

TUBERCULOSIS FACT SHEET 2016



Tuberculosis (TB) is an infectious disease caused by the bacterium *Mycobacterium Tuberculosis*. TB usually involves the lungs (pulmonary TB) but can infect almost any organ in the body. TB is spread through the air from person to person. The risk of exposure and subsequent infection is linked with the intimacy and duration of contact, ventilation in the shared environment, and degree of infectiousness of the person with TB. About 5-10% of infected persons who do not receive treatment for latent TB infection later develop TB disease. Symptoms of TB depend on the site of TB infection. Common symptoms of pulmonary TB include a cough lasting at least three weeks, chest pain and coughing up blood or sputum (phlegm in lungs). TB skin tests (TST) and TB blood tests are used to detect TB bacteria in the body. Other tests, such as a chest x-ray and a sample of sputum, are needed to see if a person has TB disease. Both latent TB infection and TB disease can be treated, with specific drug regimens. Treatment can be long and complicated depending on characteristics of the patient (e.g., HIV co-infection) and infection (e.g., drug resistance).

Source: Centers for Disease Control and Prevention (CDC)

Trends in TB Disease

The rate of TB disease in Sacramento County has declined 43.0% over the most recent ten years [Figure 1]. The TB rate in the County has fluctuated by year and was below the State rate in 2016. Both rates have been much higher than the Healthy People 2020 objective rate of 1.0 per 100,000 population. There were 68 new TB cases among County residents in 2016, a slight decrease from 2015.

TB Case Demographics

Race/ethnicity: A majority (70.6%) of TB cases in the County were Asian/Pacific Islander, despite comprising only about 15 percent of the total County population [Figure 2].

Nativity: Most TB cases in the County (79.1%) were foreign-born persons, slightly lower than the State value (81.0%) [Table 1]. The most common countries of birth among foreign-born cases were the Philippines (22.4%), Vietnam (9.0%), China (7.5%), India (6.0%), and Laos (6.0%).

Sex: The number of TB cases among males surpassed the number of cases among females in 2016, despite a reversal of this trend for the previous two years. [Figure 3].

Age: Over two-fifths (41.2%) of County TB cases in 2016 were among persons age 65 and older. Less than five percent (4.4%) were pediatric cases age less than 15 [data not shown].

Figure 1. TB Case and Rates, Sacramento County vs. California, 2007-2016

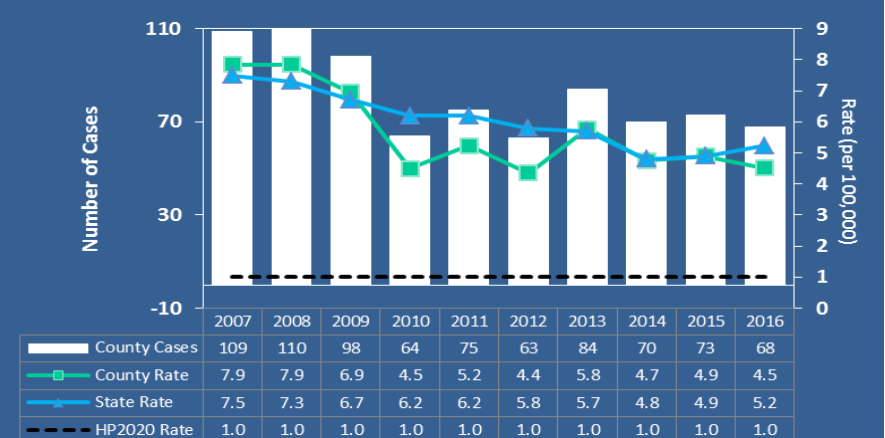


Figure 2. TB Cases by Race/Ethnicity, Sacramento County, 2016

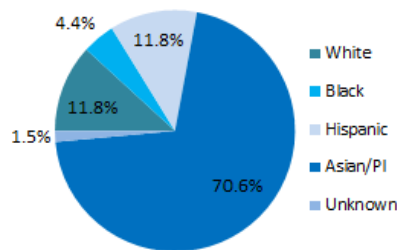
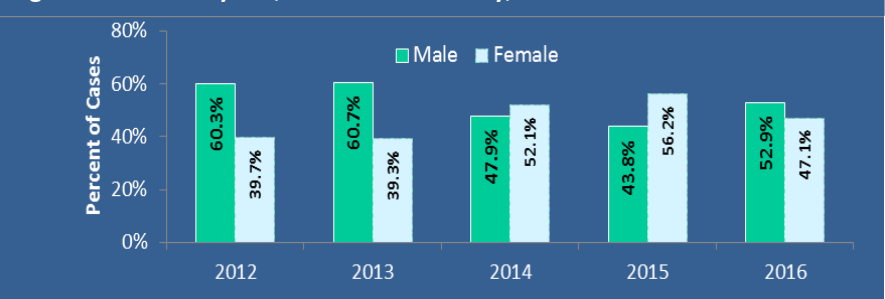


Table 1. TB Cases by Nativity, Sacramento County vs. California, 2016

County/State	Foreign-Born	US-Born
Sacramento	79.1%	20.9%
California	81.0%	18.9%

Figure 3. TB Case by Sex, Sacramento County, 2012-2016



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TB Risk Factors

Co-morbid conditions: The number and proportion of TB cases in the County with Diabetes Mellitus in 2016 declined in comparison to 2015, but remains higher than 2012 to 2014 [Figure 4]. In 2016, one-fourth (25.0%) of TB cases had DM. There was only one County TB case (1.4%) co-infected with HIV and 6 (8.8%) with other documented non-HIV immunosuppressive conditions in 2016 [data not shown].

Close contact: Three (4.4%) 2016 County TB cases had close contact to an infectious TB case. The primary reason two (2.9%) cases were evaluated for TB disease was because of a public health contact investigation [data not shown].

Living conditions: Homeless persons and persons living in congregate settings are at increased risk of developing TB, but they account for very few of the 2016 County TB cases [Table 2]. For the first time in four years, a single County TB case occurred in a homeless person.

Substance use: Substance use also increases the risk of developing TB disease and can complicate TB therapy, but very few County TB cases reported recent substance use [Table 2].

Site of TB Disease

About three-fourths (72.1%) of TB cases in the County in 2016 had pulmonary disease only [Figure 5]. Of the 19 (27.9%) cases with at least one extrapulmonary site of disease, the most common sites of disease were cervical (15.8%) and pleural (10.5%).

TB Drug Susceptibility and Resistance

In 2016, 52 (76.5%) of 68 County TB cases were culture-confirmed, and 51 (98.1%) of these had antimicrobial susceptibility testing performed. The most common type of front-line TB drug resistance among these cases was isoniazid (11.8%), followed by pyrazinamide (2.0%) and Rifampin (2.0%) [Figure 6]. Multi-drug resistance (MDR) is when the TB organism is resistant to at least isoniazid and rifampin. There was one case of MDR TB in the County in 2016.

Figure 4. TB Cases with Diabetes, Sacramento County, 2012-2016

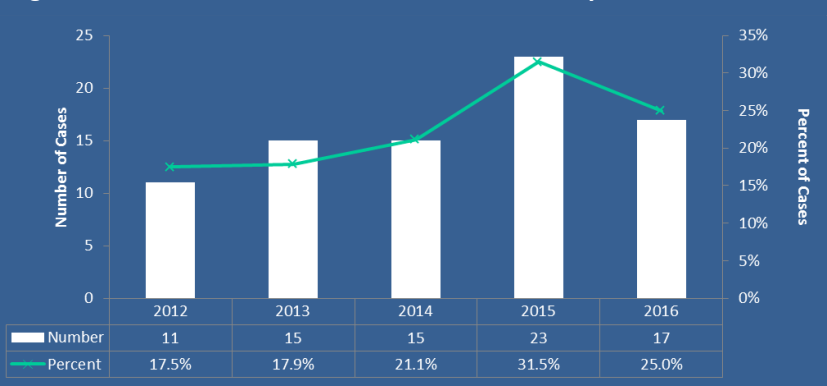


Table 2. Select Risk Factors of TB Cases, Sacramento County, 2016

Place of Residence	Substance Use within Past Year
Long-term care	0 (0.0%)
Corrections	0 (0.0%)
Homeless	1 (1.5%)
Excess alcohol	2 (3.0%)
Injection drugs	1 (1.5%)
Non-injection drugs	3 (4.5%)

Figure 5. TB Cases by General Site of Disease, Sacramento County, 2016

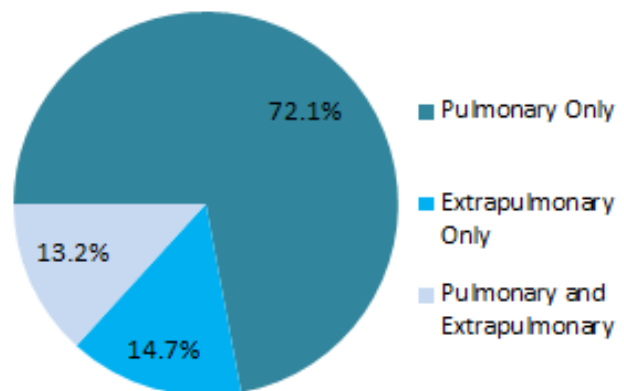


Figure 6. TB Drug Resistance, Sacramento County, 2012-2016



INH = isoniazid; RIF = rifampin; PZA = pyrazinamide; EMB = ethambutol; MDR = multi-drug resistant