



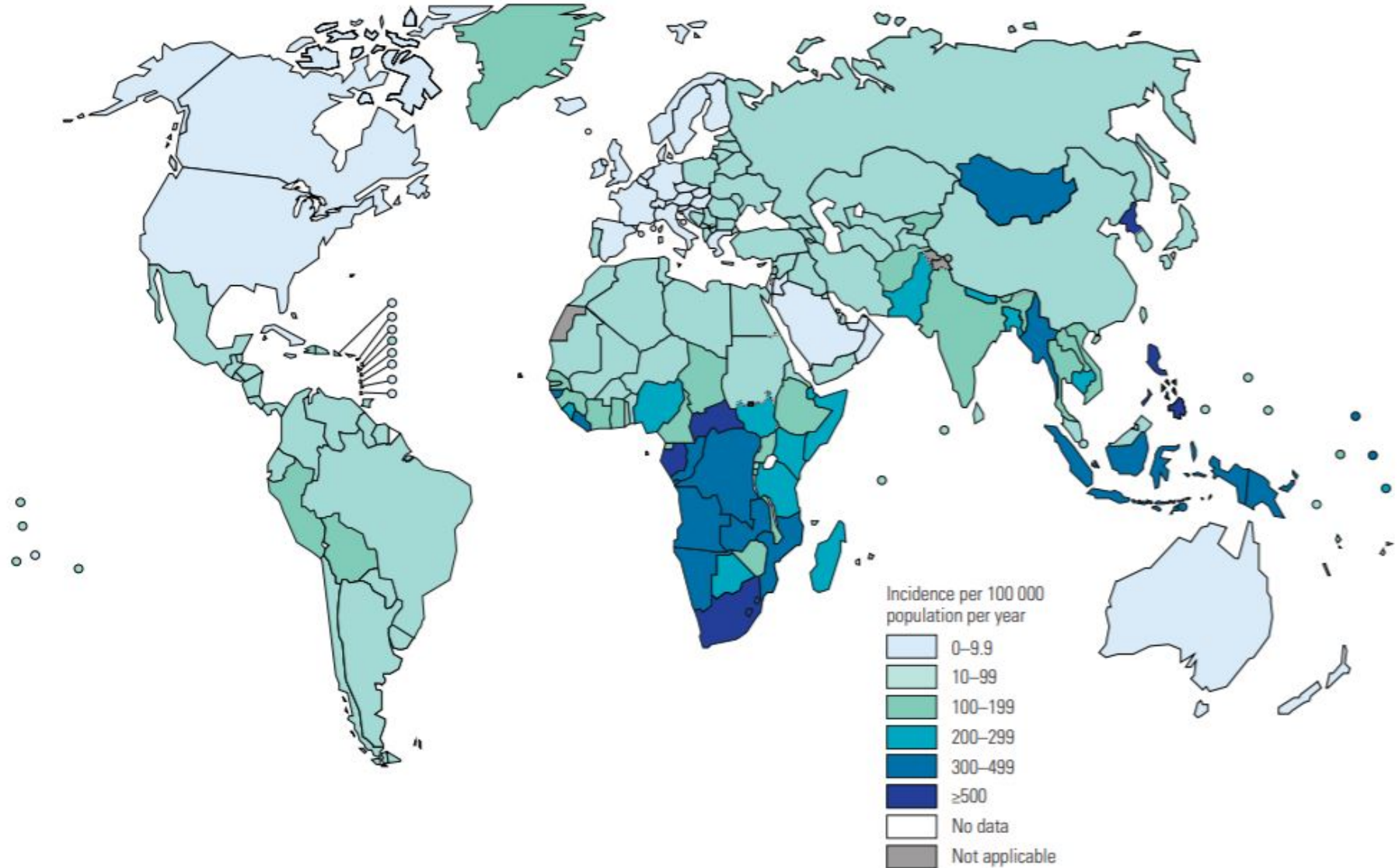
**Indiana**  
**Department**  
**of**  
**Health**

# Epidemiology of TB in Indiana- 2020

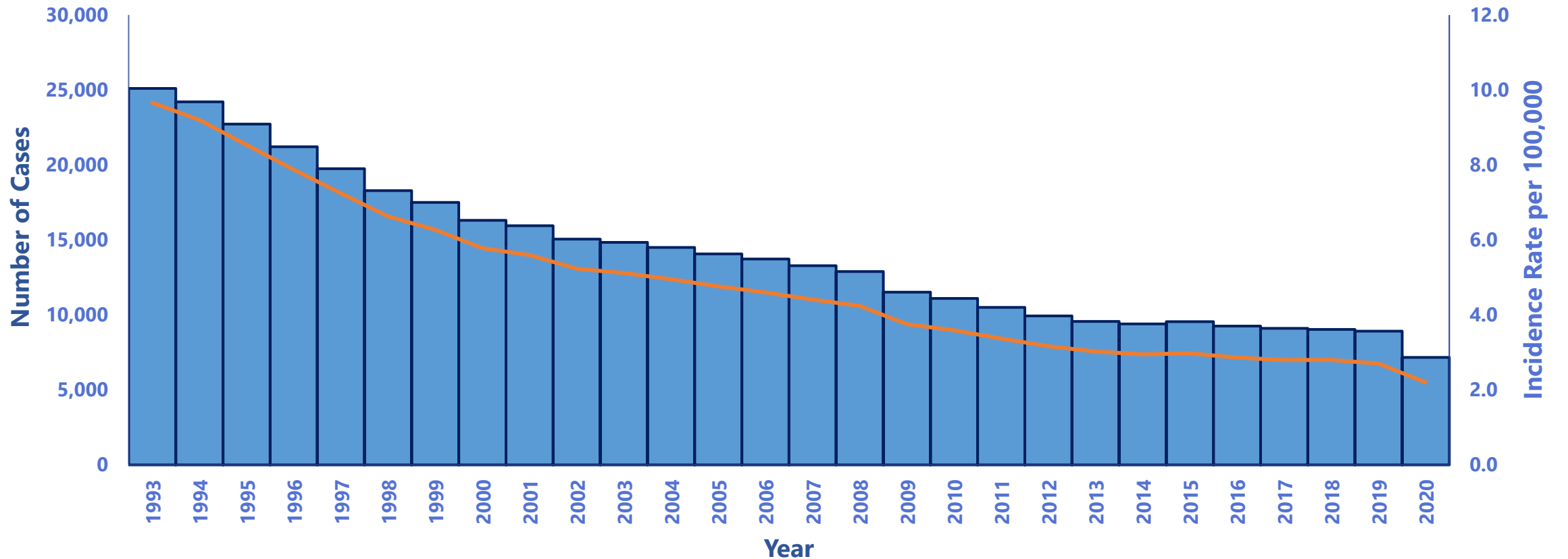
Biak Chinpar, MPH  
TB & Refugee Health  
Epidemiology Resource Center

March 24, 2021

# Annual Tuberculosis Incidence (per 100,000 population), Worldwide, 2019



# Reported Tuberculosis (TB) Cases and Rates United States, 1993-2020



CDC Reported TB in the United States, 2021

# TB Trends, United States, 2019

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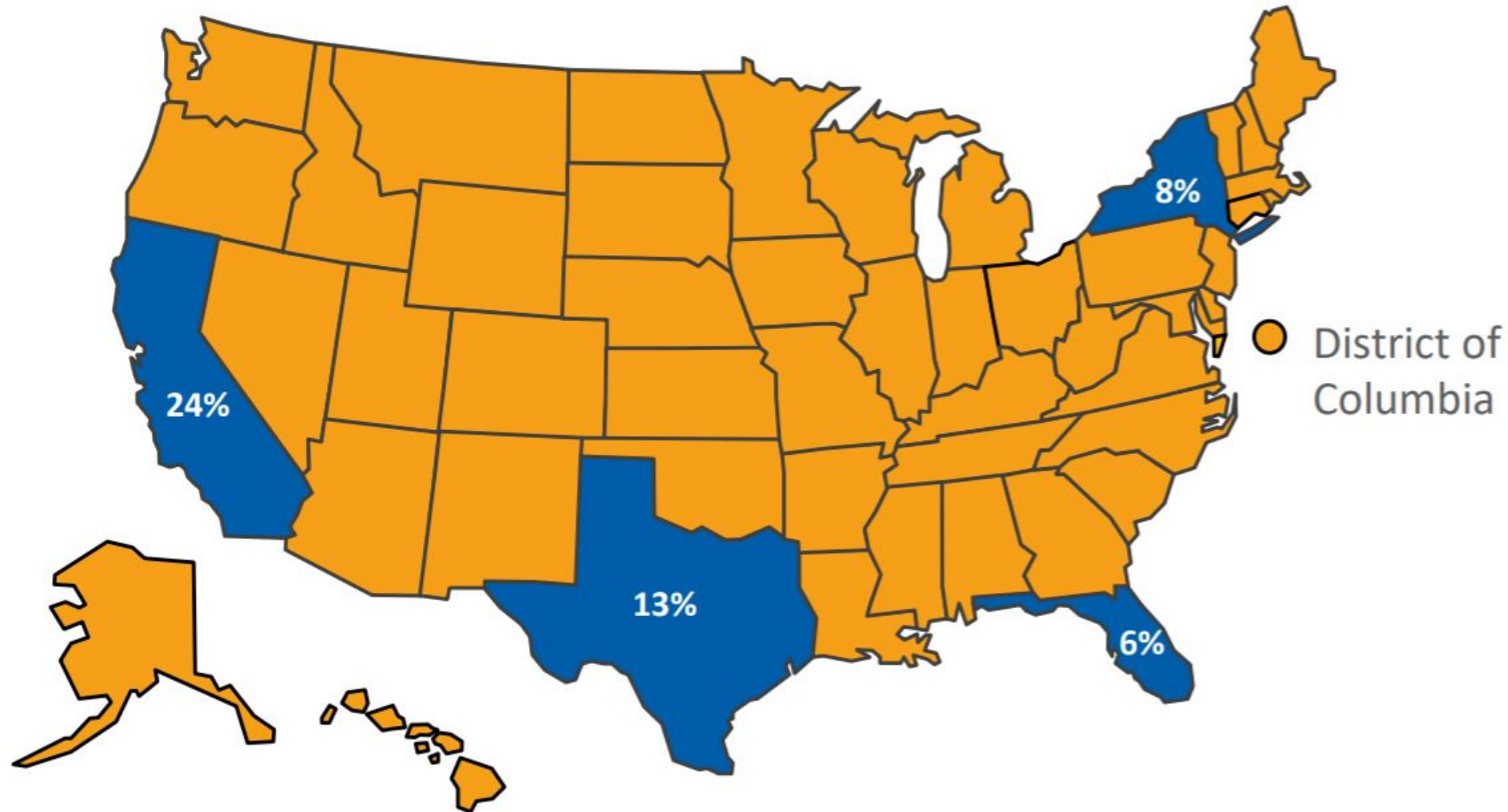
Minority populations continue to be disproportionately affected by TB disease.

- Percent of total cases for race group:
  - Non-Hispanic Asian (35.3%) and Hispanics (30.2%)
  - Non-Hispanic African American (19.7%) and White (11.4%)
  - Downward trend for Native Hawaiian/other Pacific Islander and American Indian/Alaska Native

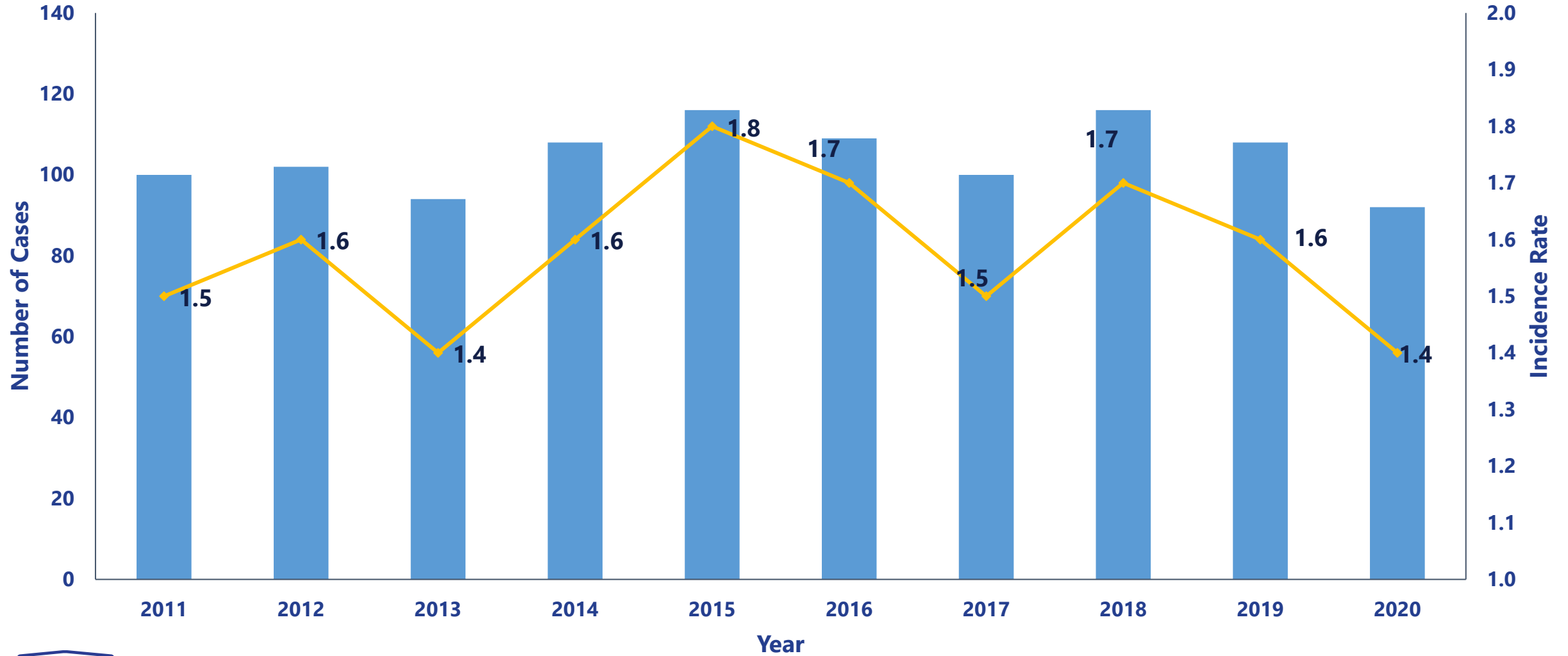
**20.7%** of cases reported having diabetes.

**71.4%** of cases occurred among non-U.S.-born people.

# Majority of TB Cases Occur in Four States, United States, 2019



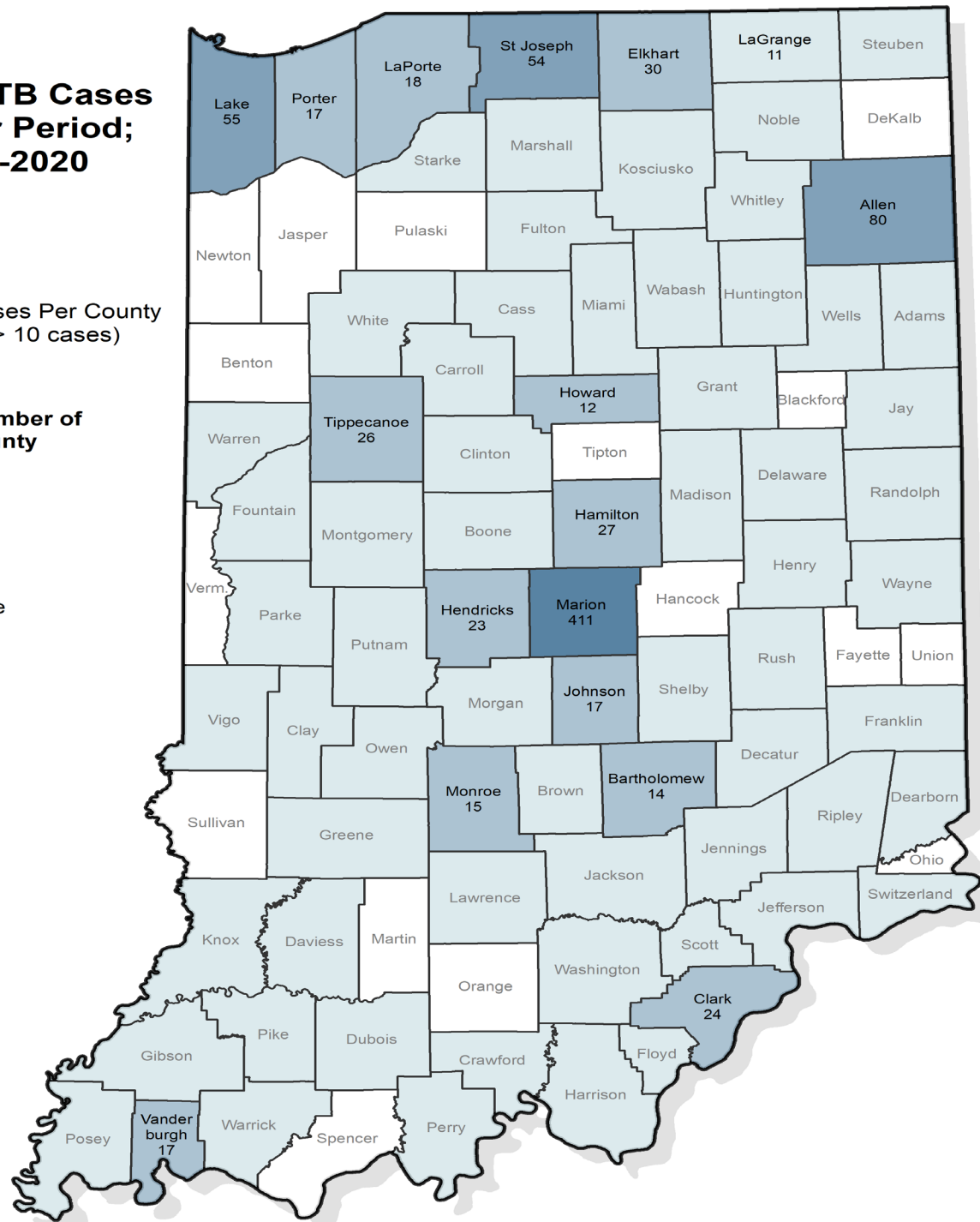
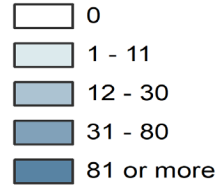
# Indiana TB 10-Year Trend, 2011-2020



# Indiana TB Cases 10-Year Period; 2011-2020

Labeled by Cases Per County  
(counties with > 10 cases)

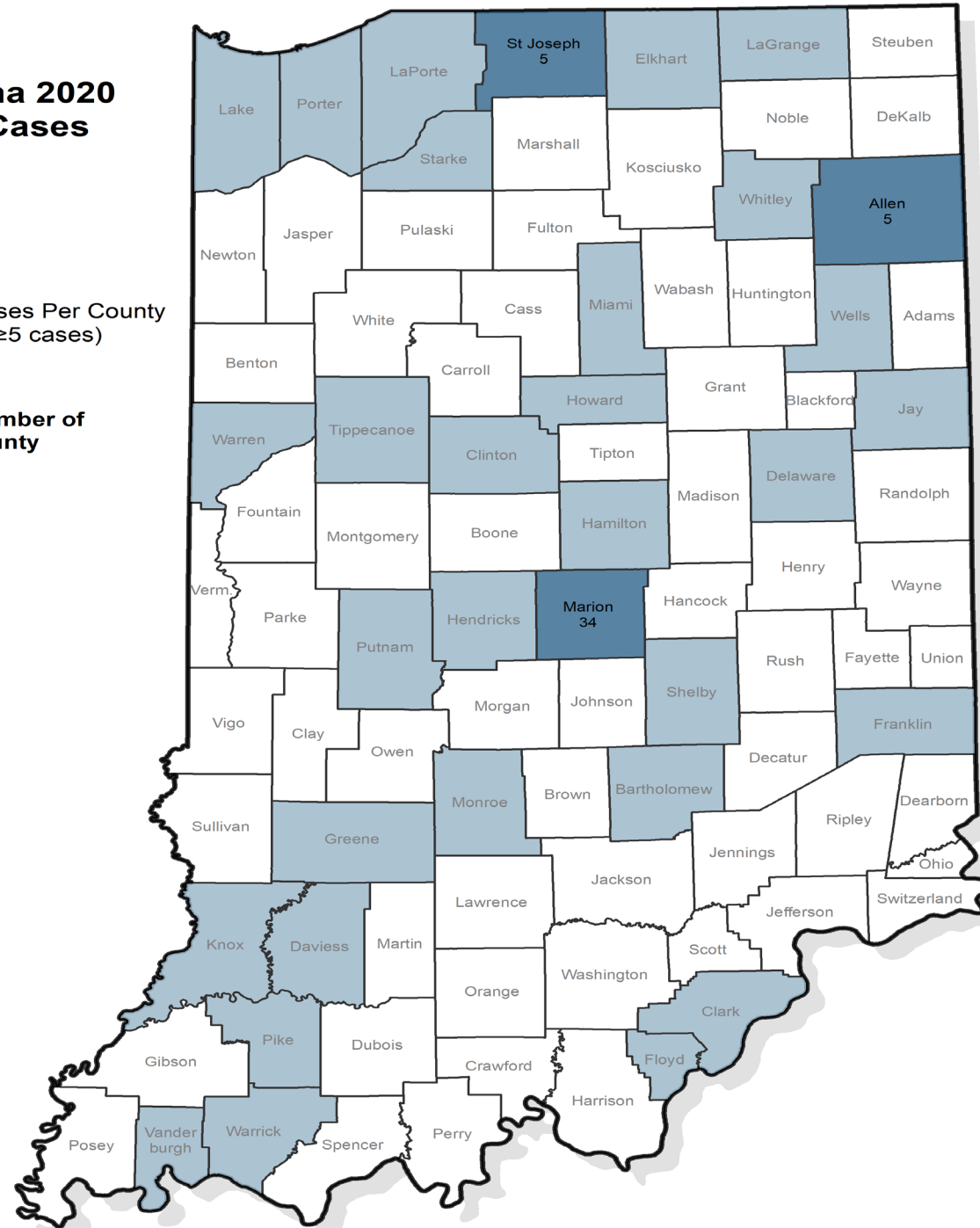
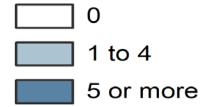
Shaded by Number of  
Cases per County



# Indiana 2020 TB Cases

Labeled by Cases Per County  
(counties with  $\geq 5$  cases)

Shaded by Number of  
Cases per County





# Overview of TB in Indiana, 2020

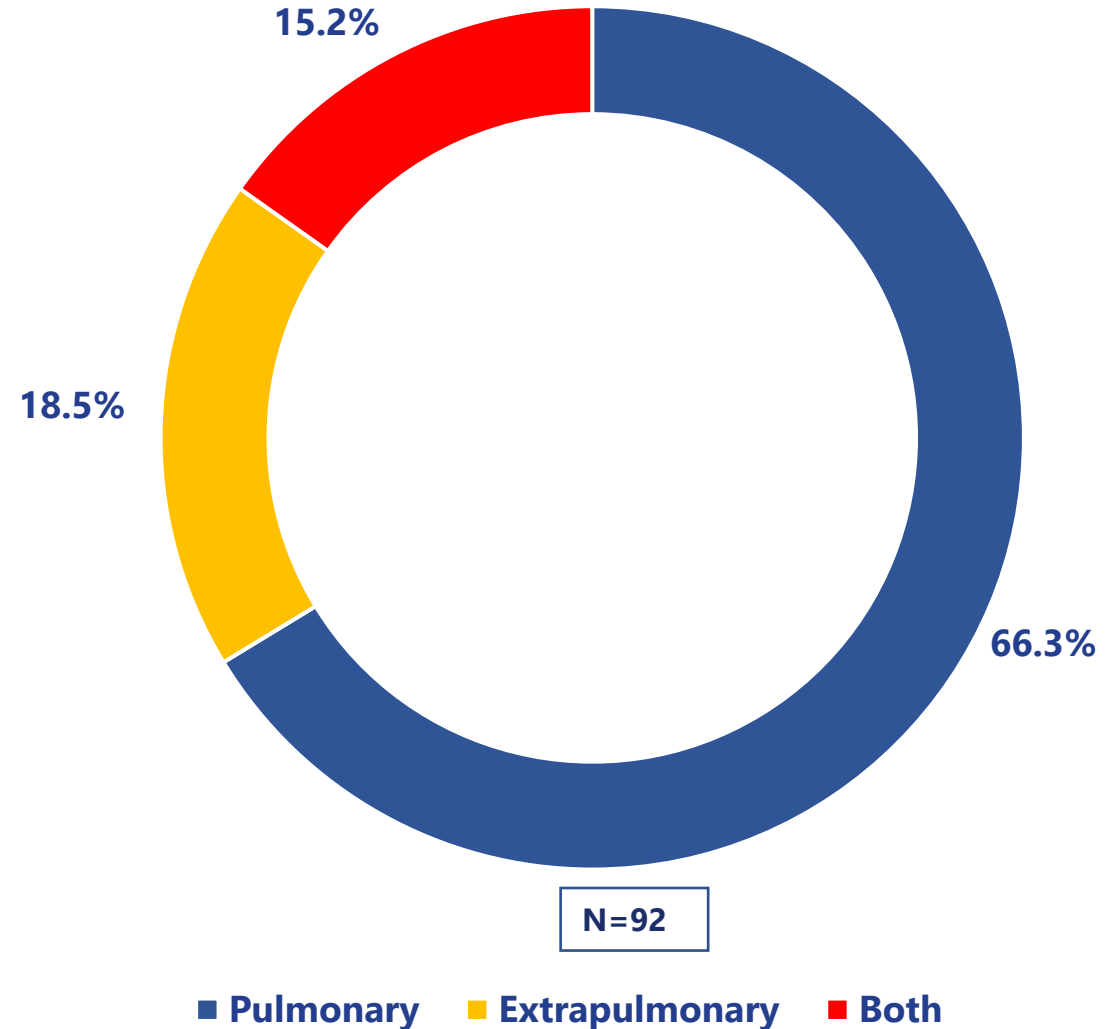
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- Total TB Cases: 92
  - Top Jurisdictions:
    1. Marion (34)
    2. Allen (5)
    3. St. Joseph (5)
  - Incidence Rate: 1.4 cases of TB per 100,000 population
- Total Reported LTBI Cases: 1,119
  - Top Jurisdictions:
    1. Marion (537)
    2. Tippecanoe (69)
    3. Hamilton (63)
    4. Hendricks (35)
    5. Vigo (25)

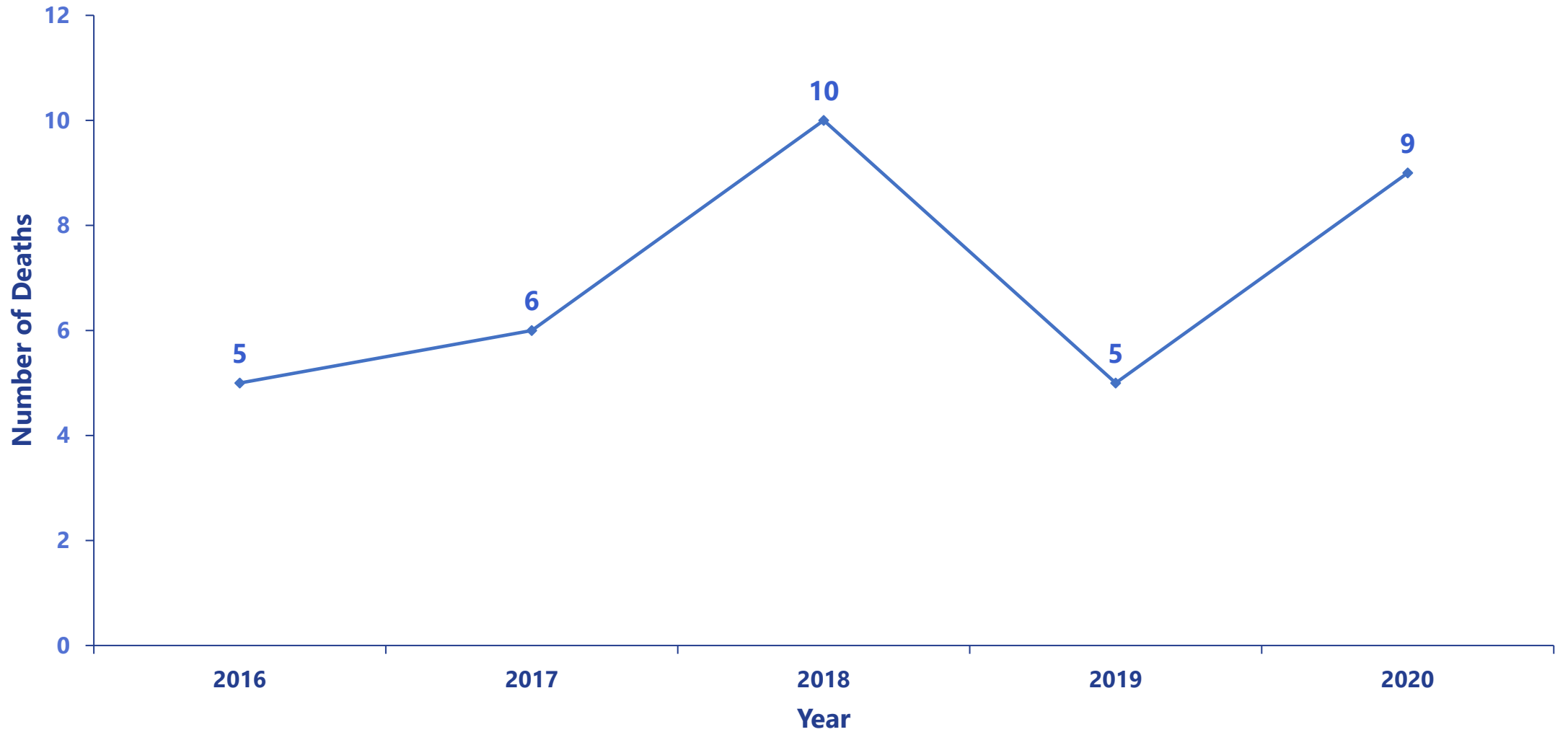
# TB Cases by Site of Disease, Indiana, 2020

Extrapulmonary sites include:

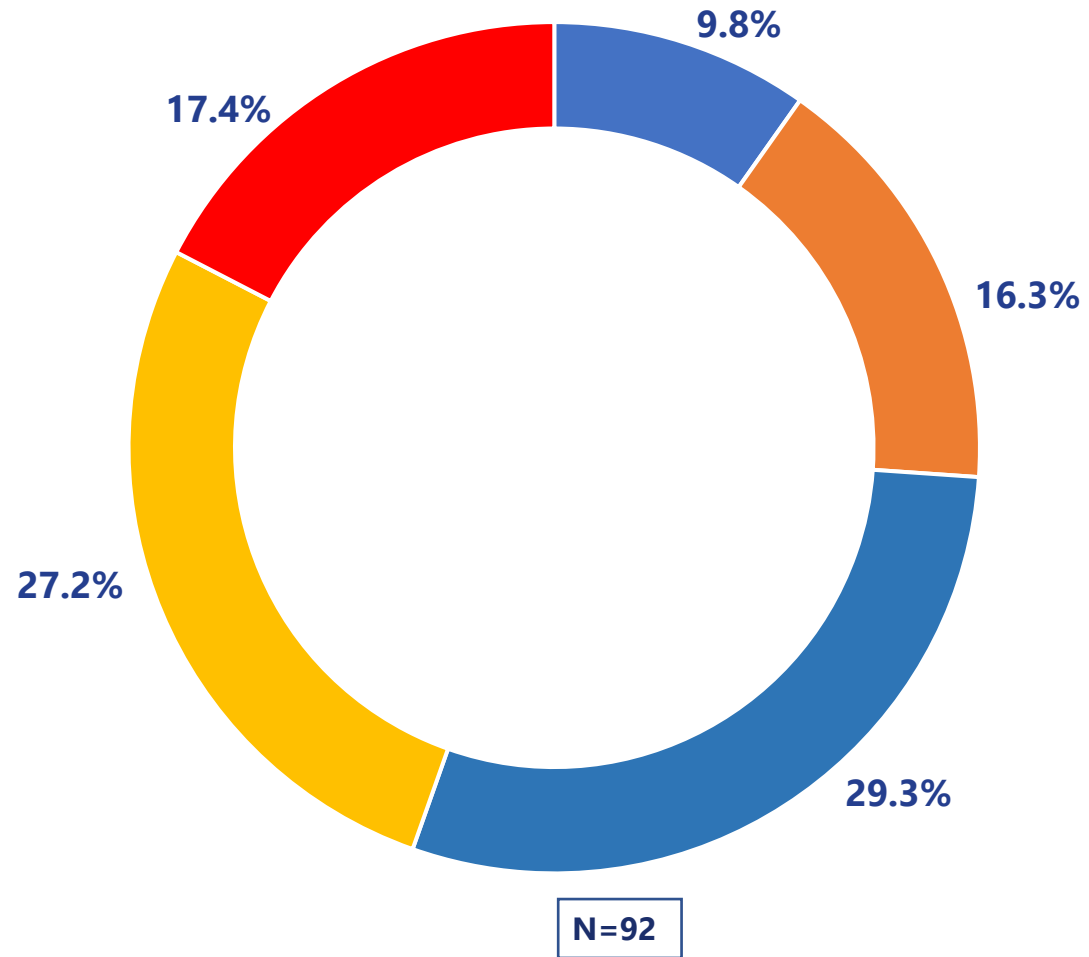
- Lymphatic (38.1%)
- Bone and/or joint (23.8%)
- Eye and/or ear (9.5%)
- Genitourinary (9.5%)
- Peritoneal (4.8%)
- Breast (4.8%)
- Colon (4.8%)
- Spinal Cord (4.8%)



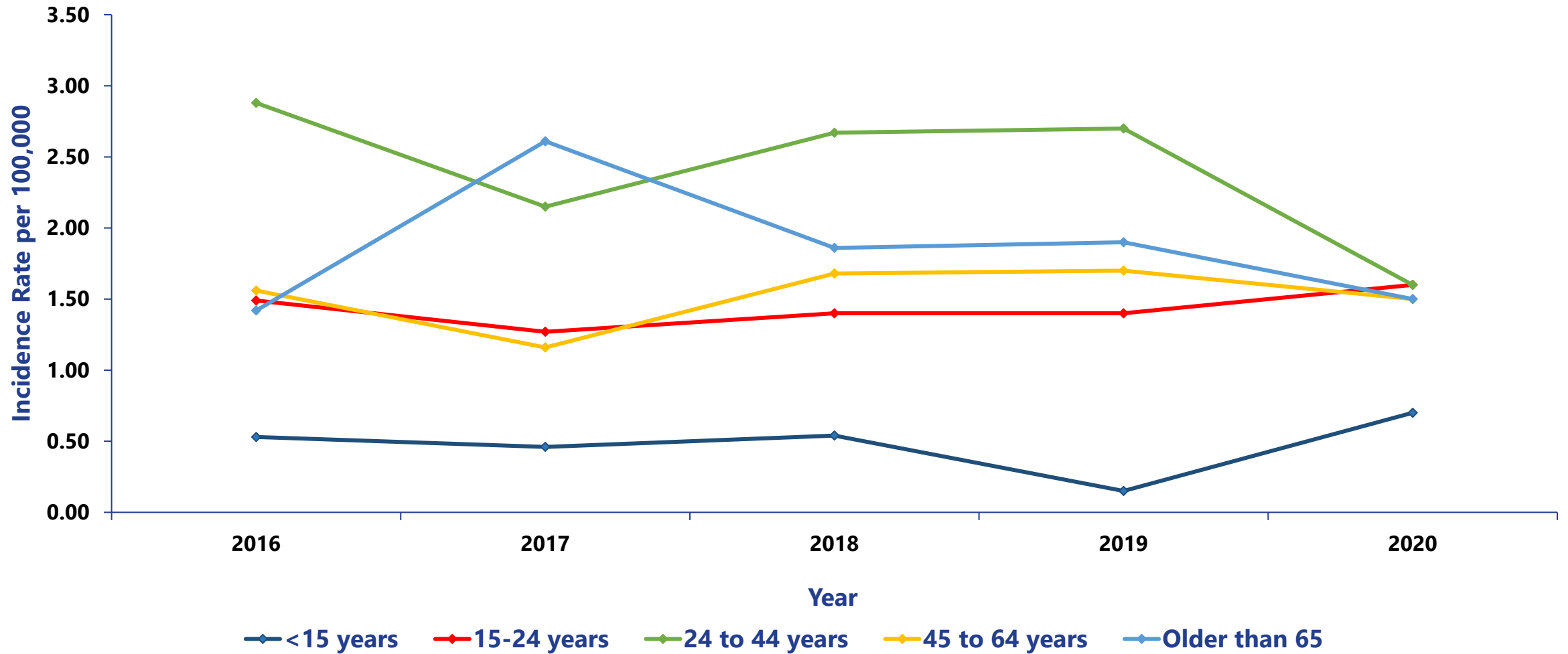
# Number of Tuberculosis Deaths, Indiana, 2016-2020



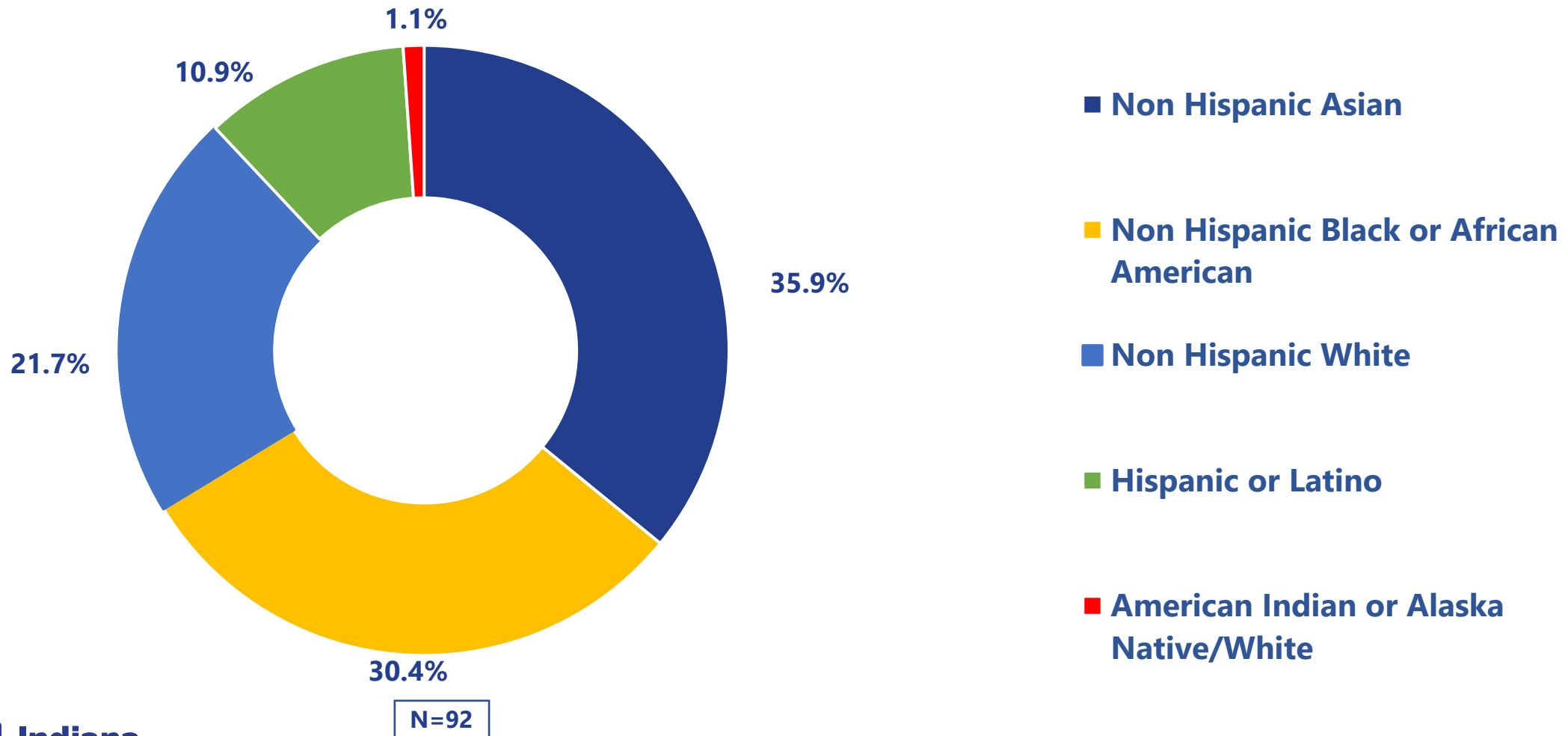
# TB Cases by Age Group, Indiana, 2020



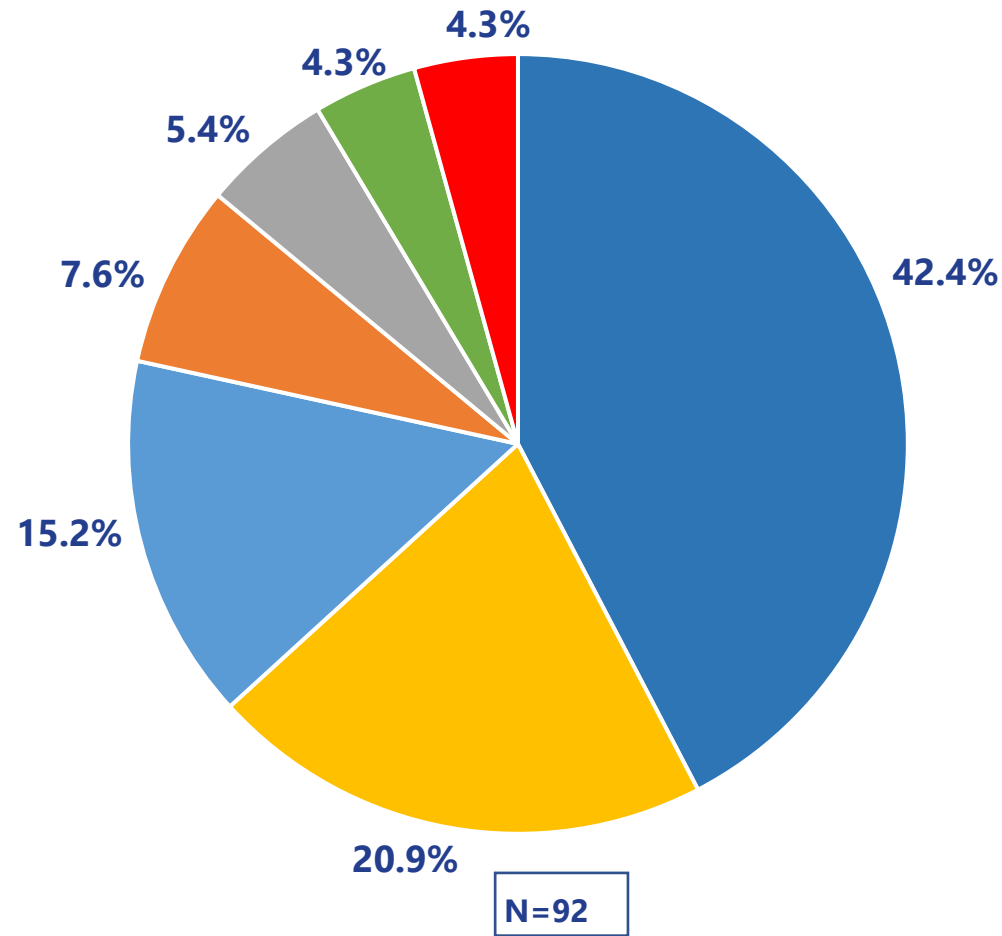
# TB Incidence Rate by Age Group, Indiana, 2016-2020



# TB Cases by Hispanic Ethnicity and Non-Hispanic Race, Indiana, 2020

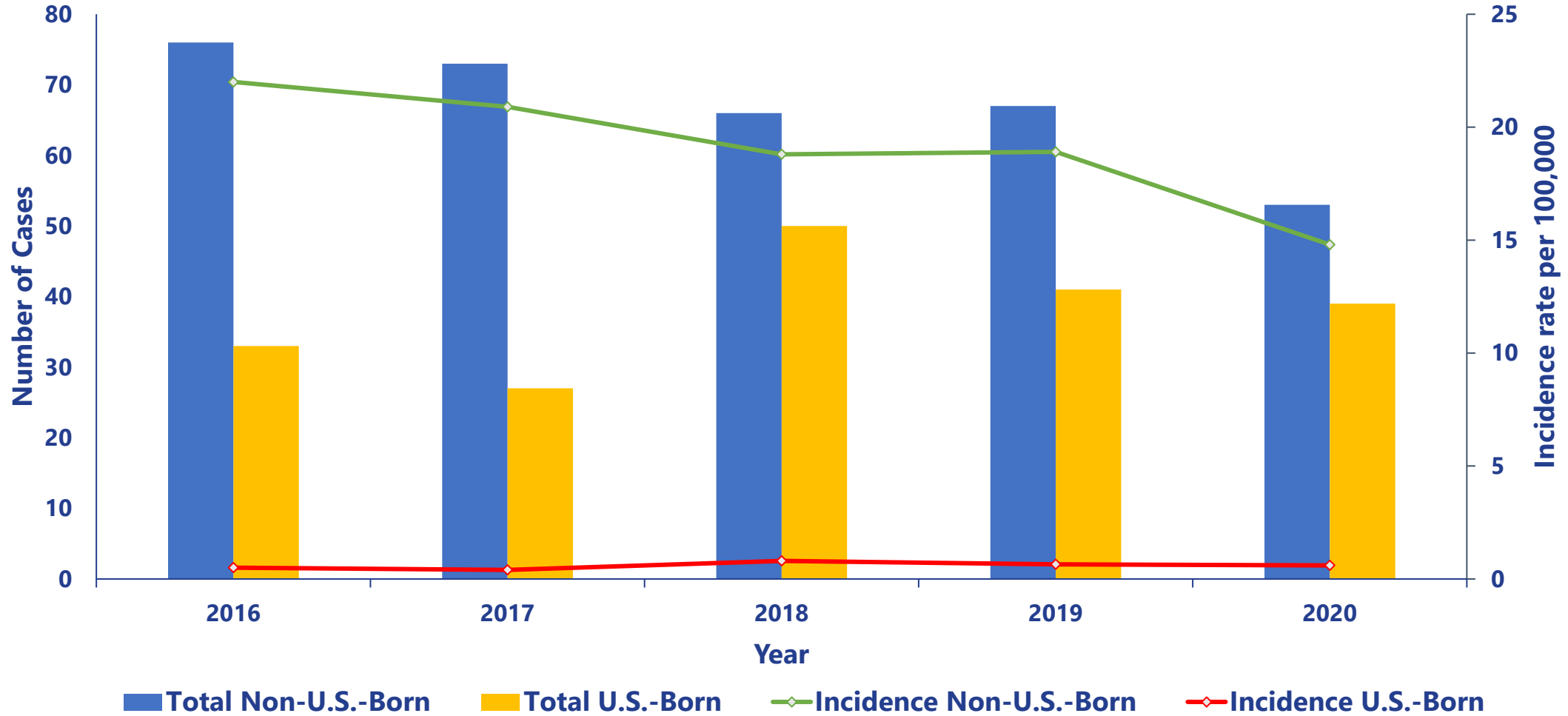


# TB Cases by Country of Birth, Indiana, 2020



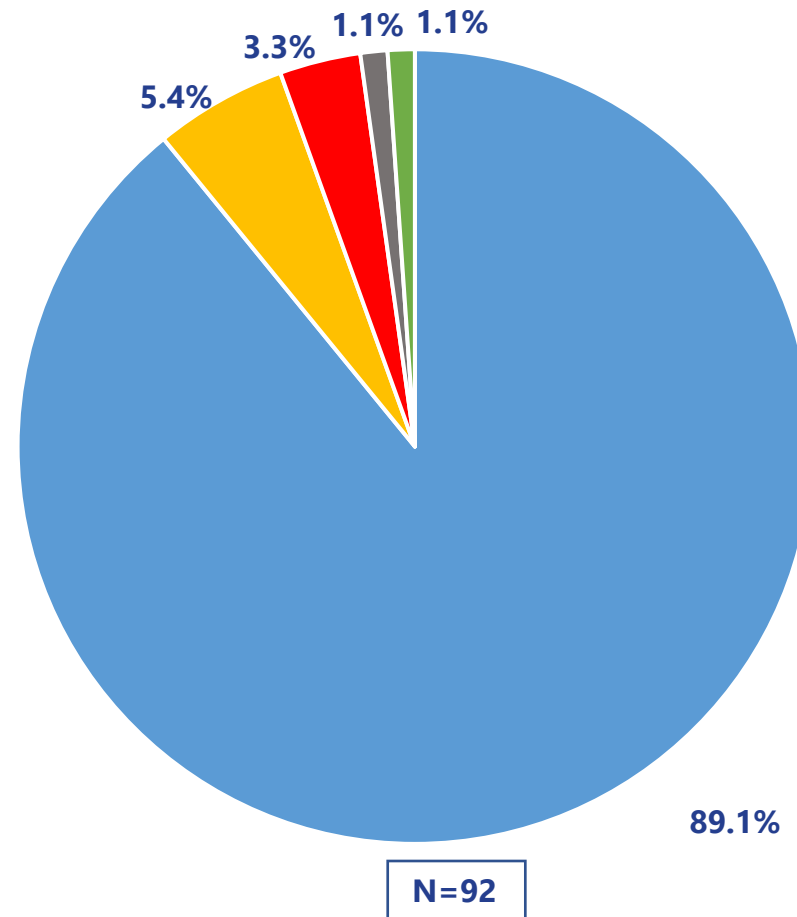
■ UNITED STATES ■ Other ■ BURMA/MYANMAR ■ PHILIPPINES ■ MEXICO ■ INDIA ■ NIGERIA

# TB Case Counts and Rates by Country of Birth, Indiana, 2016-2020





# Tuberculosis by HIV Status, Indiana, 2020

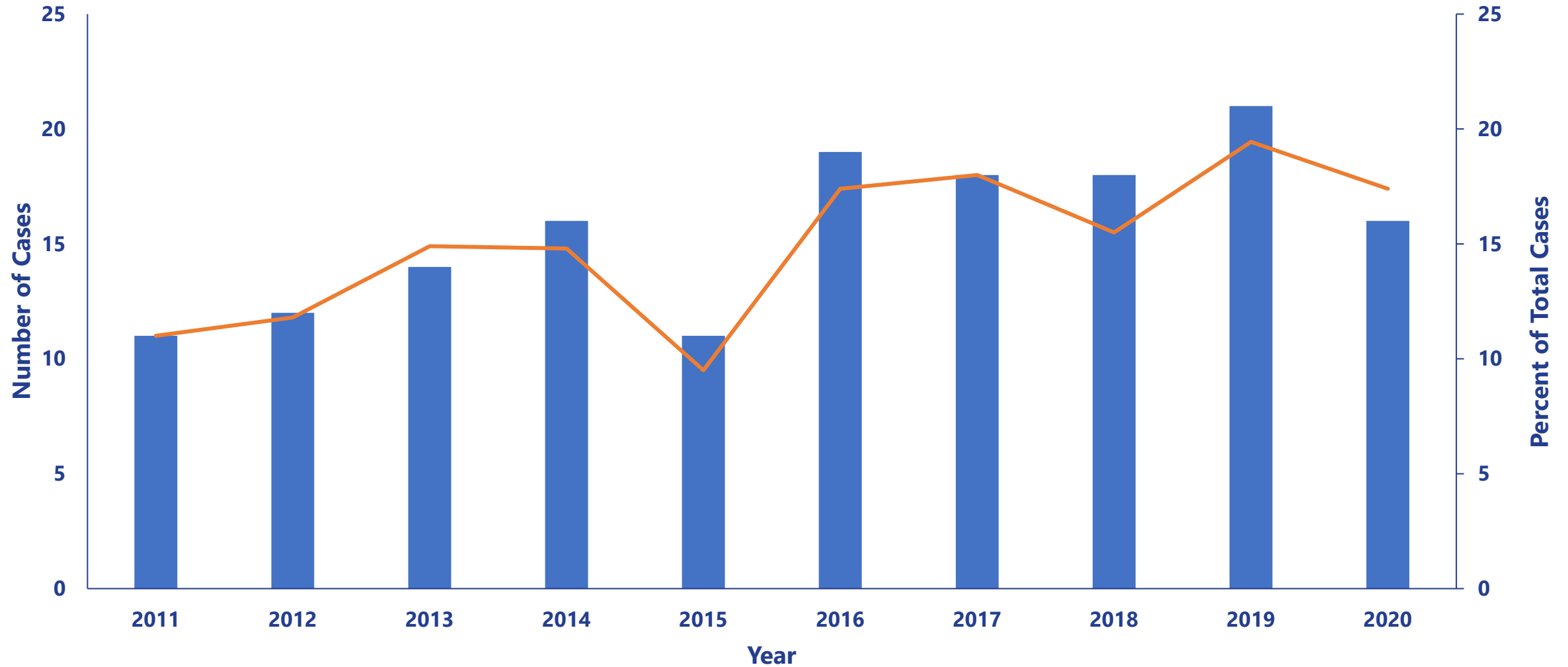


■ Negative ■ Refused ■ Positive ■ Not Offered ■ Unknown or Missing

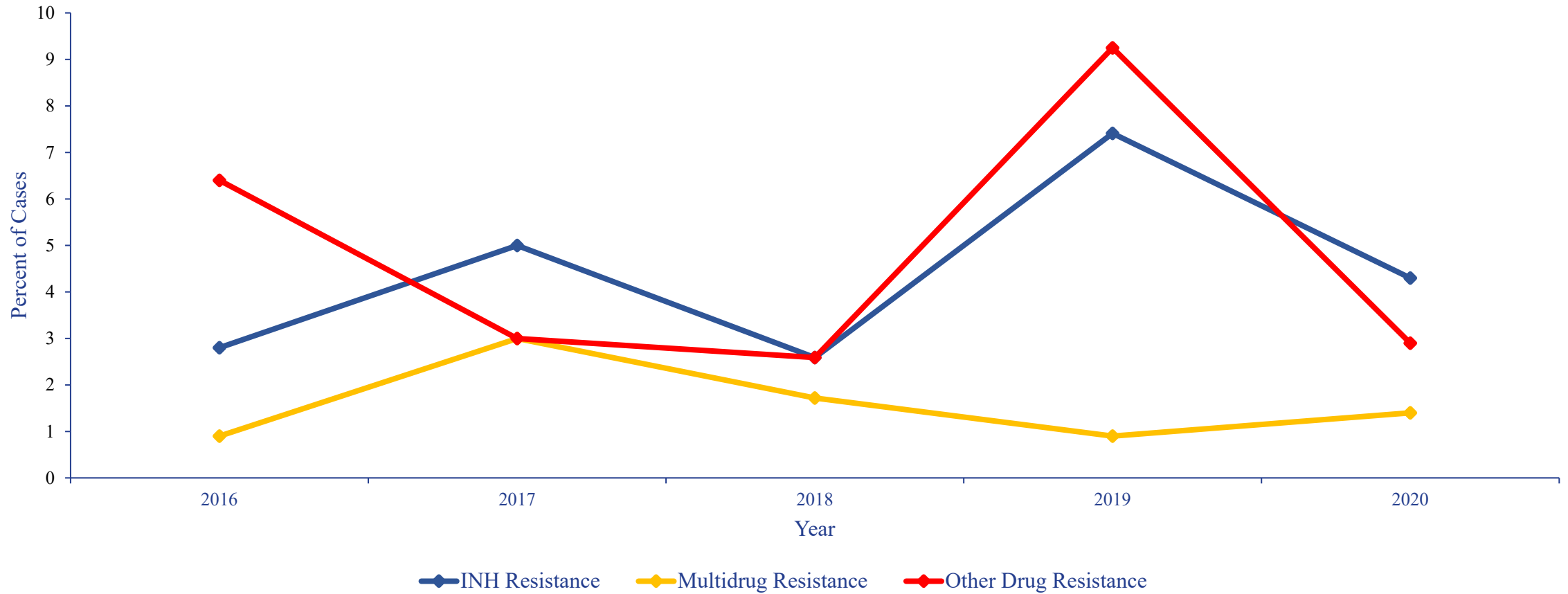
# Most Commonly Reported Risk Factors among TB Cases, Indiana, 2020

Risk Factor	Percent of Cases
Diabetes Mellitus	17.4%
History of Homelessness	7.6%
Excess Alcohol Use (past year)	6.5%
Immunosuppression (not HIV/AIDS)	5.4%
Non-injection Drug Use (past year)	4.3%
Contact of Infectious TB Patient	4.3%
Resident of Long-term Care Facility	4.3%
Correctional Facility	3.3%
End-Stage Renal Disease	3.3%
Injection Drug Use	2.2%

# TB Cases with Diabetes Mellitus, Indiana, 2011-2020



# Number of TB Cases by Drug Resistance, Indiana, 2020



# TB Treatment Indicators, Indiana, 2019-2020

	Percent of Cases	National Average	Program Goal
Initiate RIPE (2020)	96.7%	91.8%	97.0%
Culture Conversion < 60 Days (2019)	68.1%	58.6%	73.0%
Completion of Therapy <1 Year (2019)	94.4%	76.4%	95.0%

# Contact Investigation Indicators, Indiana, 2019

	Percent of Cases	Program Goal
<b>Contacts Elicited</b>	<b>92.7%</b>	<b>100%</b>
<b>Contacts Evaluated</b>	<b>77.3%</b>	<b>94%</b>
<b>LTBI Treatment Initiated</b>	<b>88.3%</b>	<b>92%</b>
<b>LTBI Treatment Completed</b>	<b>81.6%</b>	<b>93%</b>

# Genotyping, Indiana, 2020

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- Among 71 cases which were genotyped
  - 60.6% of genotyped cases were identified as part of a cluster
  - 5 new genotype clusters were identified
  - No ongoing outbreaks
    - Recurring cases from previous outbreaks

# Clusters of Interest- IN\_0011

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- 42 Cases in Indiana (2008-2020)
  - Risk Factors:
    - Non-U.S. born who came from Asian countries especially from Burma, China, Vietnam and India
      - A few exceptions of Mexico and other countries
- IN\_0011\_007
  - 3 MDR cases in Marion County, Indiana
  - Cluster from visiting pastor



# Cluster of Interest- IN\_0162

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- 9 Cases in IN (*2015-2020*)
  - 4 cases from 2020
- Risk Factor:
  - Close contact with Index case (2015)
- Index risk factor:
  - Came to U.S. from Congo (2012)

# Additional Clusters of Interest

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## IN\_0069 (2008-2020)

- 28 Cases in IN

## IN\_0111 (2012-2020)

- 17 cases in IN

## Risk Factors:

- History of homelessness
- Non-injection and injection drug use
- Excess alcohol use
- History of incarceration
- U.S. born

# Summary

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- Indiana total TB case count decreased in 2020
  - -14.8% change
- The number of TB deaths in Indiana has increased from 2019
- Risk factors: diabetes and homelessness are increasing
- Continued success in TB treatment and case management indicators:
  - HIV testing
  - Genotyping
  - Completion of treatment
  - Contact Investigation

# Questions?

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## Contact Information:

**Biak Chinpar, MPH**

*TB & Refugee Health Epidemiologist*

Office: 317-233-7841

Mobile: 317-779-4553

Bchinpar@isdh.in.gov