Statistics System, CDC

HIV Co-Infection by Age in U.S. TBD Cases

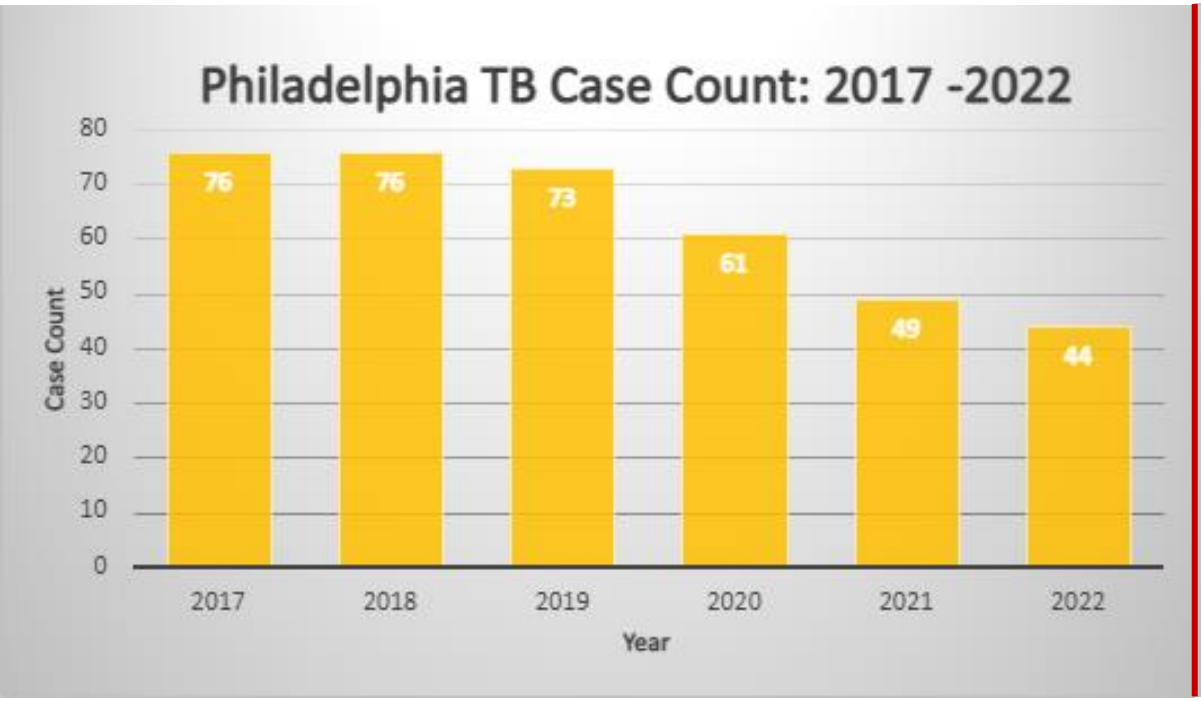


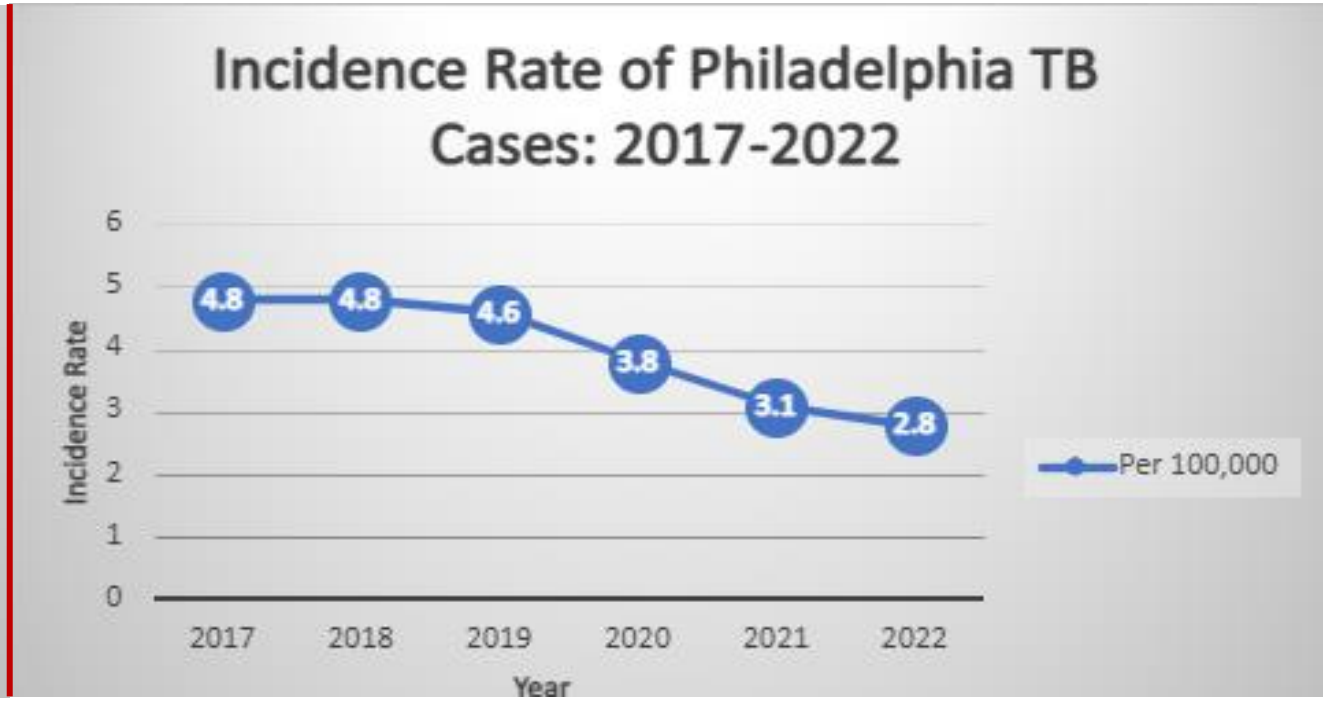
National Vital Statistics System, CDC

Percentage of Social and Behavioral Risk Factors in U.S. Adults with TBD



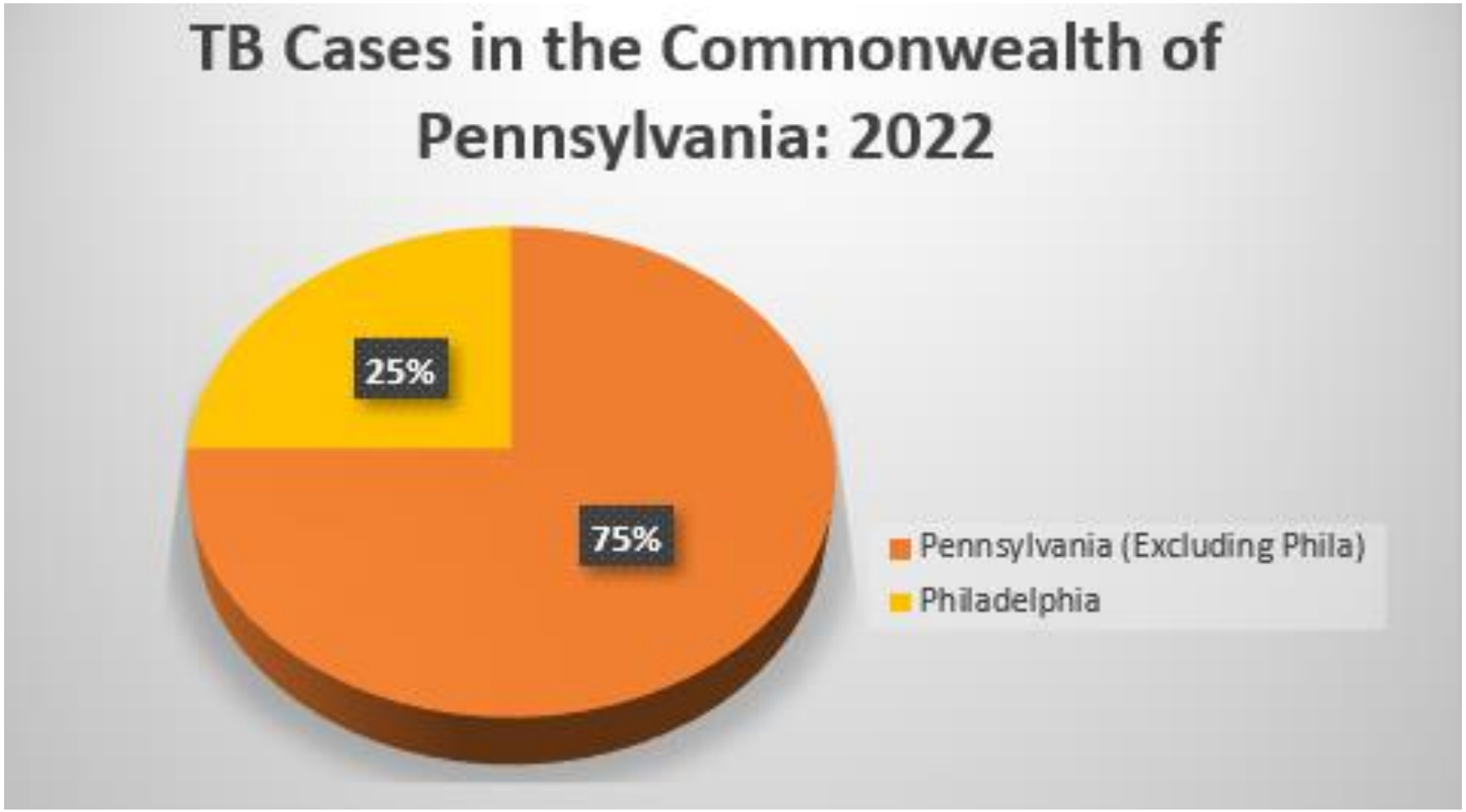
Philadelphia TBD Case Count and Incidence Rate



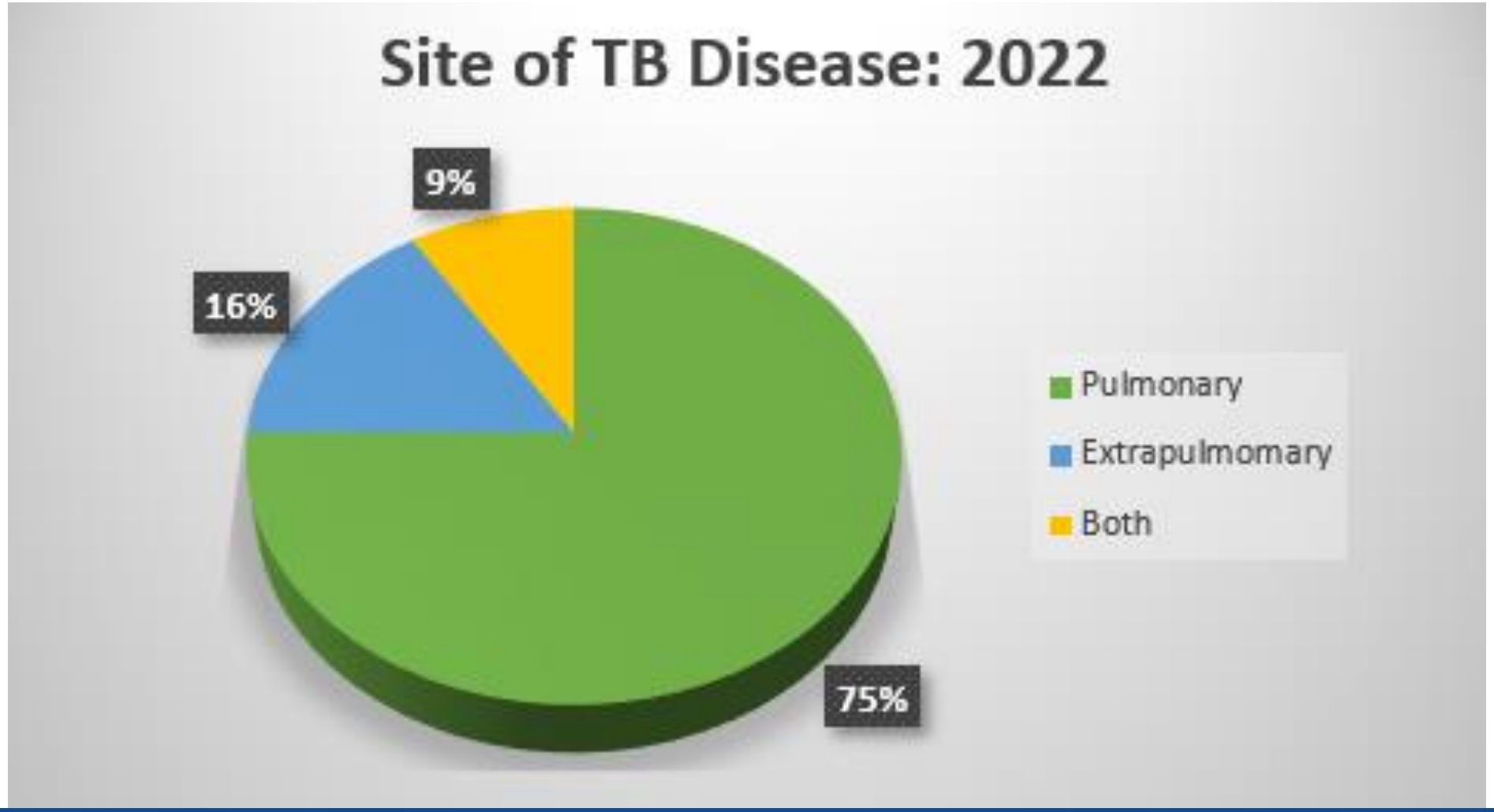


- Q1 2023= 17 cases so far
- Expecting rebound in case number to pre-pandemic level

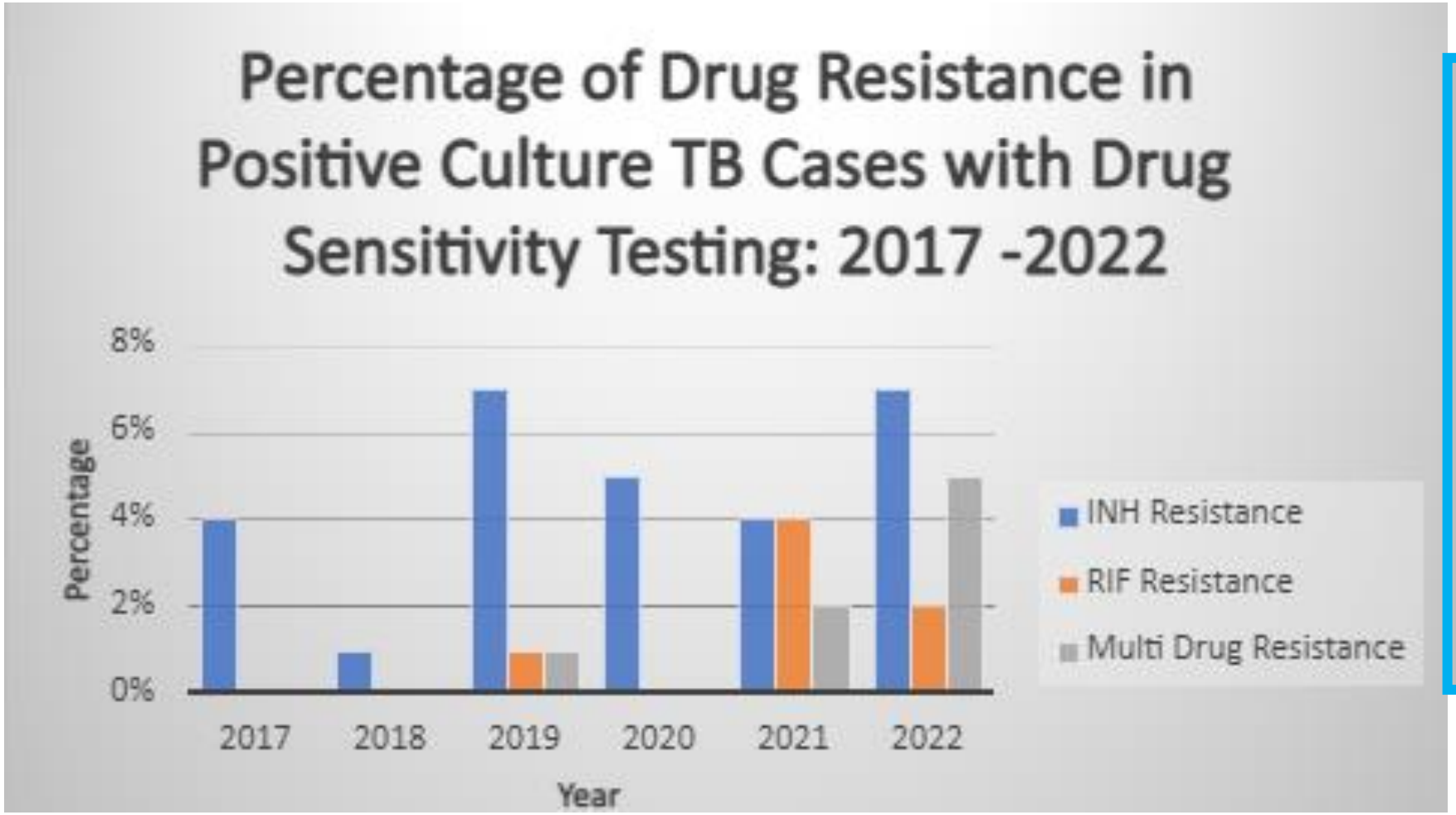
Philadelphia TBD Case Contribution to Pennsylvania Cases



Philadelphia TBD Cases Site of Disease, 2022



Percentage of Philadelphia TBD Cases with Drug Resistance



2022

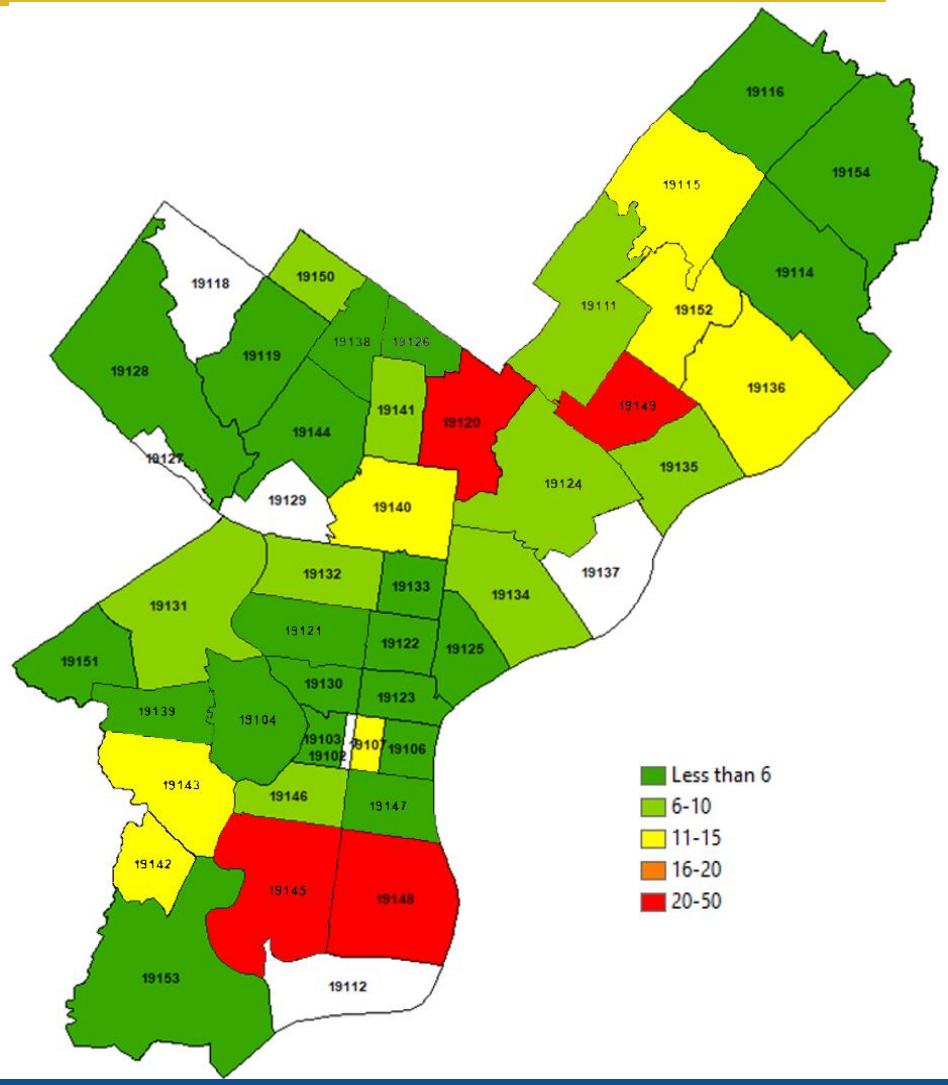
- INH mono-resistance is most common form of drug resistance: 7%
- Multi-drug resistance (MDR): 5%
- Rifampin resistance: 2%
- The percentage of MDR is increasing

Philadelphia TB Cases by Zip Code: 2017-2021

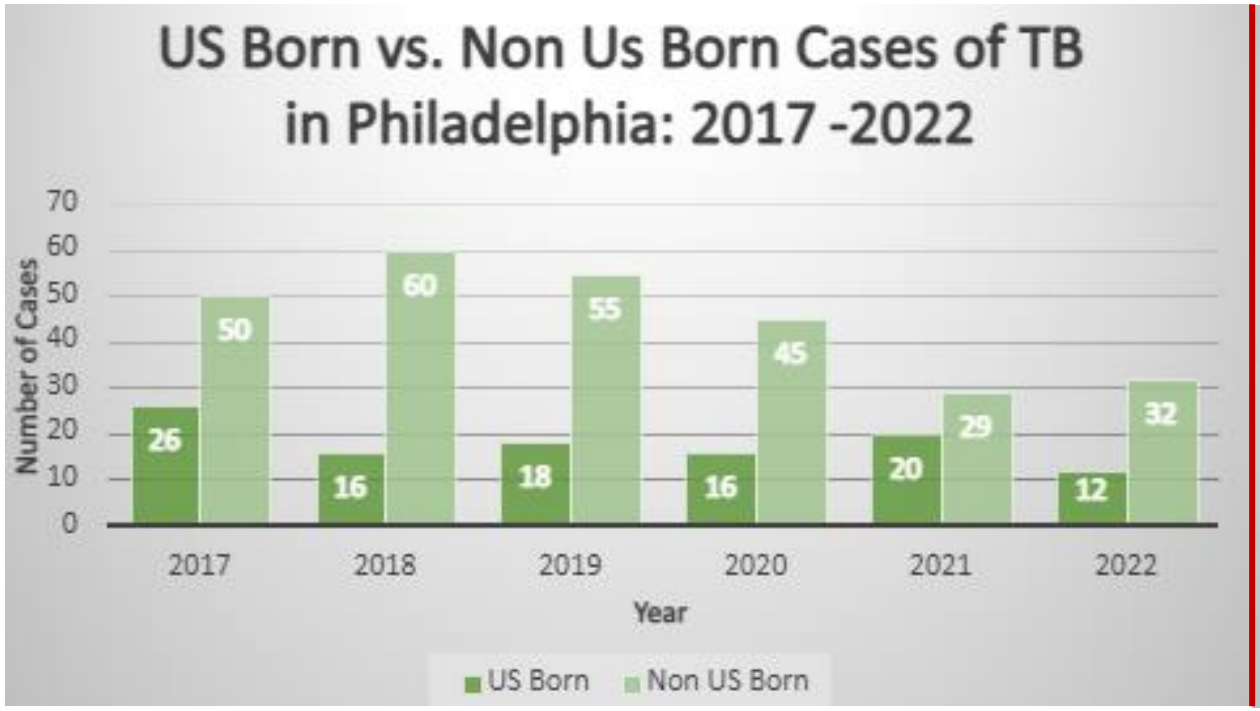
Highest reporting zip codes:

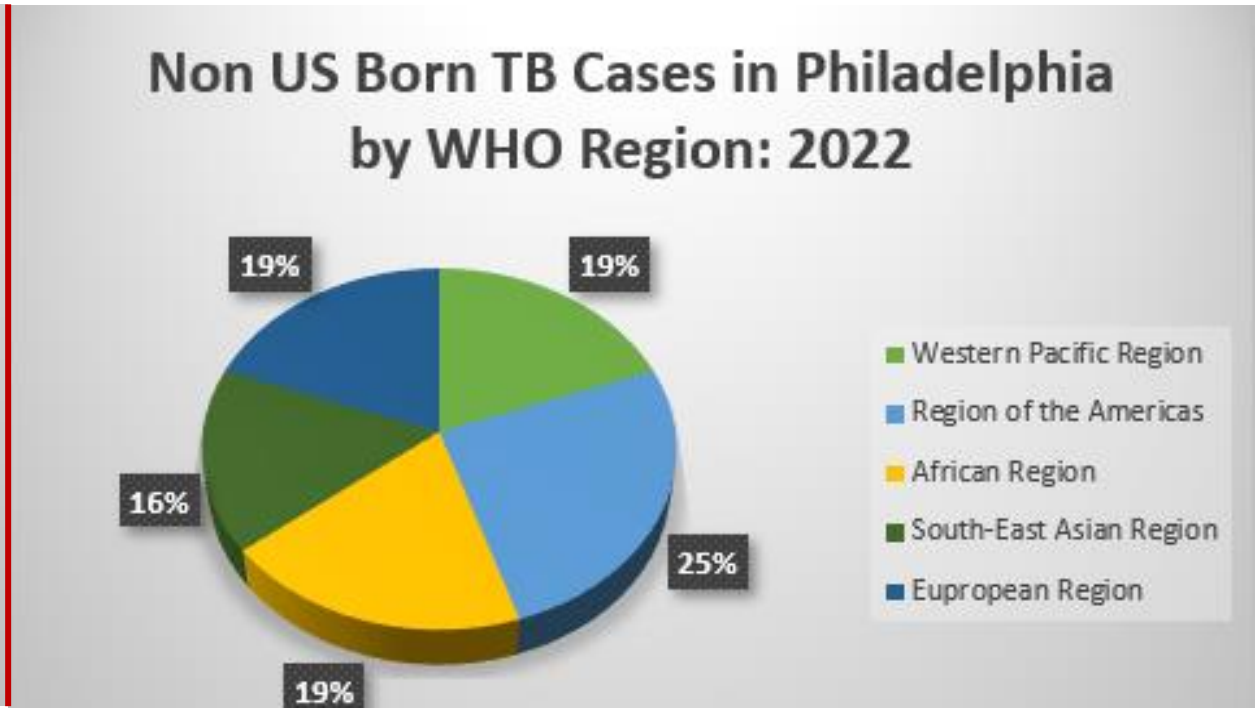
1. 19148-Pennsport
2. 19149-Oxford Circle
3. 19120- Olney
4. 19145- Girard Estates
5. 19140- Tioga

Zip Code Data is available with a 1-year lag period.



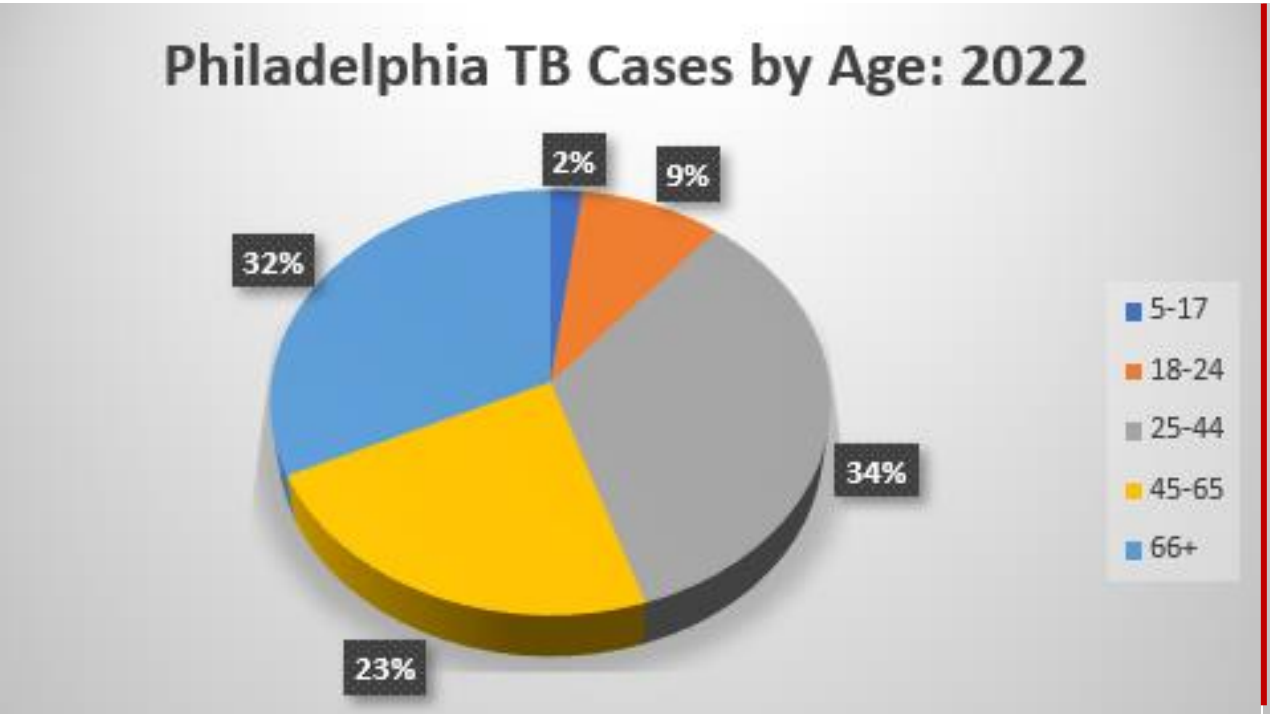
Philadelphia TBD Case by Country of Birth

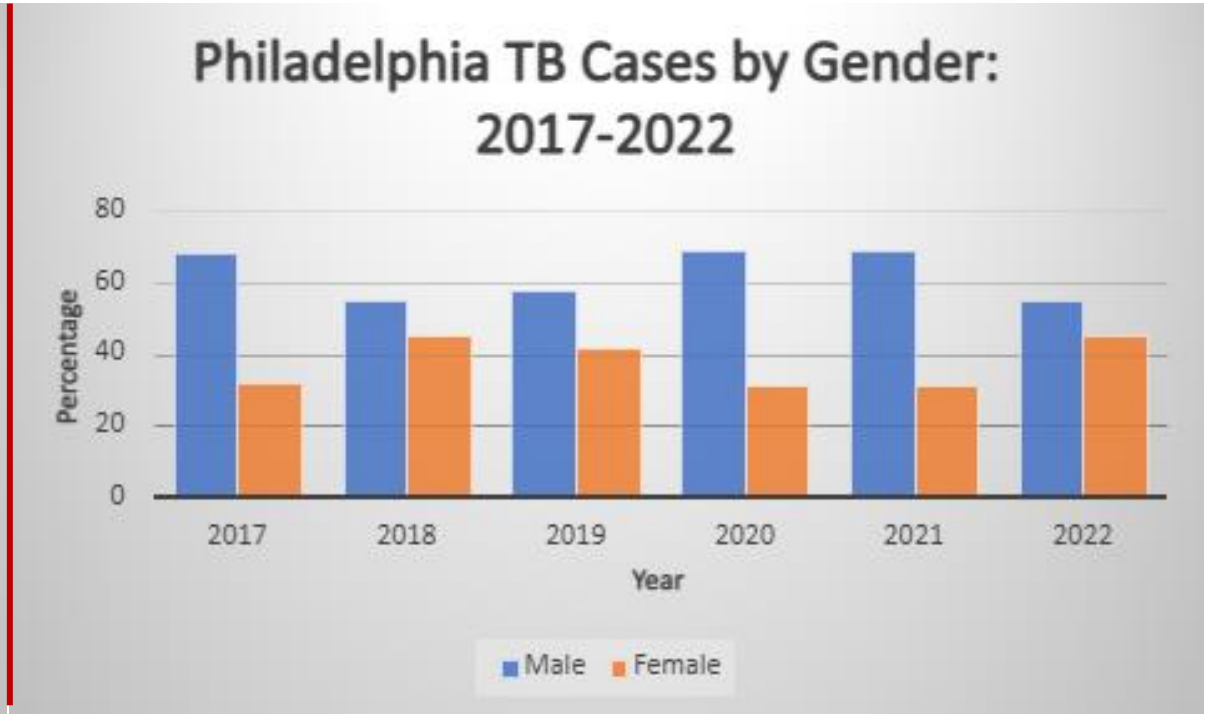




- **Most cases in Philadelphia in 2022 were in non-U.S. born persons**
- **WHO regions of the world represented varied**

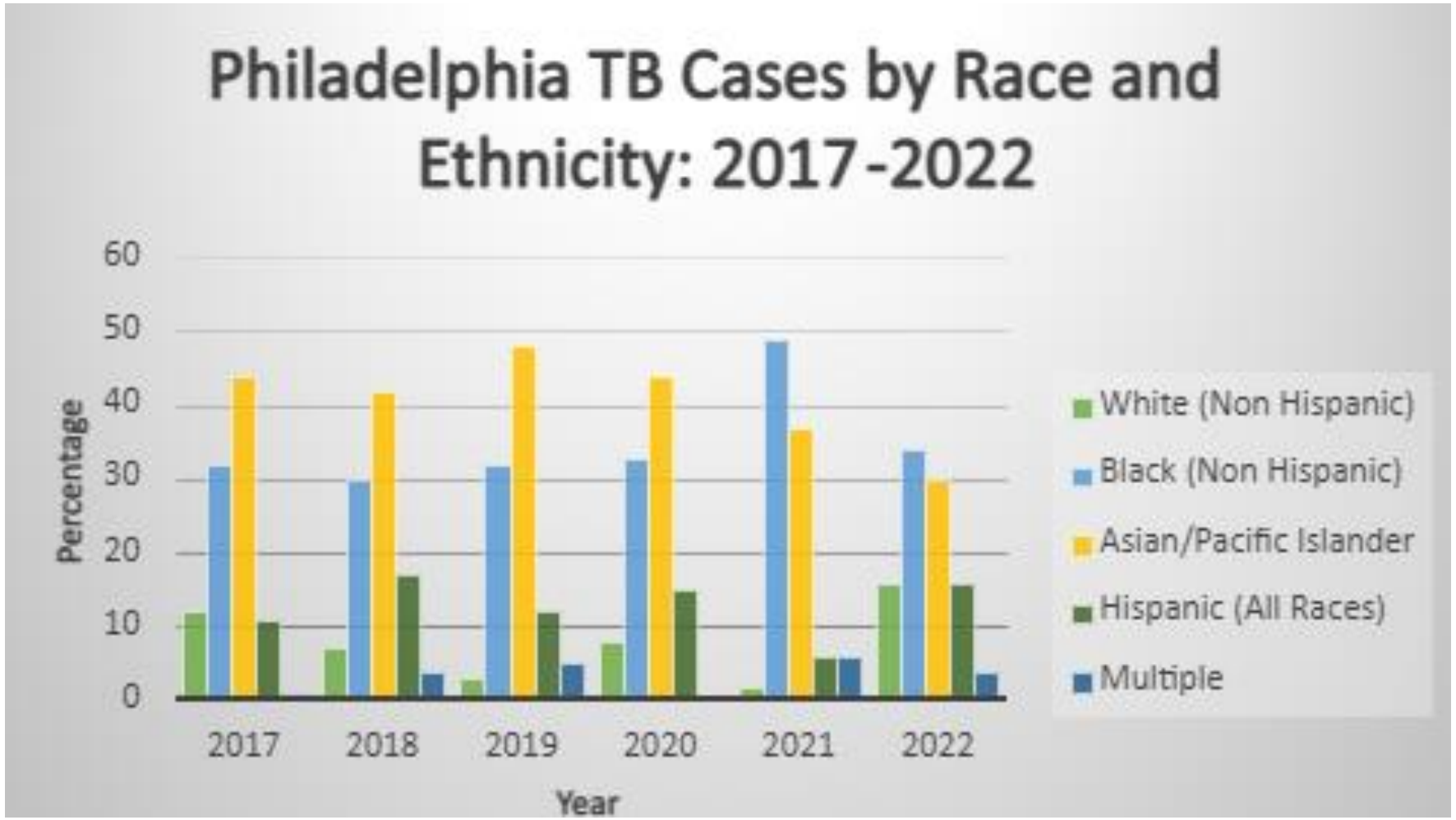
Philadelphia TBD Cases by Age and Gender, 2022





Majority of cases occur in adults
Majority of cases occur in males

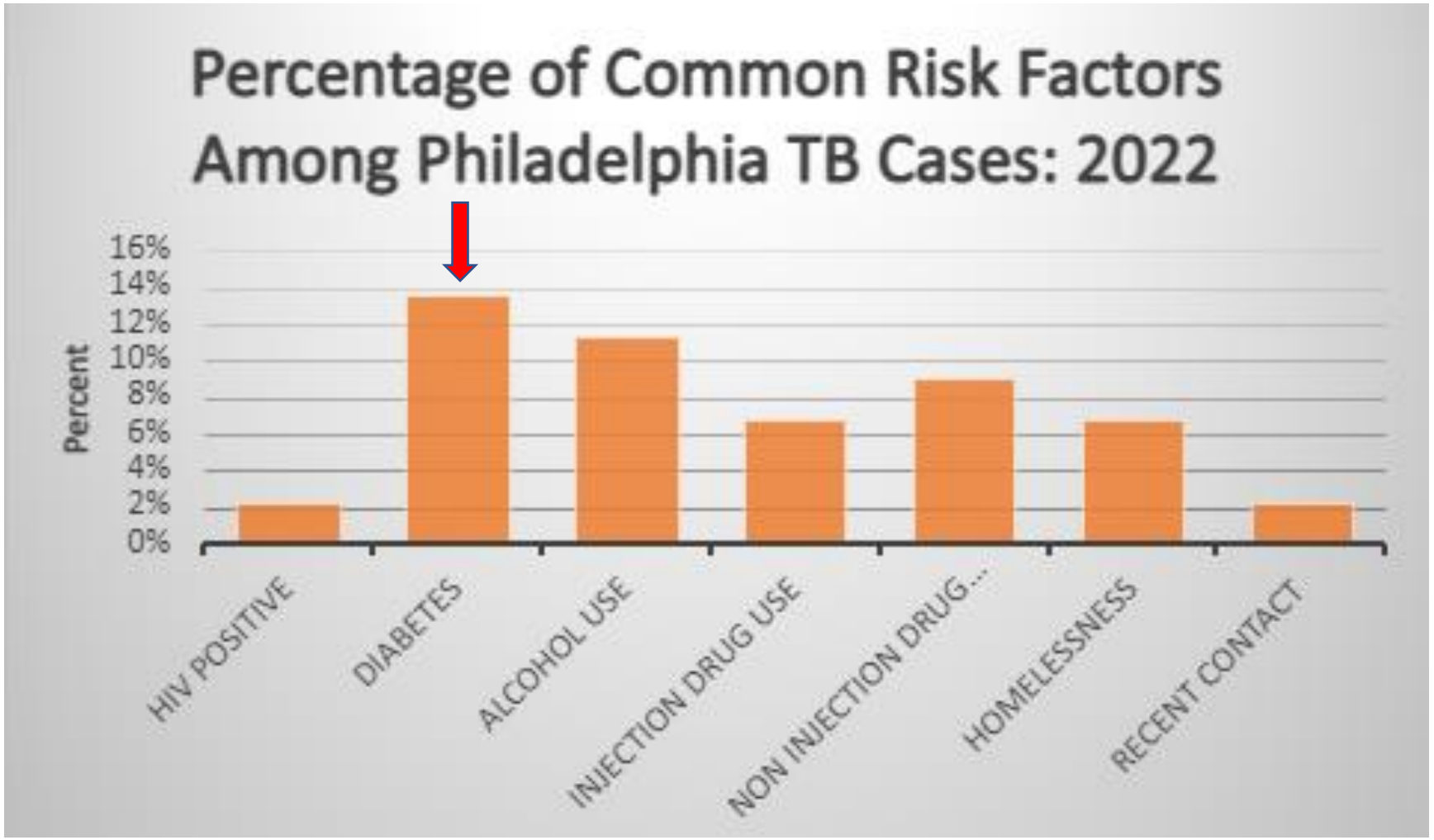
Philadelphia TBD Cases by Race and Ethnicity



2022

Most cases occurred in Black (Non-Hispanic) and Asian/Pacific Islanders

Philadelphia TBD Case Risk Factors, 2022



Diabetes is the most common risk factor

Tuberculosis Tool Kit

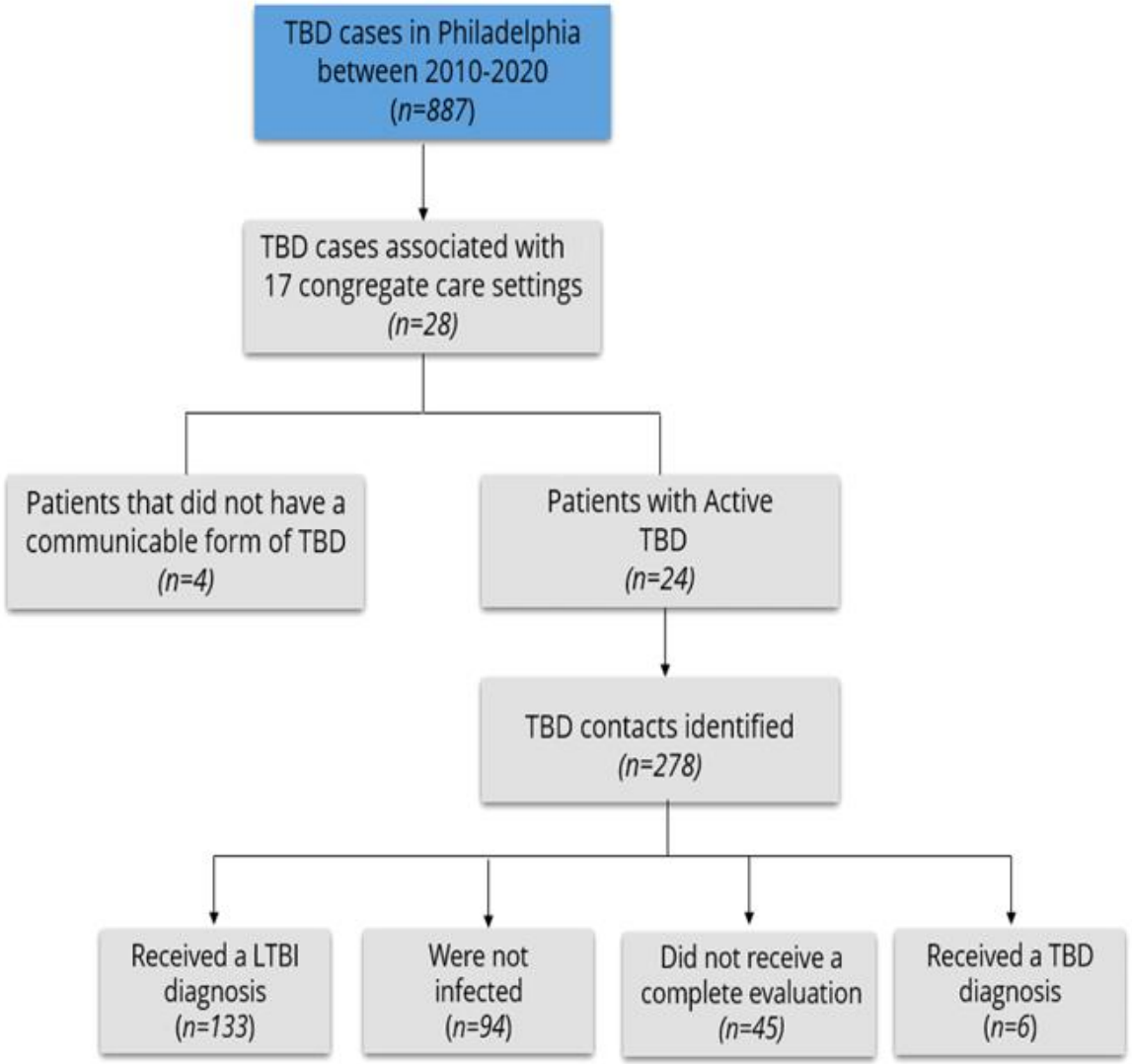
LTCF Collaborative Call
March 17, 2023

Department of Public Health
CITY OF PHILADELPHIA

Background

- Impact of Tuberculosis Investigations in Philadelphia Congregate Care Settings: Opportunities for Improvement and Collaboration
- While investigations happen infrequently, they create a high burden of work for all parties involved and they result in high numbers of TBI and TBD among contacts.
- As a public health program, how can we lessen the workload for facilities and prevent future cases of TBD in congregate care settings (CCS) in the future?
- Educate!
- Provide resources!
- Develop tools to help CCS strengthen their respiratory protection programs!

Analysis of Contact Investigation in CCS



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Contents of the Tool Kit

Tools for Healthcare Providers

- Educational Materials
- Risks Assessment for Adults and Pediatrics
- Infection Prevention and Control recommendations

Tools for Facility Leadership

- TB Exposure Control Plan for LTCF

Tools for Reporting Confirmed or Suspected TBD

- Adult TB Reporting Form
- Pediatric TB Reporting Form

General Tuberculosis Information

- Q&A
- General Educational Material

Risk Assessment for Adults and Pediatrics

- Guide
- Assessment Form

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

☐ **Birth, travel or residence** in a country with an elevated TB rate for at least a month

- 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** those patients with at least one medical risk for progression to TB disease (see the Pennsylvania Adult TB Risk Assessment User Guide for a list).
- An interferon gamma release assay test is preferred over a tuberculin skin test for non-U.S. born persons 2 years of age or older.

☐ **Immunosuppression,** current or planned

Examples include HIV infection, organ transplant recipient or treatment with a TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent to a prednisone dose of 15 mg/day for one month or longer), or other immunosuppressive medication.

☐ **Close contact** to someone with infectious TB disease during lifetime

If TB test is positive, rule out active TB disease before diagnosing TB infection.

Tuberculosis Exposure Control Plan for Long Term Care Facilities For Facility Use

- Definitions
- Plan Management
- Building Management
- Facility Infection Preventionist Responsibilities
- TB Risk Assessment
- Evaluation of Healthcare Personnel (HCP) for TB
- Evaluation of Residents for TB
- Editable for Your Facilities Use!

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TB Reporting in Philadelphia

- The reporting of Confirmed or Suspected Tuberculosis by laboratories and clinical providers is mandated by both the State of Pennsylvania (35 P.S.§521.1 et seq., 28 Pa. Code § 27.81 et seq.) and the City of Philadelphia (Philadelphia Health Code § 6-104 et seq) law. **Reports must be received at the Health Department within 24 hours of diagnosis, specimen collection or start of anti-TB treatment.**
- **Adult TB Reporting Form**
- **Pediatric TB Reporting Form**

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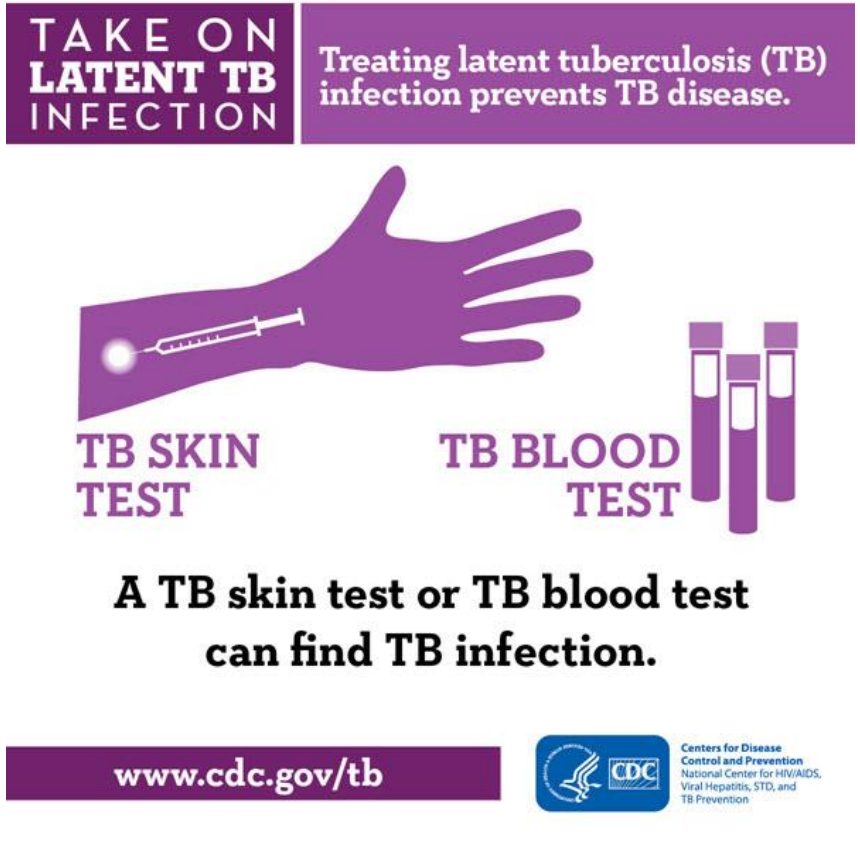
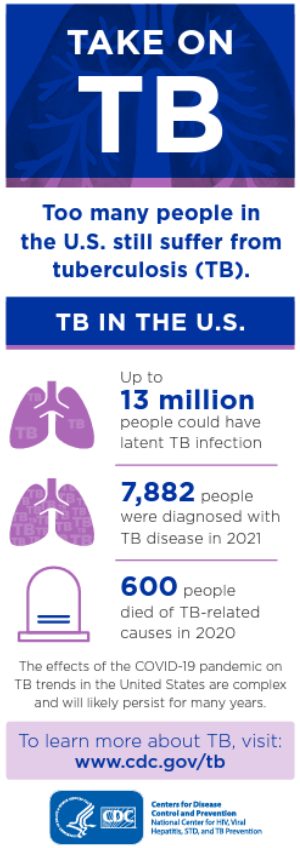
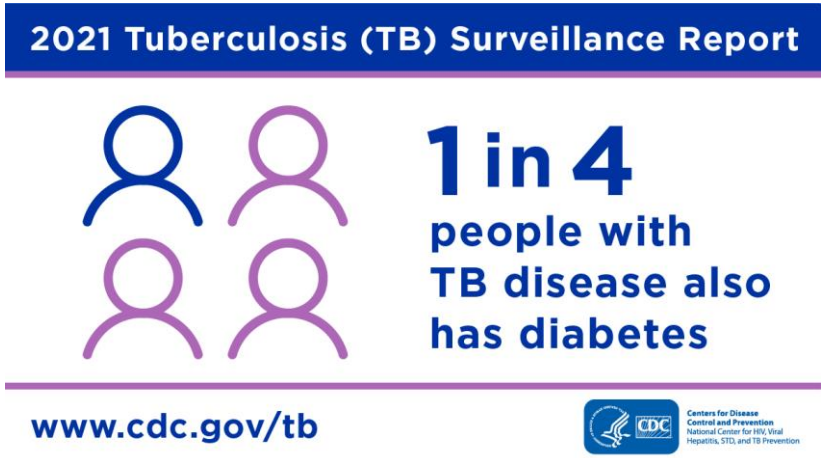
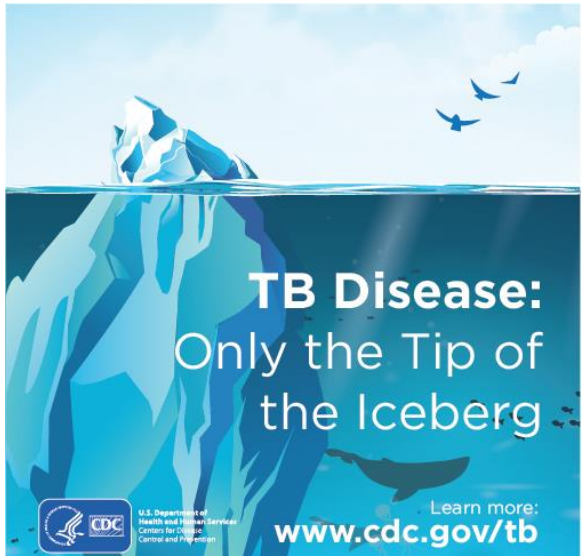
Educational Materials









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Tuberculosis Data from TBC Program

- An annual surveillance report will be posted on the PDPH TB Service page and on the TB Health Information Portal
  - 2022 information is posted
  - Yearly data will be posted by February of the following year

- The surveillance report includes incidence and case rates for the past 5 years, and rates by various demographic information.

- If you any questions or requests regarding TB data please feel free to reach out!
  - Stephanie.Rossman@Phila.gov
  - 215-685-6503

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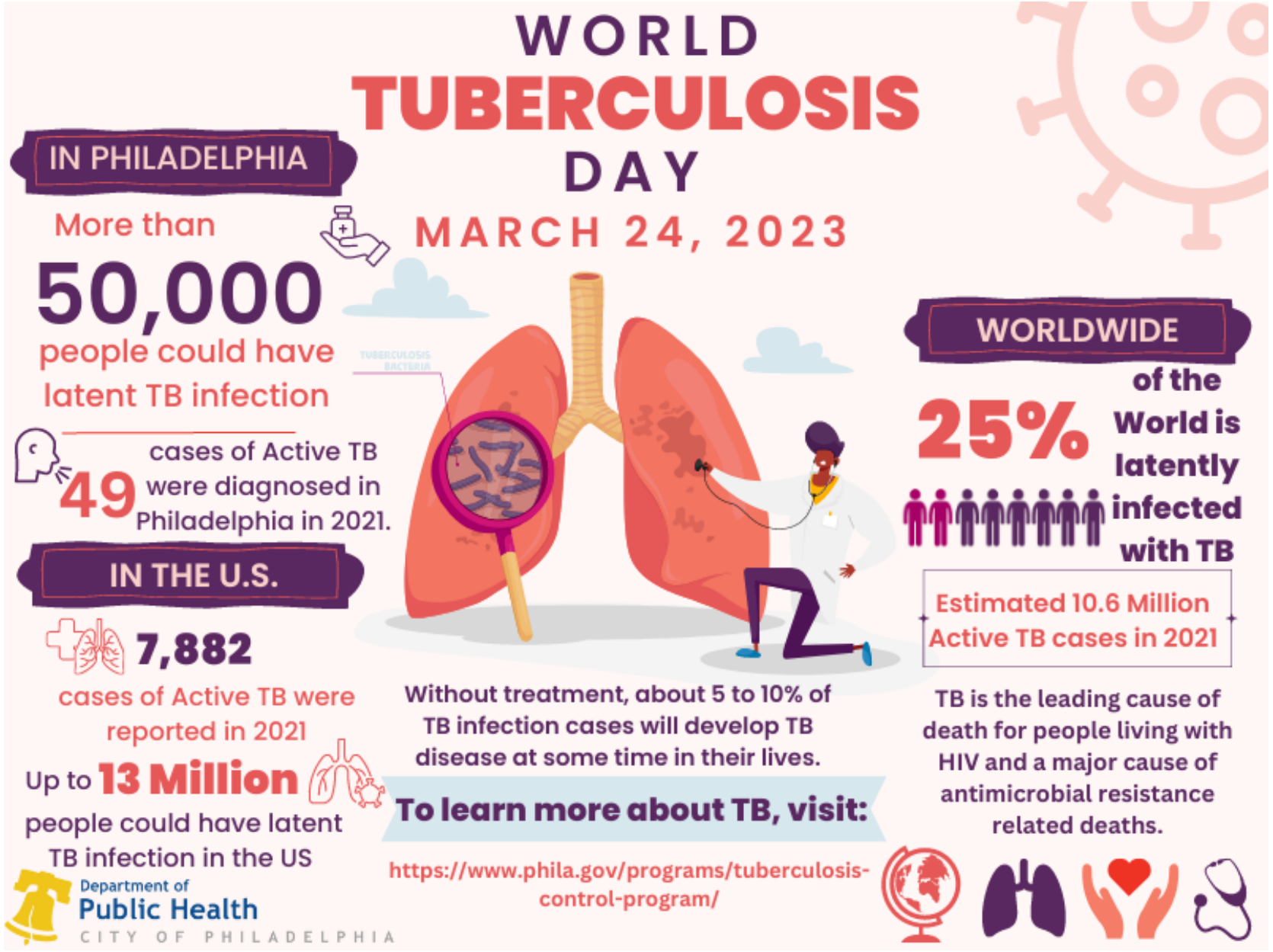
World TB Day is March 24th!



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Resources and Services

AHRQ Safety Program for MRSA Prevention

We are recruiting long-term care facilities to participate in the *Agency for Healthcare Research and Quality (AHRQ) Safety Program for MRSA Prevention*, a **free 18-month program that seeks to improve bathing and skincare techniques to reduce pressure injuries, wounds, and methicillin-resistant *Staphylococcus aureus* (MRSA) and other Multidrug Resistant Organism (MDRO) transmission.**

Beginning in June 2023, this program combines evidence-based guidance with implementation strategies to address the attitudes, beliefs, culture, and barriers that often pose challenges to improving infection prevention practices. This program can help you enhance your infection prevention program and prevent MRSA infection by utilizing evidence-based MRSA prevention strategies including improvement of hand hygiene, proper skin care, antibiotic stewardship, and environmental cleaning.

Participation in this AHRQ program will provide your long-term care facility with technical assistance, coaching, webinars, and tools to support your infection prevention program and resident safety.

Benefits of Participation Include—

- Reducing skin and soft tissue infections
- Reducing pressure injuries and skin tears
- Reducing MDRO infections
- Improving team-based infection prevention practices
- Enhancing communication and teamwork regarding proper skin care
- Increasing resident and family satisfaction

Eligible Long-Term Care Facilities (enrollment limited to adult populations)

- Nursing homes
- Skilled nursing facilities

This program is not designed for long-term acute care facilities (LTACHs), adult day care, home health programs, exclusive hospice facilities, dementia or memory care facilities, or facilities specializing in the care of developmentally disabled or pediatric patients.

How Can I Learn More?

Attend an informational webinar:

Date	Time (ET)	Registration Link
2/23/23	12 pm – 1 pm	https://norc.zoom.us/webinar/register/WN_4HFRAZPdRLyk0Yf0ROKBmA
3/7/23	11 am – 12 pm	https://norc.zoom.us/webinar/register/WN_XrMks0hrTg2OczREXBWSxQ
3/16/23	2 pm – 3 pm	https://norc.zoom.us/webinar/register/WN_SSVChv4DTMGM75loK3JI3g
3/23/23	2 pm – 3 pm	https://norc.zoom.us/webinar/register/WN_EnHAe9s3TZyXoDVQd-U-tw

Visit https://safetyprogram4mrsaprevention.org/ or email MRSAPrevention@norc.org for more information.

This program is funded and guided by the Agency for Healthcare Research and Quality and led by Johns Hopkins Armstrong Institute for Patient Safety and Quality and NORC at the University of Chicago.

Reminder: HAI/AR Services

- Infection Control Assessment and Response (ICAR) visit
- N95 qualitative fit test training
- Quarterly newsletter
- Onsite education

- Sign-Up Form for HAI/AR Services


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Healthcare-Associated Infections/Antimicrobial Resistance (HAI/AR) Program

Sign-Up Form for HAI/AR Services

Please fill out the fields below.

Thank you!

First Name
* must provide value

Last Name
* must provide value

Email
* must provide value

Phone Number

Facility Name
* must provide value

APIC Membership for SNF Infection Preventionists

Connecting LTCF IPs to a professional organization offers:

- Online educational resources
- Online peer community and support
- Local chapter networking opportunities and LTC Focus Group support

PDPH Organizational Membership (annual):

- One membership per facility
- Can be transferred to a new IP
- Link to sign up:
  https://app.smartsheet.com/b/form/3e8cffae22f84c2692ee614321f816f0

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Thank you!

Our next call will be on Friday, April 21, 2023