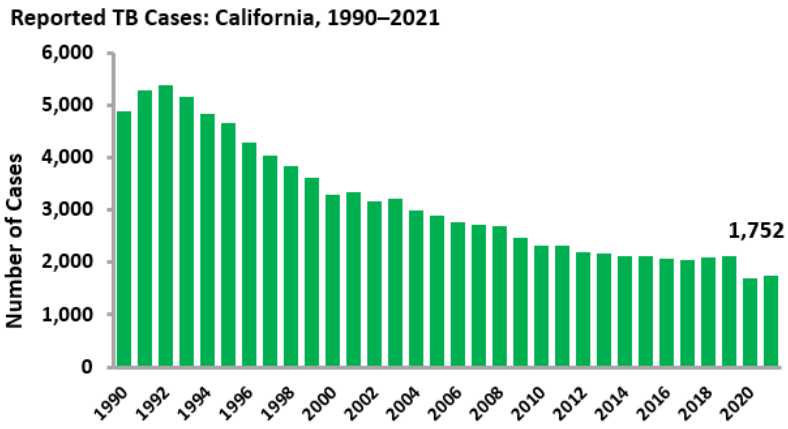
TB in California: 2021 Summary

Tuberculosis (TB) disease is an illness caused by the bacteria *Mycobacterium tuberculosis*. TB usually affects the lungs and spreads through the air when a person sick with TB coughs. Not everyone infected with the bacteria becomes sick. People that have been infected but are not sick have latent tuberculosis infection (LTBI). People with LTBI can become sick with TB disease in the future if they are not treated.

California continues to have a high rate of TB



- In 2021, California reported **1,752** new TB cases, a three percent increase compared with 1,704 in 2020.
- California's annual TB incidence was **4.5** cases per 100,000 persons; nearly double the national incidence rate of 2.4
- The overall decrease in TB cases since 2019 is likely at least partially due to the COVID-19 pandemic. Possible reasons include fewer cases in persons born outside the U.S. because of decreased international travel and immigration during the pandemic, fewer patients seeking care or receiving a diagnosis of TB, and decreased transmission of TB due to masking and other COVID restrictions. CDPH expects further increases in TB cases as pandemic conditions recede.
- Medical and societal costs of TB reached **$203 million** in California in 2021.
- TB was reported in 42 of California's 61 (69%) local health jurisdictions; 15 (25%) jurisdictions reported 1–4 cases.
- The vast majority of TB cases (87%) were attributable to progression of LTBI to active TB while an estimated 3% of cases were in persons who arrived in California with active TB disease from outside the United States, and another 10% resulted from recent transmission.
- In 2021, 24 cases (1.4%) were reported in children under 5 years of age; all of whom were born in the United States. Among these, 79% occurred in Hispanic children. Central nervous system (CNS) TB, a serious complication of TB, occurred in 17% of these children.
- In 2021, there were 4 new TB outbreaks and 16 ongoing outbreaks in 8 jurisdictions, each involving at least 4 persons.
- During 2017–2019, 670 persons (11% of TB cases) died with TB. Of those, 20% died before receiving TB treatment.
- In 2019, the most recent year for which complete data is available, 11.5% of people diagnosed with TB died, a proportion not seen since 1993.
- Among persons reported with TB in 2019 who started anti-TB treatment, 85% completed treatment.
- >**2 million** Californians (6% of the population) have LTBI. Without treatment LTBI can progress to active TB.

TB and COVID-19

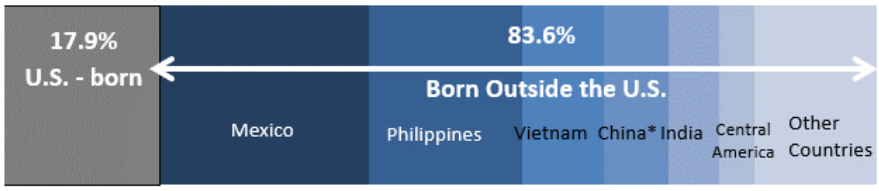
- Among 2210 persons with TB disease during September 2019-December 2020, 225 (**10**%) also had COVID-19 infection identified in 2020. TB and COVID-19 occurred in close succession (within 120 days) among 91 cases.
- Among the 91 people with TB/COVID-19, 60% were Hispanic and 45% resided in low health equity census tracts, highlighting health disparities in both COVID-19 and TB. People with TB and COVID-19 had higher mortality than those with either disease alone.

TB in California: 2021 Summary

TB in People Born Outside the United States

- The TB rate among persons born outside the U.S. (13.6 per 100,000) was **12 times** higher than the rate among U.S.-born persons (1.1 per 100,000).
- **Half** of TB cases in non-U.S.-born persons occurred more than 20 years after arrival in the U.S.

Proportion of TB Cases by National Origin, California, 2021



*People's Republic of China includes Hong Kong and Macau

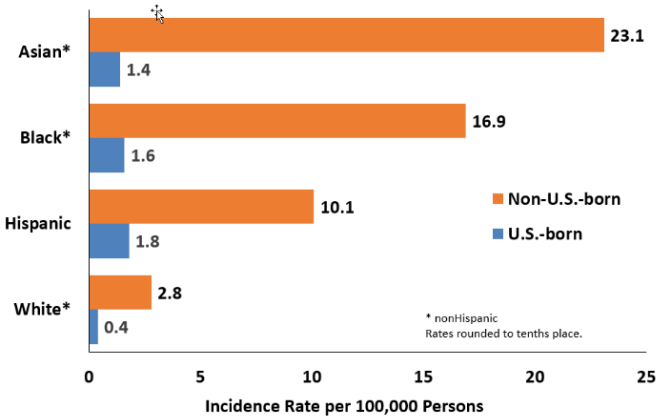
- Among the most common countries of birth for people with TB in California, people born in Philippines (35.6 per 100,000) and Vietnam (30.5 per 100,000) had the highest rate of TB.

Severe Racial and Ethnic Disparities

- The rates among people born outside the U.S. that are Asian* and Black* were **52 and 38 times higher** respectively than White* people born in the U.S. The rate among non-U.S.-born Hispanic people was 23 times that of U.S.-born White* people.
- Rates in each non-U.S.-born racial and ethnic group were higher than among U.S.-born persons in the same group.
- Nearly half (49%) of California's TB cases occurred in Asian* persons, and 41% of cases occurred in Hispanic persons.

* non-Hispanic

TB Rates by Place of Birth and Race and Ethnicity, California 2021



Comorbidities

- **40%** of adult TB cases had diabetes mellitus, end stage renal disease, HIV infection, or another condition that can increase the risk of progression from latent to active TB disease.
- The most common comorbidity was diabetes mellitus (30% of adult cases).
- HIV infection increases the risk of progression from LTBI to active TB disease, as well as for death with TB.
- In 2021, 88% of patients with TB were tested for HIV. Of those tested, 60 (**3.9%**) were HIV-positive, a decline from 101 (5.4%) in 2011, the first year these data were reported in California on the TB case report form.

Diagnosis and Management of TB

- The results of nucleic acid amplification (NAA) tests, used to identify *Mycobacterium tuberculosis*, can be available within hours after specimen collection, resulting in earlier detection and treatment of TB cases.
- NAA tests were used in 75% of cases reported in 2021.
- In 2021, pulmonary disease was diagnosed in 82% of TB cases, indicating a risk of transmission to others; of those, 16% also had TB in another site. Eighteen percent of TB patients had only extrapulmonary disease.
- Of pulmonary TB cases with an abnormal chest x-ray, cavitation was seen in 21%, indicating more advanced disease.
- TB was diagnosed by laboratory findings in 86% of cases; 14% of cases were clinically confirmed.