



TUBERCULOSIS EPIDEMIOLOGY: GLOBAL TO LOCAL

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Disclosures

- Ownership interest in Apnimed

TB deaths worldwide

1.6 million

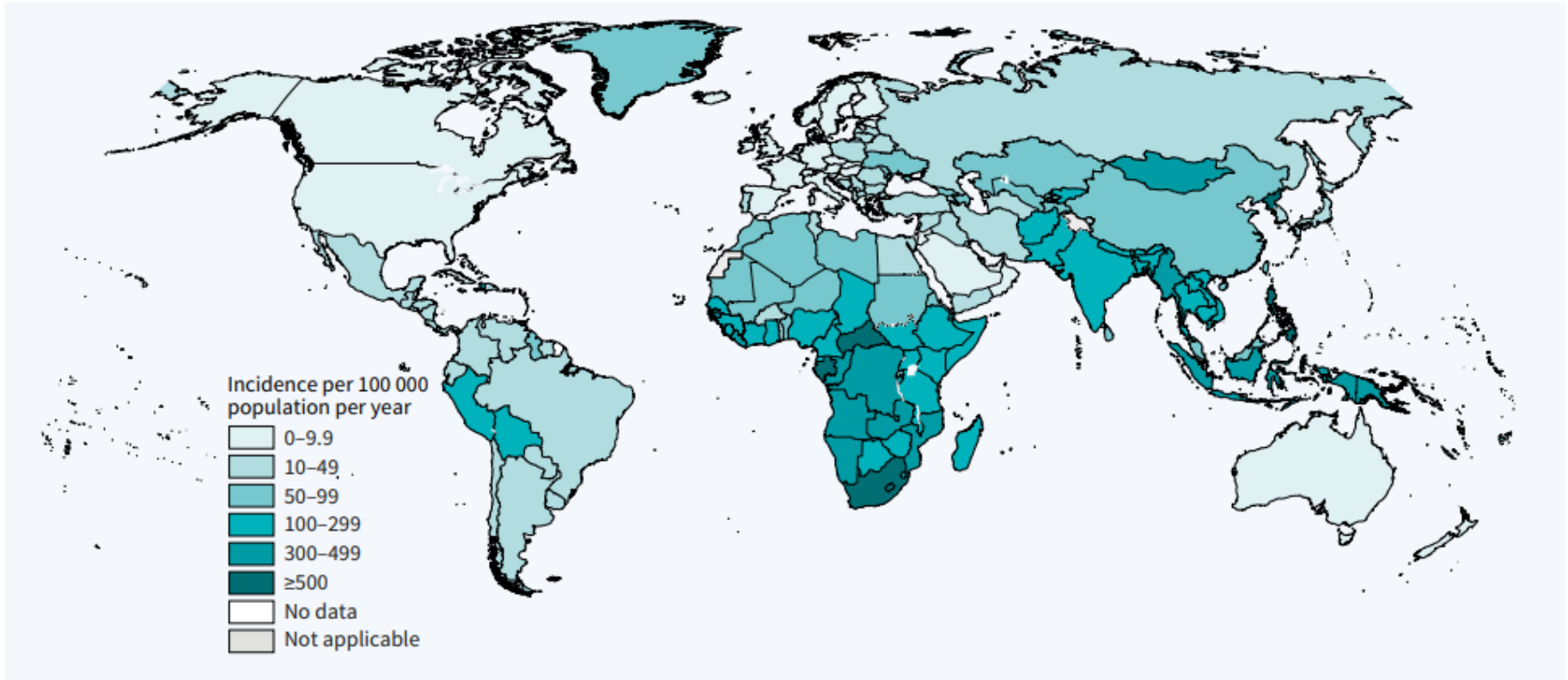
TB deaths worldwide in
2021

2nd leading

infectious cause of death in
2021 (after COVID-19)

WHO, Tuberculosis fact sheet. <https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

TB disease incidence worldwide (2021 data)



WHO, Global tuberculosis report 2022. <https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022>

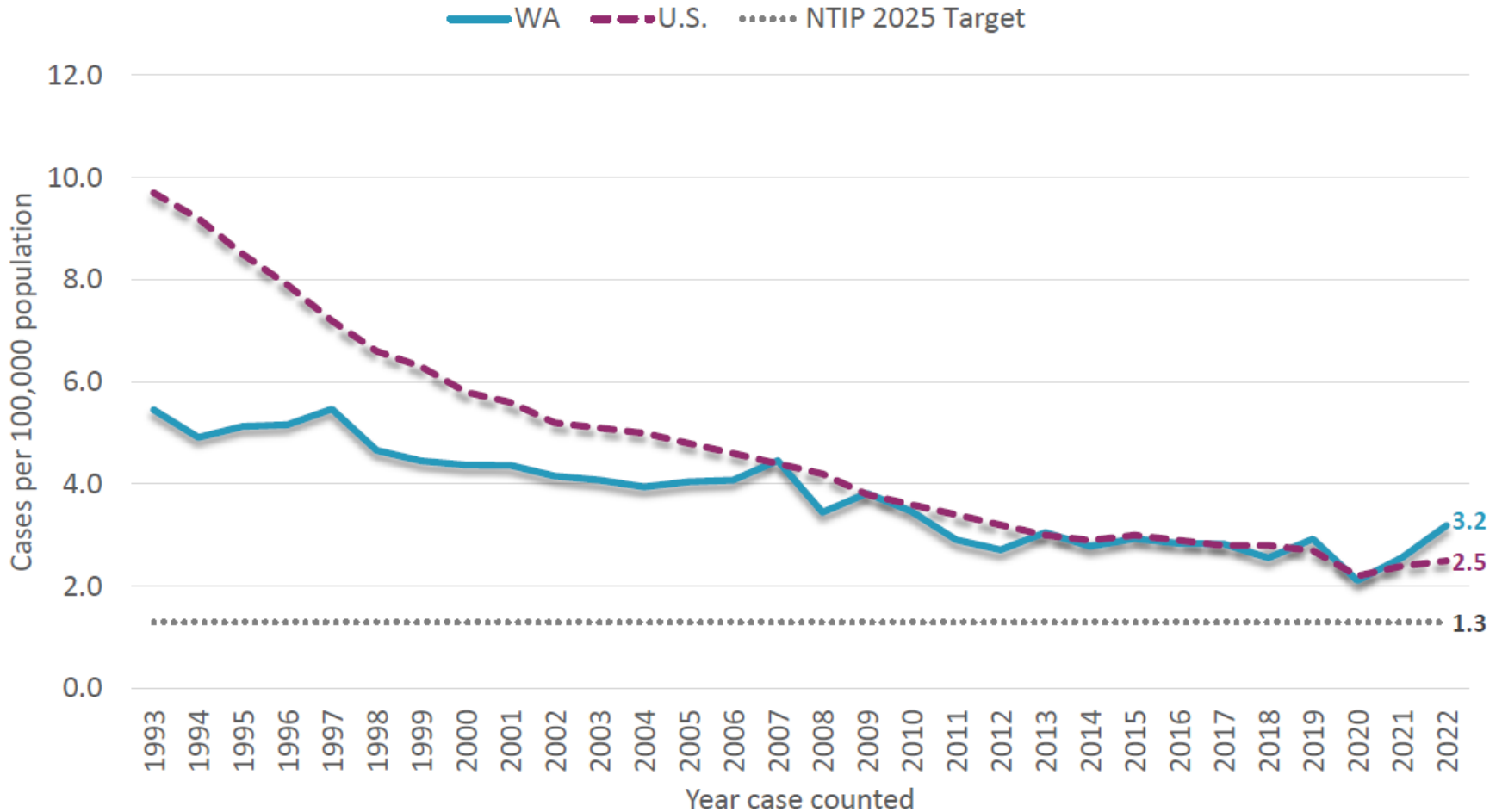
TB infection worldwide

25%

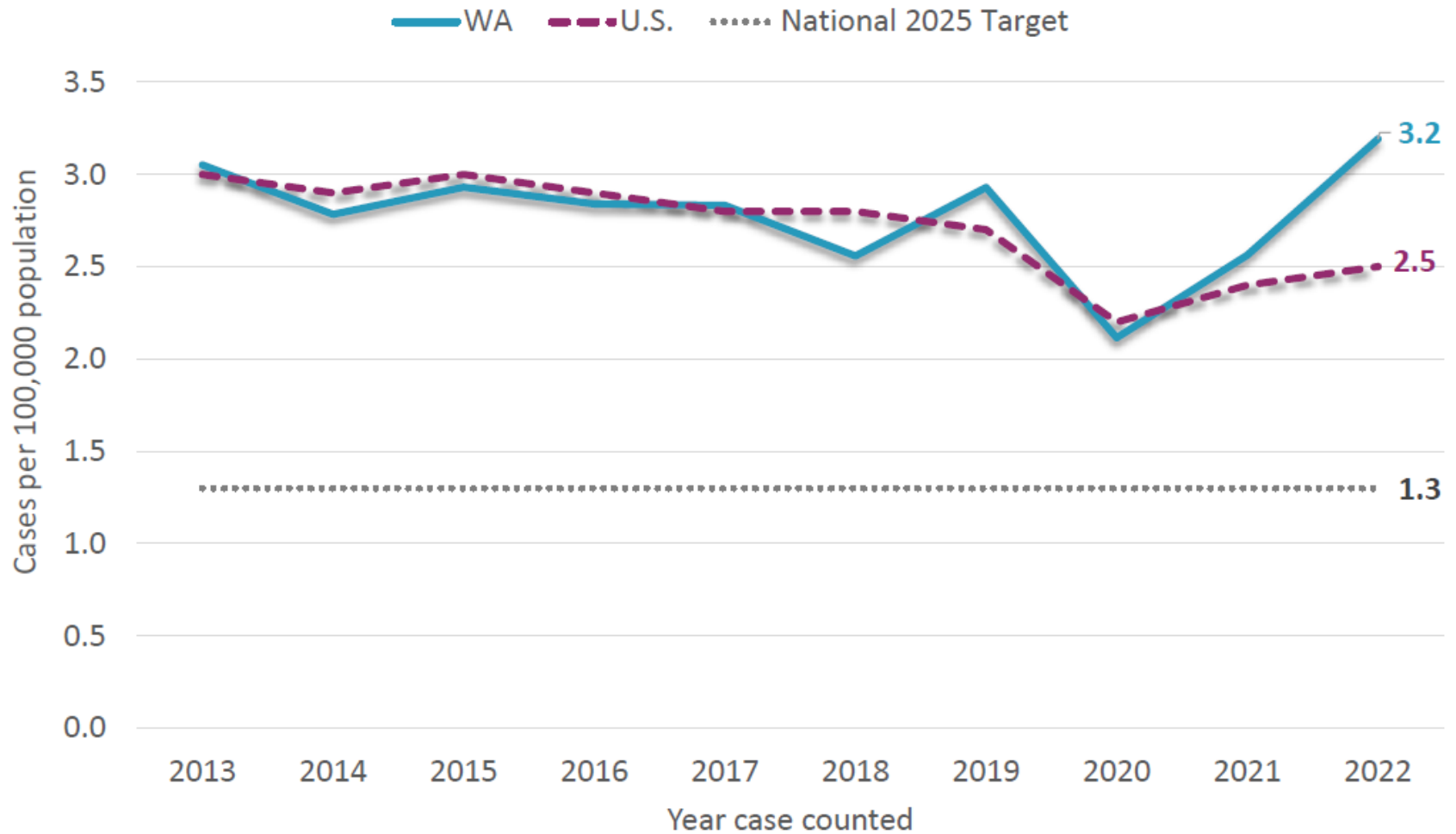
of world population estimated
to have TB infection

WHO, Tuberculosis fact sheet. <https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

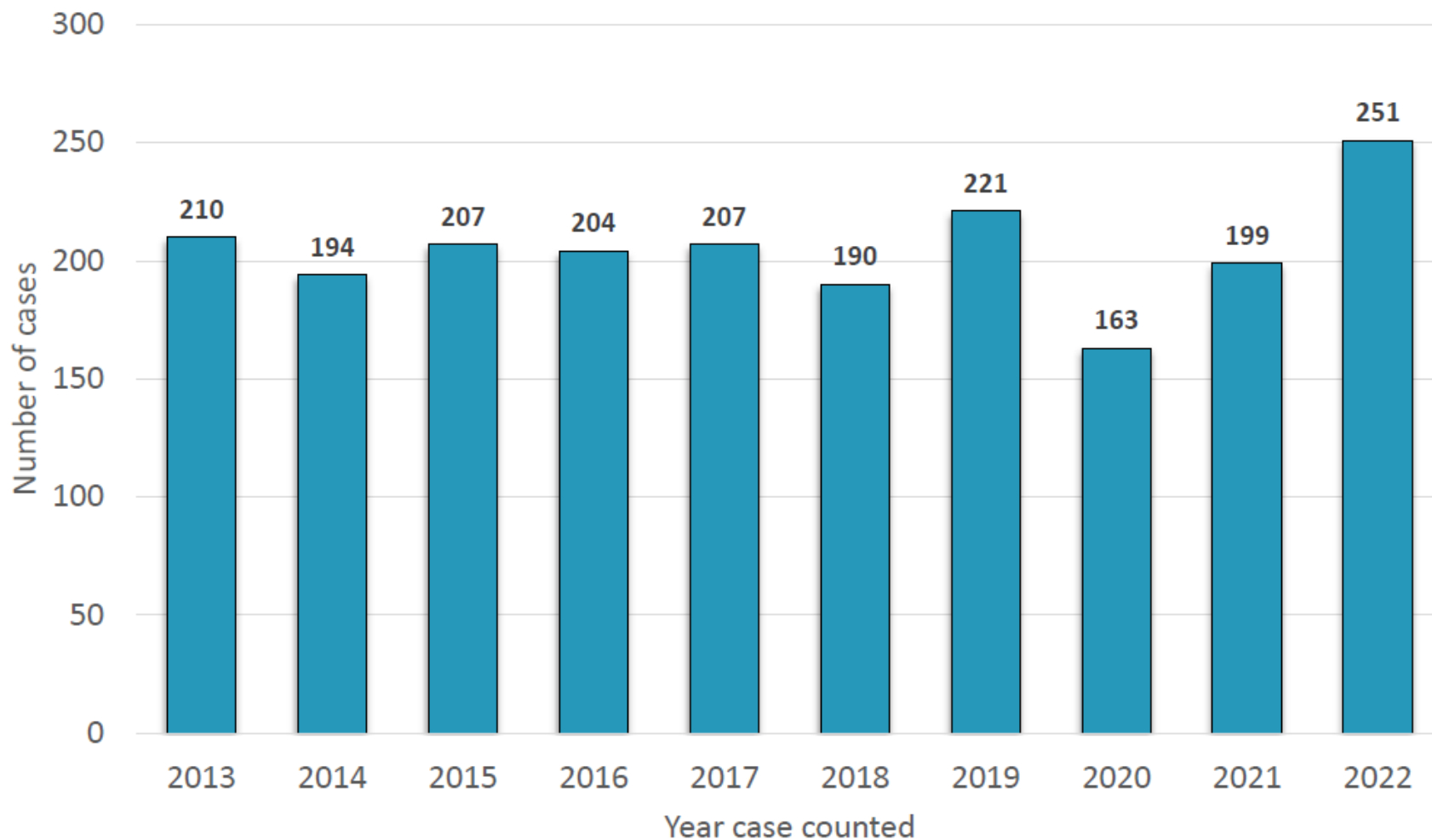
TB disease incidence in Washington and U.S.



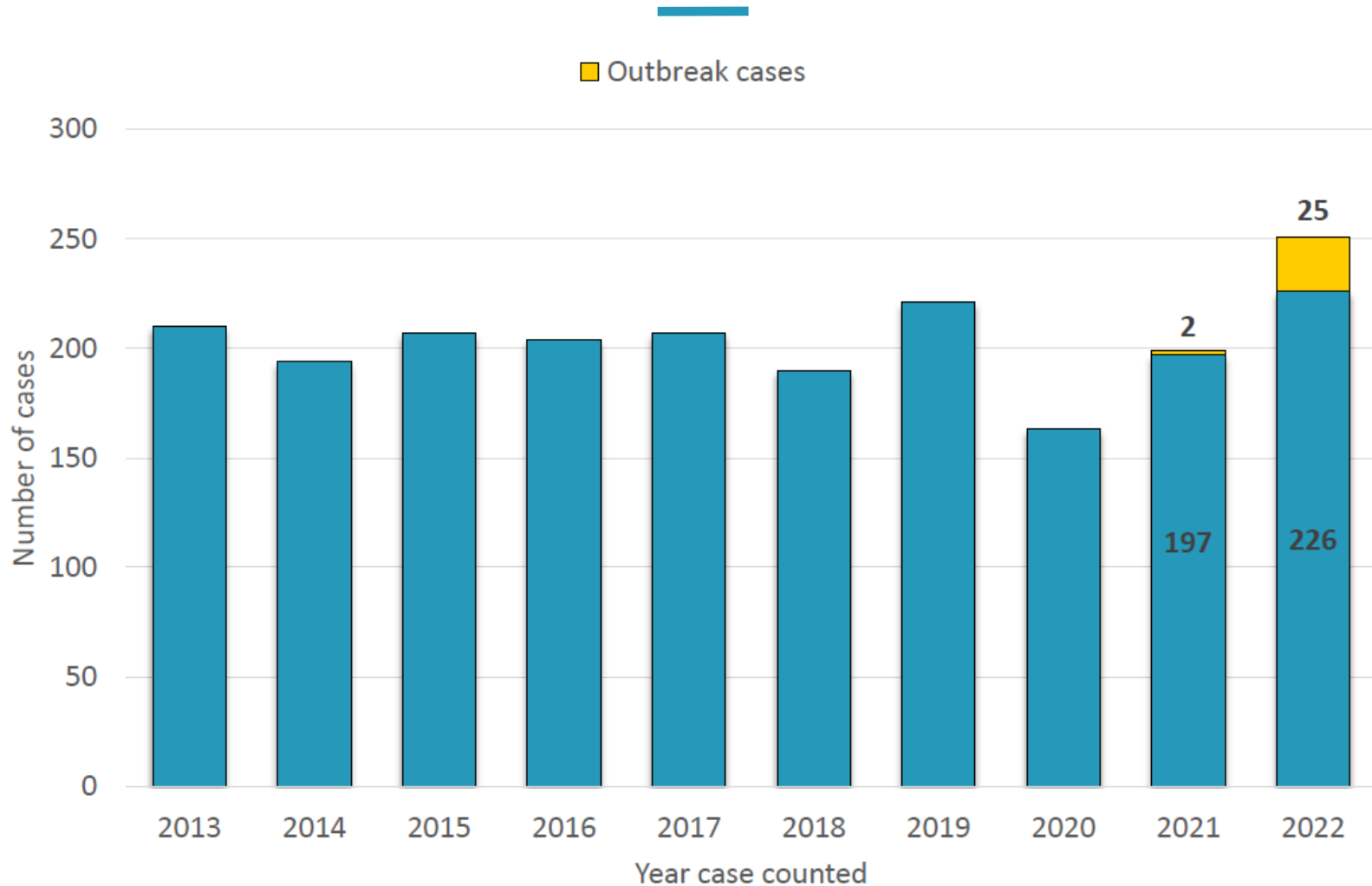
TB disease incidence in Washington and U.S.



Reported TB disease cases in Washington (by year)

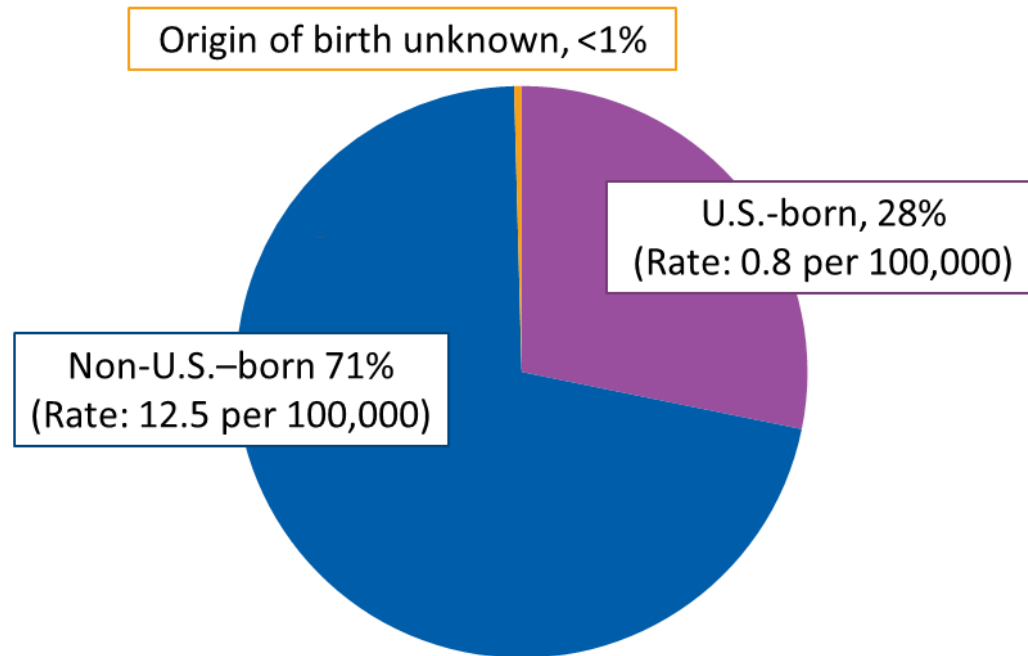


Reported TB disease cases in Washington (by year)



TB cases in the US by national origin

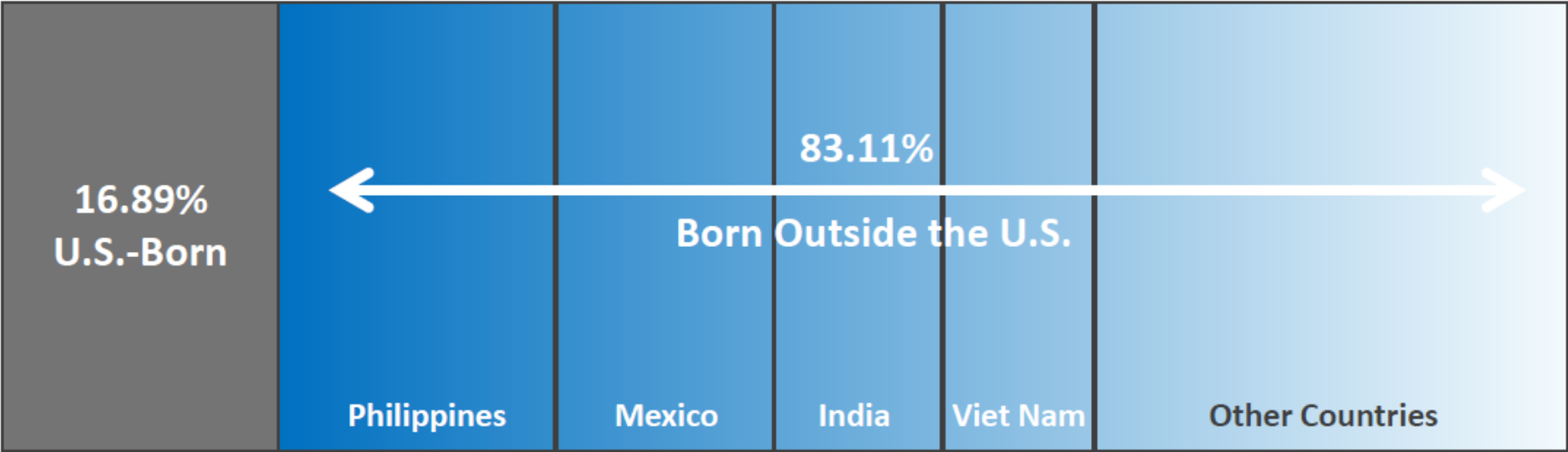
TB Incidence Rates and Percentages by Origin of Birth,* United States, 2021 (N=7,849)



*Persons born in the United States, certain U.S. territories, or elsewhere to at least one U.S. citizen parent are categorized as U.S.-born. All other persons are categorized as non-U.S.-born.

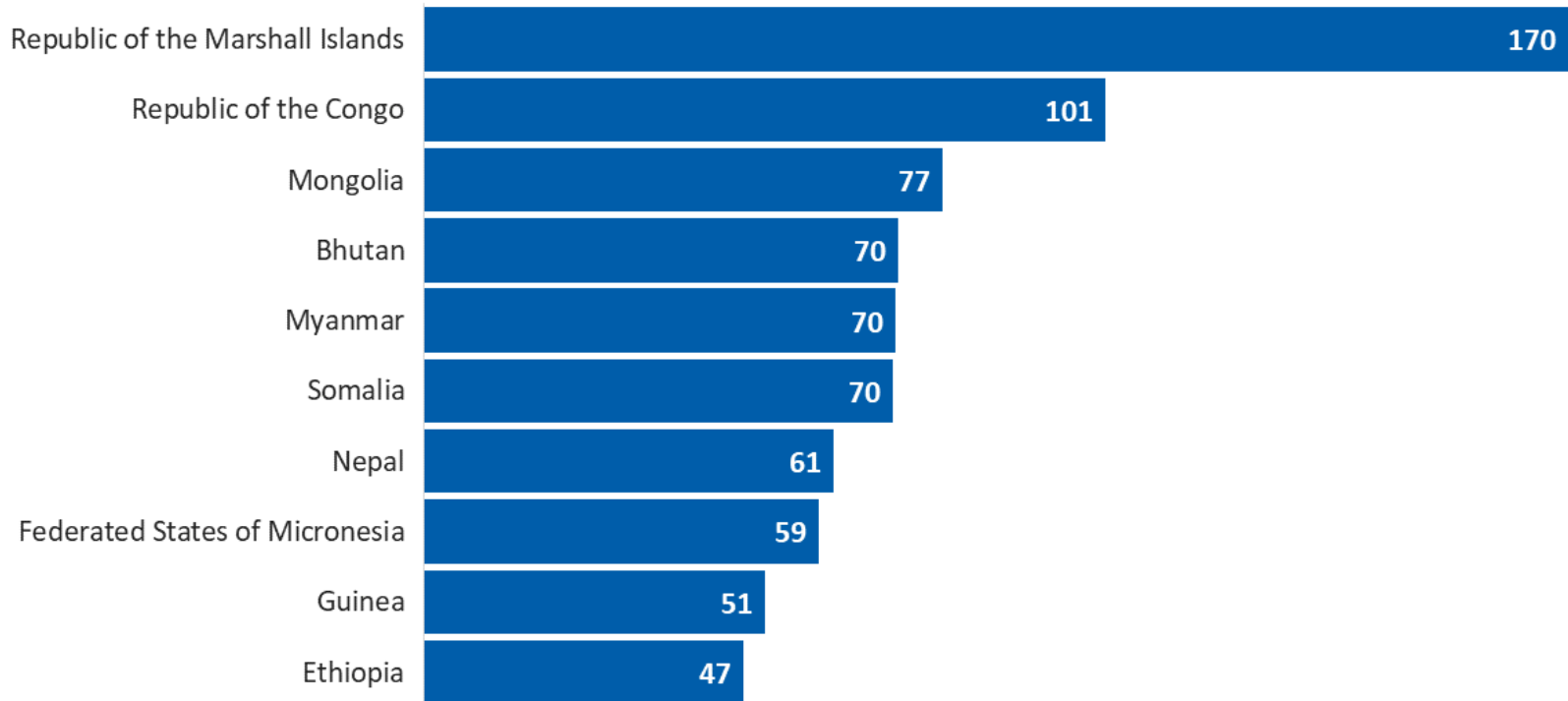
CDC. Reported Tuberculosis in the United States, 2021. <https://www.cdc.gov/tb/statistics/reports/2021/demographics.htm>

TB cases in Washington by country of birth (2018-2022)



TB incidence in the US by country of birth

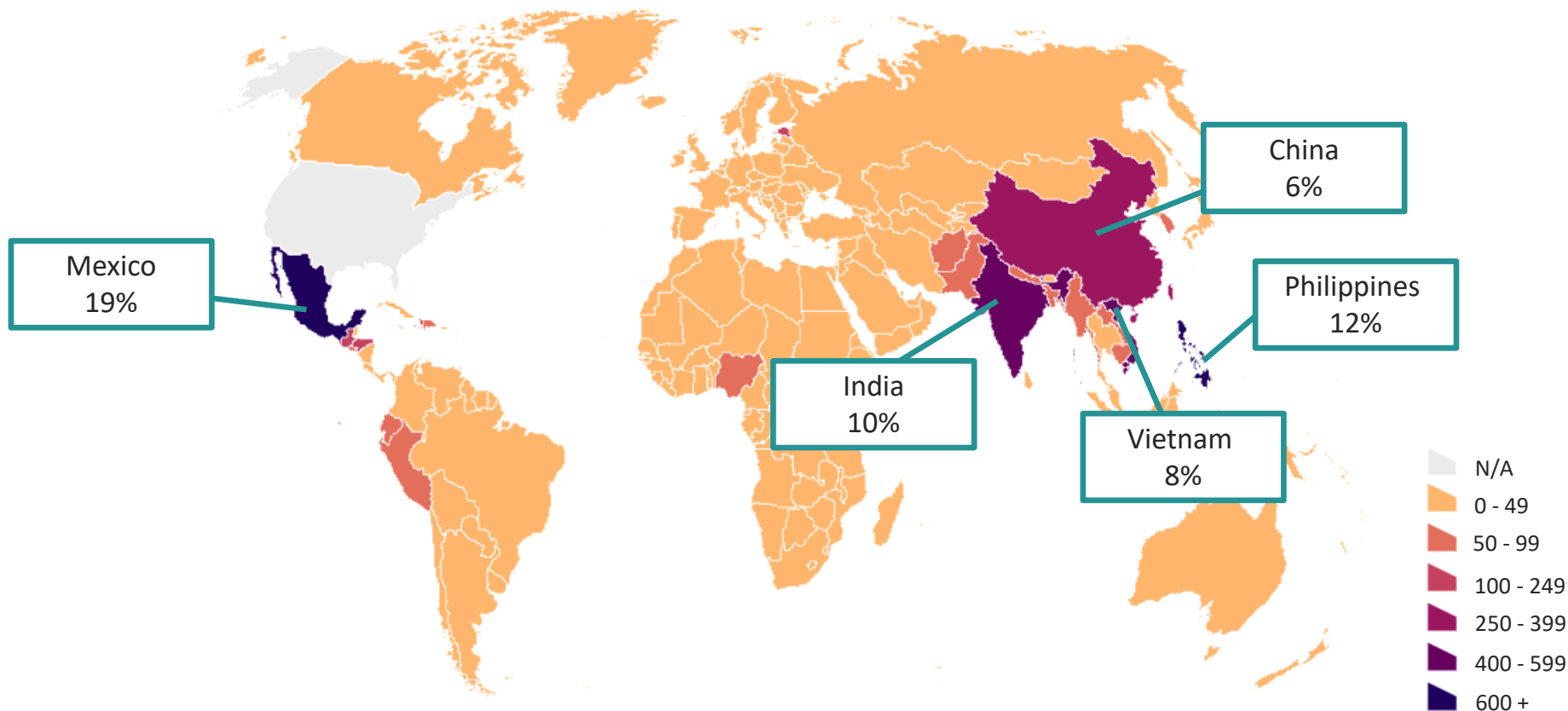
Top 10 TB Incidence Rates* by Country of Birth, United States, 2017–2021



* Cases per 100,000 persons

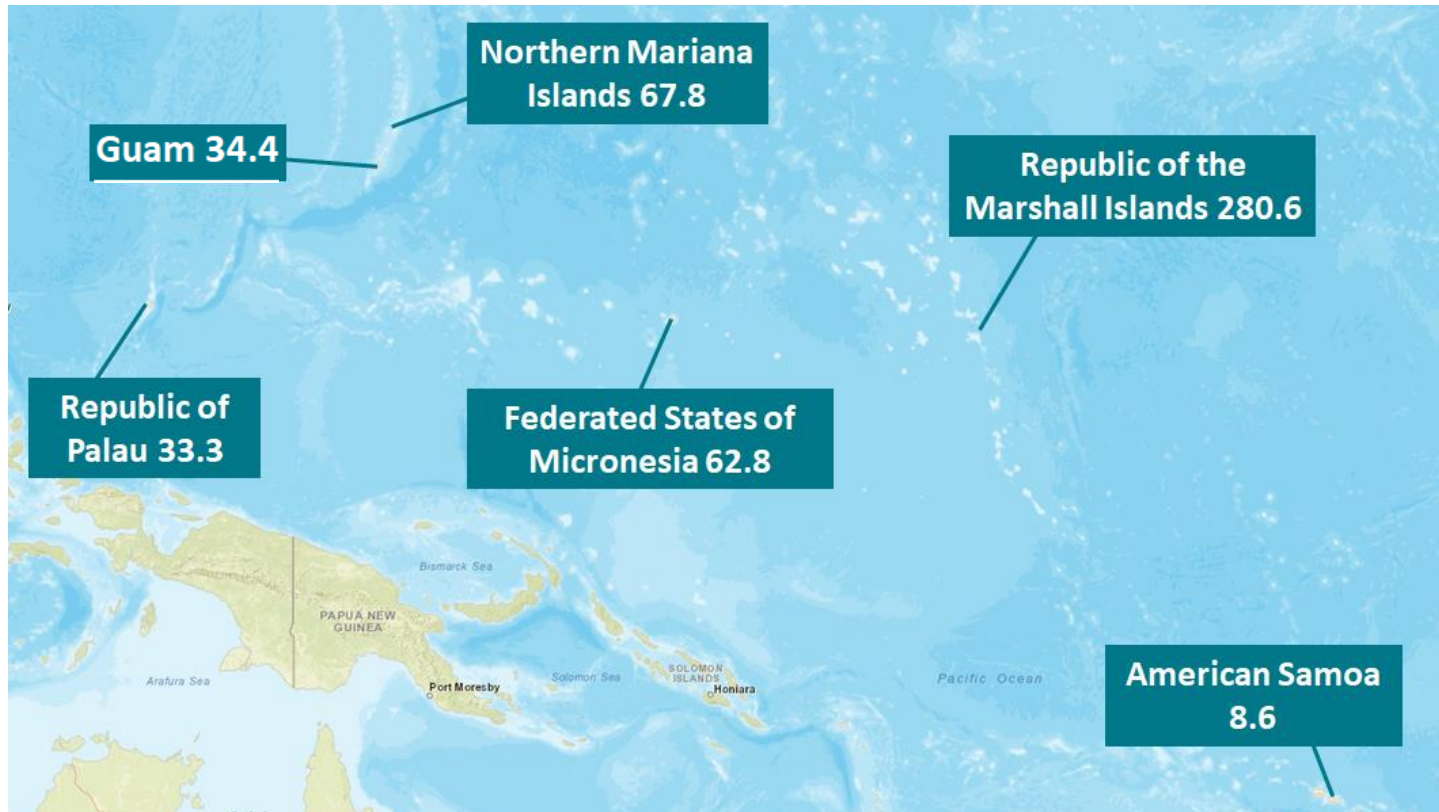
CDC. Reported Tuberculosis in the United States, 2021. <https://www.cdc.gov/tb/statistics/reports/2021/demographics.htm>

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



*Persons born in the United States, certain U.S. territories, or elsewhere to at least one U.S. citizen parent are categorized as U.S.-born. All other persons are categorized as non-U.S.–born.

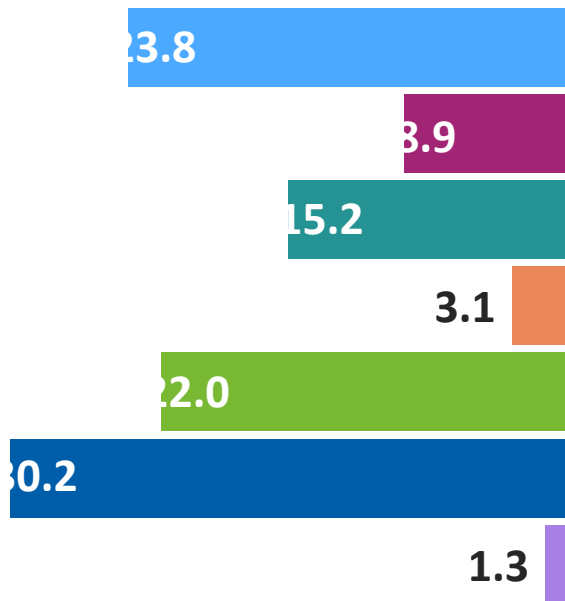
TB Incidence Rates* by U.S.-Affiliated Pacific Islands, 2021



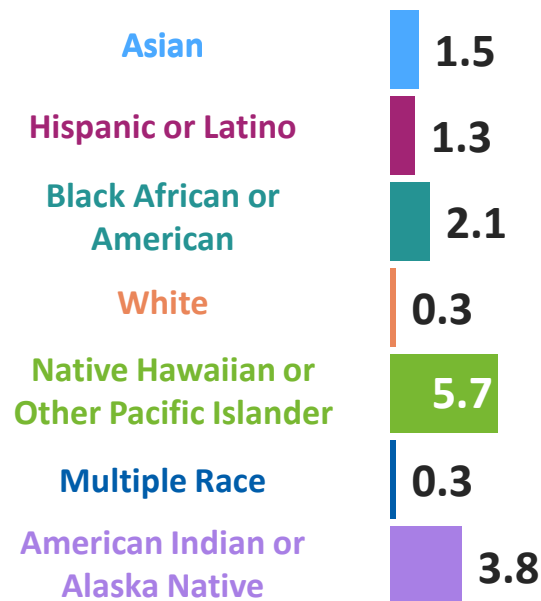
*Cases per 100,000 persons

TB Incidence Rates* by Origin[†] and Race/Ethnicity,[§] United States, 2021

Non-U.S.–born persons
(N=5,626)



U.S.–born persons
(N=2,223)



*Cases per 100,000 persons

[†]Persons born in the United States, certain U.S. territories, or elsewhere to at least one U.S. citizen parent are categorized as U.S.–born. All other persons are categorized as non-U.S.–born.

[§]Persons who identified as Hispanic or Latino were categorized as "Hispanic or Latino," regardless of self-reported race. Persons who did not identify as Hispanic or Latino were categorized by self-reported race; if more than one race was reported, the person was categorized as "Multiple race."

Older adults have the highest risk of TB disease

31%

of cases occur in people
45-64 (incidence 2.9 per
100K)

28%

of cases occur in people
65 and older (incidence
4.0 per 100K)

CDC, Reported Tuberculosis in the United States, 2021. <https://www.cdc.gov/tb/statistics/reports/2021/table5.htm>

Proportions of drug-resistant TB disease are stable

In 2021:

- **8.9%** of TB disease cases had INH resistance at diagnosis
- **1.3%** of TB disease cases had MDR-TB at diagnosis

CDC, Reported Tuberculosis in the United States, 2021. <https://www.cdc.gov/tb/statistics/reports/2021/table5.htm>

What about LTBI data?

- LTBI is often not reportable and is often undiagnosed
- From on NHANES data, **~13-14 million** people in US with LTBI
 - Based on TST and IGRA testing of study participants

Recommendations on LTBI screening: the role of social history

- USPTF recommends LTBI screening for people at increased risk of infection
 - Have lived in high-prevalence country
 - Have lived in/live in high-risk congregate setting
- CDC also recommends screening testing for people who work in high-risk congregate settings
- Frequency of screening depends on risk

USPTF, Latent Tuberculosis Infection in Adults: Screening. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/latent-tuberculosis-infection-screening>

CDC, Who should be tested for TB infection. <https://www.cdc.gov/tb/topic/testing/whobetested.htm>

Questions?



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