

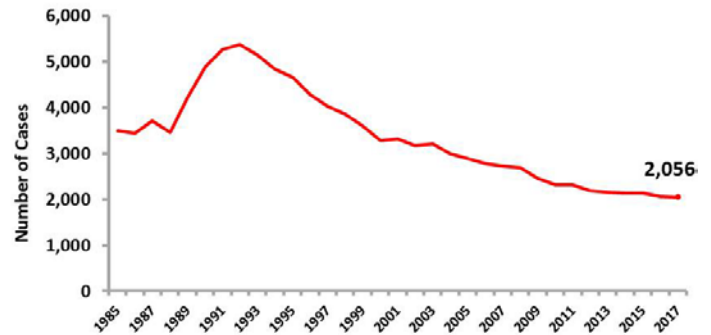
TB in California: 2017 Snapshot

Active tuberculosis (TB) is an illness caused by the bacterium *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. Those that have been infected but are not sick have latent tuberculosis infection (LTBI). Persons with LTBI can become sick with active TB in the future if they are not treated.

Overview

- In 2017, California reported 2,056 new active TB cases, compared with 2,059 cases in 2016.
- In 2017, California's annual TB incidence was 5.2 cases per 100,000 persons, which is nearly double the national incidence rate of 2.8.
- An estimated more than \$78 million was spent on medical management of TB cases in California during 2017.
- TB cases were reported in 46 of California's 61 (75%) local health jurisdictions, but 23 (51%) jurisdictions reported fewer than 5 cases.
- Among California's TB cases, an estimated 6% were imported from outside the United States, 14% resulted from recent transmission, and 80% were due to progression of LTBI to active TB.
- More than 2 million Californians (6% of the population) have LTBI which can progress to active TB without diagnosis and treatment.

Reported TB Cases: California, 1985–2017



The resurgence of TB began in the 1980s and peaked in 1992. Case counts began decreasing again in 1993, and continued a downward trend through 2017.

Most Affected Populations

Persons Born Outside the U.S. Bear Significant Burden

- The TB rate among persons born outside of the United States (U.S.) (15.6 per 100,000) was 12 times higher than the rate among U.S.-born persons (1.3 per 100,000).
- In 2017, 82% of California's TB cases occurred in persons who were born outside the U.S.
- Persons born in Mexico, the Philippines, Vietnam, China, and India accounted for over 77% of TB cases in non-U.S.-born persons.
- During 2008–2017, the percentage of non-U.S.-born TB patients diagnosed within 6 months after arriving in the U.S. decreased from 11% in 2008 to 8% in 2017. Half of TB cases in non-U.S.-born occurred 18 years or more after arrival in the U.S.

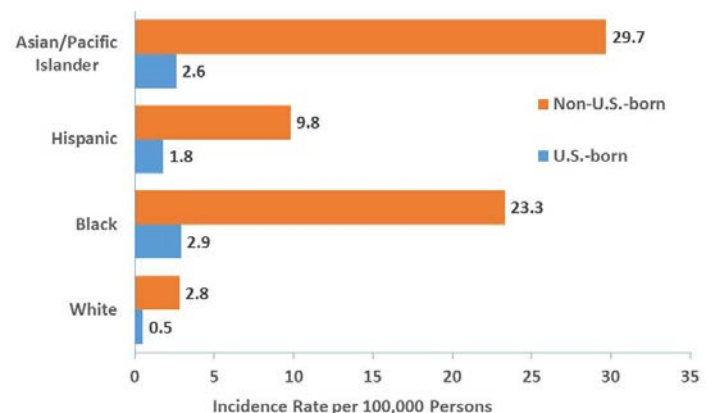
Proportion of TB Cases by National Origin — California, 2017



Racial/Ethnic Disparities Persist

- Persons born outside the U.S. continued to experience higher TB rates compared to their U.S.-born counterparts. The rate among Asians and Pacific Islanders born outside the U.S. was 11 times higher than among those born in the U.S., and the rate among Hispanics born outside the U.S. was 5 times higher than among those born in the U.S.
- Rates among racial/ethnic minorities were higher than in whites in both U.S.-born and non-U.S.-born persons.
- Over half (54%) of California's TB cases occurred in Asians and Pacific Islanders, up from 43% in 2008.

TB Rates by Place of Birth and Race/Ethnicity, 2017



TB in California: 2017 Snapshot

Medical Comorbidities

- In 2017, 39% of adult TB cases had a medical comorbidity such as 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 (31% of adult cases).
- HIV infection greatly increases a patient's risk for progression from LTBI to active TB disease, as well as for TB-related death.
- In 2017, 86% of patients with TB were tested for HIV. Of those tested, 68 (3.8%) were HIV-positive, down from 75 (4.2%) in 2016.

Children and Older Adults

- There were 39 TB cases among children less than 5 years of age in 2017, a decrease from 88 cases in 2008.
- The proportion of TB cases in older adults is growing. In 2017, 33% of TB cases were reported in persons 65 years of age or older, compared to 23% in this age category in 2008.
- More than 200 persons age 80 or older were diagnosed with TB in 2017.
- Since 2008, the median age of all TB patients rose from 48 to 56 years, driven predominantly by the rising median age of foreign-born TB cases from 49 years in 2008 to 58 years in 2017.

TB Transmission is Occurring in California

- An estimated 14% of TB cases resulted from transmission of TB in California during 2015–2017.
- In 2017, transmission occurred in 8 new or ongoing confirmed TB outbreaks, each involving at least 4 persons.

Death

- During 2013–2015, 609 persons (9% of TB cases) died with TB. Of persons who died with TB, 21% died before receiving TB treatment.

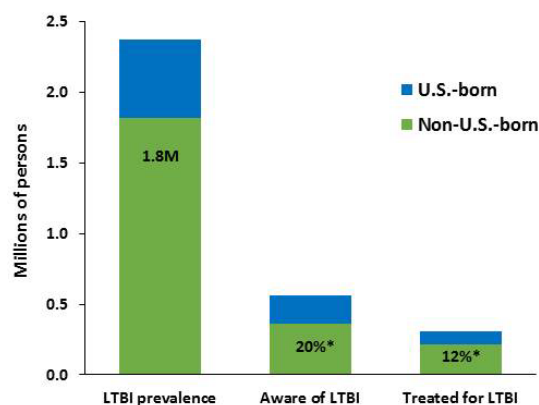
Drug-Resistant TB

- Multidrug-resistant (MDR) TB is TB resistant to the two most potent first line drugs, isoniazid and rifampin. Extensively drug-resistant (XDR) TB is MDR TB additionally resistant to two classes of second line drugs, fluoroquinolones and injectables.
- In 2017, there were 29 (1.9%) MDR TB cases in California, the same number reported in 2016.
- Despite a worldwide increase in MDR TB, the proportion of TB cases in California that are MDR has remained consistent (1–2%) since drug susceptibility data began being systematically collected in 1993.
- Since 1993, the start of routine tracking of drug resistance, 23 XDR TB cases have been reported in California.
- Patients with MDR and XDR TB generally have poorer outcomes because the most effective TB drugs are ineffective against their disease.

Treating Latent TB Infection is Critical

- Over 6% of California's total population is estimated to have LTBI, including 16.9% of the population born outside the U.S. and 1.9% of the population born in the U.S.
- More than 2 million Californians have LTBI. Approximately 1.8 million were born outside the U.S., of whom only 20% are aware of their infection and only 12% have been treated.
- Because an estimated 80% of cases arise from reactivation of LTBI, treating LTBI will prevent many TB cases in California.
- [Risk assessment tools](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/TB-Risk-Assessment.aspx) are available for use by medical providers to identify persons at risk for LTBI for testing and treatment (<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/TB-Risk-Assessment.aspx>).

Estimated latent TB infection prevalence, awareness and treatment, California, 2017



Estimated using National Health and Nutrition Examination Survey, 2011–2012 applied to the 2017 California population.

*Percent among non-U.S.-born