

Report on Tuberculosis in California, 2015

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State of California

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Cover: The figures represent the 2,133 TB cases reported in California in 2015.



KAREN L. SMITH, MD, MPH
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EDMUND G. BROWN JR.
Governor

September 1, 2016

Dear Colleagues,

It is with great pleasure that I present to you the 2015 Report on Tuberculosis (TB) in California. Although TB disease did not decline in our state in 2015 compared to 2014, this report includes notable successes, including a decline in TB cases in very young children, and a steep decline in the rate of TB among black persons. Use of nucleic acid amplification testing to more rapidly diagnose TB increased across the state, as did HIV testing among our TB patients.

Despite these successes, the lack of decline in TB cases highlights the need for increased TB prevention activities. In 2015, nearly 2.5 million Californians were estimated to have latent TB infection (LTBI). Identifying and treating high risk populations with LTBI can prevent future cases of TB disease. With prevention in mind, the report includes information that can help us identify subpopulations in which to focus our TB prevention efforts, including:

- Asians and Pacific Islanders, who comprise more than half of California's TB cases
- Older populations, as the median age of TB cases born outside the United States increased to 57, while the median age of U.S.-born cases decreased to 34 in the past decade
- Long-term foreign-born residents, among whom 63 percent were in the United States for more than 10 years at the time of TB diagnosis
- The 31 percent of foreign-born persons with diabetes

In addition, for the first time this year, we report the results of genotyping of TB specimens, including genotyping surveillance coverage, the number and size of clusters, and characteristics of cases identified as *Mycobacterium bovis*. We also include information on the proportion of multidrug-resistant (MDR) TB cases by country of origin, information that can be used to identify patients for rapid molecular testing for drug resistance.

As a reminder, the tables in this report are provided on our website in Excel format as a tool for your use, as well in PDF format (<http://cdph.ca.gov/programs/tb>).



Thank you for all you do to control TB in California. I look forward to our continued partnership to prevent and eliminate TB in our state.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jennifer Flood". The signature is fluid and cursive, with the first name "Jennifer" and last name "Flood" clearly distinguishable.

Jennifer Flood, M.D., M.P.H., Chief
Tuberculosis Control Branch
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Introduction

Tuberculosis (TB) case reports are submitted to the California Department of Public Health (CDPH), TB Control Branch (TBCB), by 61 local health jurisdictions (58 counties, and the cities of Berkeley, Long Beach, and Pasadena). In 1993, the Centers for Disease Control and Prevention (CDC), in conjunction with state and local health departments, began using the Report of Verified Case of Tuberculosis (RVCT) to collect information on each case of TB. The RVCT includes demographic and clinical characteristics of TB cases, as well as information on drug resistance, risk factors for TB, and treatment outcomes. In 2009, CDC released an expanded RVCT that collects additional information to address the changing epidemiology of TB in terms of risk factors, new drug treatments, and enhanced laboratory capacity for diagnostic tests. California implemented this revised RVCT January 1, 2010.

CDPH Division of Communicable Disease Control implemented an internet-based surveillance system for reportable diseases including TB in January 2010. This system, California Reportable Disease Information Exchange (CalREDIE), allows all jurisdictions in California to submit TB case reports and access their local data on-line in a timely manner.

Acknowledgment

TBCB would like to thank surveillance and reporting staff in all local reporting jurisdictions. Without their hard work we would not have data for this publication. We also acknowledge the support of our partners at CDC's Division of Tuberculosis Elimination.

Executive Summary

The steady decline in tuberculosis (TB) in California seen over the last 25 years halted in 2015. The number of TB cases and the TB rate were unchanged in 2015 (2,133 cases and a rate of 5.5 per 100,000 population) compared with 2014 (Table 1). In contrast, the number of TB cases reported nationwide increased by nearly three percent, to 9,563 cases (3.0 per 100,000). In 2015, California reported 20 percent of the nation's cases. Although declines in TB have been small in recent years, TB cases in California have declined by 60 percent since the most recent peak in 1992. Finding and treating active TB cases continues to be the primary focus of public health programs, however, California's goal is the elimination of TB in our state by 2040. TB elimination is defined as <1 case per million population, which translates to a target of approximately 40 cases per year in California. To reach this ambitious goal we need diverse strategies, and to expand our focus to include prevention of TB among populations at risk.

Geographic distribution of TB

Although TB continues to be diagnosed throughout California, 19 rural local health jurisdictions (LHJs) reported no TB cases in 2015 (Table 13). Of those, six LHJs have not reported a TB case in the past decade (Table 14). Twelve of 27 (44 percent) LHJs with five or more cases in 2015 reported an increase in the number of TB cases compared to 2014 (Table 14).

Disparities in TB among racial and ethnic groups

In 2015, TB case numbers and rates declined in all racial/ethnic groups except Asian and Pacific Islander, where cases increased by nearly five percent, and accounted for 53 percent of all California's cases (Table 2). TB rates among the Asian and Pacific Islander group also increased by nearly three percent (Table 3). Of particular note, following several years of slower declines, TB among black non-Hispanic persons decreased by 17 percent from 2014 to 2015 (Table 2). Nevertheless, disparities continue to exist between racial/ethnic groups. In 2015, the TB rate among Asians and Pacific Islanders grew to nearly 22 times that of whites, while the rates among Hispanics and blacks were five and four times as great, respectively, compared to whites (Table 3). In 2015 the rate of TB among foreign-born persons (16.3 per 100,000) was nearly 12 times that of U.S.-born persons (1.4 per 100,000), an increase from 10 times greater in 2014. Ninety-three percent of Asian and Pacific Islander TB cases in California are born outside the United States (U.S.), contributing to the disparity in TB rates between U.S.-born and foreign-born persons (Tables 8, 9). The highest rates of TB among demographic groups are in Asians and Pacific Islanders born outside the U.S. (Table 9).

Age of TB patients

In 2015, 31 percent of TB patients were reported in persons 65 years of age or older (Table 2), in contrast to 2006, when only 24 percent were in the older age category. In the same time period, the median age of all TB cases rose to 54 from 46 years. The increase in age was predominately driven by foreign-born TB cases among whom the median age increased from 47 to 57 years between 2006 and 2015, while the median age of U.S.-born cases decreased from 44 to 34 years of age.

Thirty-six cases of TB were reported in children under the age of five in 2015, a dramatic decline from the previous year when 56 cases were reported in this most vulnerable group (Tables 2, 16, 17). Nearly 90 percent of these children were born in the U.S., and of those, two-thirds had at least one parent or guardian who was born in a country with an elevated rate of TB. TB in

very young children is often the result of transmission from a family member or caregiver whose TB had not been diagnosed and treated in a timely manner.

Foreign-born persons with TB

In 2015, 1,717 (80 percent) of California's TB cases were reported in persons born outside the United States (Table 2), an increase of nearly 3 percent compared to 2014. Of these, 77 percent were born in Mexico, the Philippines, Vietnam, China, or India (Table 11). Sixty-three percent of all foreign-born cases have resided in the United States for more than ten years, and nearly three-quarters have been in the United States more than five years. TB in these persons may be the result of reactivation of infection acquired in their home country rather than recent infection in the United States. Identification and treatment of latent TB infection (LTBI) in foreign-born populations to prevent active TB disease is one strategy to move California toward TB elimination. The California Tuberculosis Control Branch (TBCB) and the California Tuberculosis Controllers Association (CTCA), along with Curry International TB Center have included foreign-born persons from a country with an elevated TB rate in a risk assessment tool to assist health care providers in identifying persons who have an increased likelihood of TB infection and would benefit from LTBI testing and treatment.

Nine percent of foreign-born cases were diagnosed with TB within one year of their arrival in the United States, indicating infection and progression to disease likely occurred in their country of origin (Table 11). Although overseas screening for infectious diseases, including active TB, is required for persons applying for permanent residency in the United States, undocumented persons and persons with non-permanent visa types are not screened for TB, nor are persons screened for LTBI. The Centers for Disease Control and Prevention (CDC) is currently in the planning stages for implementing overseas screening for long-term non-permanent visa holders, including students and workers. In 2015, 53 cases of TB were reported in persons who first entered the United States with a student visa, and 39 cases were reported in persons with an employment visa (Table 22). TB cases in these populations may result in extended contact investigations in school or work settings, possible transmission of disease to others, and can be resource intensive. The addition of overseas screening for LTBI, and treatment of LTBI among arrivers in the United States could further diminish the pool of persons who may progress to TB disease in the future.

Medical risk factors for TB

Persons with medical conditions that compromise the immune system may be at increased risk for TB. In 2015, 586 persons with TB (28 percent) also had a diagnosis of diabetes, 114 (five percent) had an immunosuppressive condition other than HIV, 83 (four percent) had end-stage renal disease, 9 had received an organ transplant, and 12 were on TNF-alpha antagonist therapy (Table 38). Thirty-five percent (n=757) of all TB cases had one or more of these medical risk factors known to increase the likelihood of progression from latent infection to active TB disease. Among foreign-born persons, 39 percent had one or more medical risk factor compared to 20 percent of U.S.-born persons. Forty-five percent of TB cases with diabetes were 65 or more years of age, and more than 90 percent were 45 years or older. Testing foreign-born patients with diabetes may be a reasonable way to prioritize TB testing when all foreign-born persons cannot be tested.

State and national guidelines recommend testing all TB patients for HIV. In 2015, 87 percent of all TB patients were tested for HIV (Table 37), an increase from 80 percent in 2011, the earliest year for which data are available. Of those tested in 2015, 60 (three percent) TB patients were co-infected with HIV, and 70 percent of those were foreign-born. Because untreated latent TB

infection can quickly progress to TB disease in persons living with HIV, testing and treating HIV patients for LTBI is an opportunity to prevent additional TB disease.

Occupational and social characteristics of TB cases

Nearly five percent (n=92) of California's adult TB cases were diagnosed in health care workers in 2015 (Table 46). This proportion has increased in the past decade, from three to five percent. During that time period, an average of 82% of healthcare workers with TB were born outside the U.S. Other occupations included migratory seasonal work (n=30 cases) and correctional facility employment (n=2 cases).

In 2015, 41 (two percent) TB cases were residing in a correctional facility at the time of their TB diagnosis (Table 40). Thirteen of these cases were in the custody of Immigration and Customs Enforcement (ICE) at the time of their TB diagnosis. Declines in the number and proportion of correctional facility cases from 288 (five percent) in 1994 may be the result of focused screening efforts in correctional facilities.

Diagnostic tests for TB

The interferon gamma release assay (IGRA) is a blood test for TB infection that can be used instead of the tuberculin skin test (TST). The IGRA is not reactive with bacille Calmette-Guerin (BCG) vaccine, and therefore is more specific than the TST in detecting TB infection in persons who have had BCG vaccination. In 2015, 61 percent of all TB cases had IGRA tests performed (80 percent positive) (Table 30), compared to 22 percent in 2010. IGRA testing was done in 60 percent of foreign-born cases, and 64 percent of U.S.-born cases in 2015.

The results of nucleic acid amplification (NAA) tests, used to identify *Mycobacterium tuberculosis* (*Mtb*) in specimens can be available within hours after specimen collection. In 2015, 62 percent of all cases had NAA test performed (Table 27). NAA tests were done in 85 percent of sputum smear positive cases, and 47 percent of sputum smear negative cases. The use of NAA tests among sputum smear positive patients who had health department involvement in their care rose to 75 percent in 2013 (the most recent year information on health care provider is available) from 68 percent in 2010. Among patients cared for in the private sector, NAA test use among sputum smear positive cases increased more substantially, to 82 percent from 55 percent in the same time period. Continued expansion of the use of this test can result in earlier detection and treatment of TB cases, and can reduce the risk of transmission to others.

TB drug resistance

Resistance to most anti-tuberculosis drugs has remained stable since 1993, when this information was first collected on the TB case report form. Resistance to isoniazid, one of the most commonly used TB drugs is seen in 9–11 percent of culture positive TB cases each year (Table 55). In 2015, there were 23 (one percent) cases of multidrug resistance, defined as resistance to both isoniazid and rifampin (Table 53). Multidrug resistance has ranged from 1 to 2 percent each year (Table 56). Ninety-two percent of MDR TB cases during 2011-2015 were born outside the U.S., and the majority of these have resided in the U.S. for five years or more (Table 57). Although MDR TB occurs in relatively small numbers, these cases can be difficult and resource-intensive to treat. TBCB's California MDR TB Service provides expert consultation to local TB programs to ensure the best chance for cure in these patients.

The use of molecular tests for drug resistance among persons with risk factors for multidrug resistance can substantially shorten the time to start of MDR TB treatment. Such testing is

recommended in persons born in countries with high rates of MDR TB after immigration (Table 57), and persons who have immigrated recently. Additional risk factors include Hmong and Tibetan ethnicity, prior treatment for TB, contact to a patient with MDR TB, HIV infection, and failure of standard TB treatment.

Pyrazinamide (PZA) resistance has increased slightly among those tested, from 3–4 percent prior to 2002, to five percent in 2015 (Table 51). PZA resistance is typically suggestive of *Mycobacterium bovis*, a type of TB often caused by eating or drinking contaminated unpasteurized dairy products. Genotype testing can definitively identify *M. bovis*, which disproportionately affects children and immune-compromised adults, and is associated with extra-pulmonary disease (Table 66). In 2015, preliminary analysis of supplemental surveillance data linked to genotyping results found that more than 50 percent of persons with the *M. bovis* strain of TB reported consuming raw dairy products, which were predominately made in Mexico.

Completion of treatment

In 2013, the most recent year for which there is complete data available, 88 percent of patients who should complete treatment in one year or less did so (Table 60). Treatment completion has continued to improve slowly, up from 87 percent in 2008. Regardless of length of treatment, a total of 96 percent of patients in this group completed treatment in 2013.

Deaths with TB

Among all TB cases starting treatment in 2013, 166 (8 percent) died during treatment (Table 58). Persons who died during TB therapy were older than those who did not die (median age 75 vs. 50), and were more likely to have a medical risk factor such as diabetes (37 vs. 24 percent), end stage renal disease (13 vs. 3 percent), or an immunosuppressive condition other than HIV (12 vs. 5 percent). Among patients who died during treatment, 39% had all their TB care provided as a hospital inpatient.

In 2013, in addition to those patients who died during treatment, 23 percent (n=49) of all TB cases that died were dead at the time TB was diagnosed, or died before TB treatment was begun (Table 32). A total of 10 percent of TB patients die each year with TB, a percent that has not changed since expanded TB case reporting began in 1993. TBCB is working to better understand the reasons persons die with TB, and to identify opportunities to prevent deaths when possible.

Patients that move before completing treatment

In 2013, nearly nine percent (n=181) of TB patients who began treatment moved out of the jurisdiction where their TB was diagnosed prior to treatment completion. Of these, 40 percent moved within California, 13 percent moved to another state, and 47 percent moved out of the country. TBCB is working closely with international referral agencies CureTB (http://www.sandiegocounty.gov/hhsa/programs/phs/cure_tb/), and TBNet (<http://www.migrantclinician.org/services/network/tbnet.html>), to ensure these patients continue treatment in their destination country to prevent further transmission of disease and development of drug resistance. Treatment outcomes (completion of therapy, or death) in this group of patients are included when available in Tables 58-60 and 63, and Figures 15-17.

Genotyping of TB cases

TB genotyping, combined with epidemiologic data, can help identify persons with TB disease involved in the same chain of recent transmission, and is a valuable tool in outbreak investigations. It can also be used to help to distinguish recent infection from activation of an old infection. Genotyping is recommended for isolates from sputum and other clinical specimens that are positive for *Mtb*. In 2015, 95 percent of all TB cases with a positive culture for *Mtb* were submitted for genotyping, up from 92 percent in 2011 (Table 64). Genotype results from two or more cases in the same jurisdiction that match are considered “clustered”, and may indicate potential outbreaks, or transmission from one member of the cluster to another. Half of genotyped cases were clustered with at least one other case within the same jurisdiction during a three-year time period, indicating a possible chain of transmission (Table 65). Using methods developed by CDC to incorporate clinical, geographic, and genotype information, it is estimated that approximately 14% of culture-confirmed cases during 2013-2015 were the result of recent transmission of disease.

Latent TB infection

In 2015, more than 2.3 million residents of California are infected with tuberculosis (6.0 percent), applying estimates obtained from the National Health and Nutrition Survey (NHANES) 2011-2012, and reported on by Miramontes, et al, in 2015 (<http://www.ncbi.nlm.nih.gov/pubmed/26536035>) (Table 66). Seventeen percent of persons born outside the U.S., and 1.9 percent of U.S.-born residents have LTBI. Most of these persons are unaware of their infection, and therefore do not seek treatment to prevent progression to active TB disease. Clinicians can use the recently developed California TB risk assessment to identify patients for LTBI testing. (<http://www.cdph.ca.gov/programs/tb/Documents/TBCB-CA-TB-Risk-Assessment-and-Fact-Sheet.pdf>. Check with your local TB program for local modifications to the risk assessment.) Identifying, testing and treating persons with LTBI will decrease the burden of TB in the future, and move California more rapidly toward TB elimination.

Summary

TB cases and rates failed to decrease in California in 2015, following years of a slowing decline. The largest single annual decline since the peak of the epidemic in 1992 was nine percent, and occurred in 1999-2000, while during 1992-2000 the overall average decline was six percent. During the more recent period, 2005-2014, the average annual decline was only four percent. At this rate of decline, TB will not be eliminated from California for at least 100 years. Continuing our efforts to identify and successfully treat active TB cases in California is important to prevent transmission and the most severe outcomes. However, this strategy alone may not be sufficient to speed the decline in TB. In order to reach the goal of TB elimination (<1 case per million population) by 2040, we must expand our focus to preventing TB. This means identifying the estimated 2.5 million Californians with TB infection who may progress to active TB by testing populations at risk, such as foreign-born persons, and using shorter duration treatments for LTBI including four months of rifampin (4R), or three months of isoniazid and rifapentine (3HP). The California TB Elimination Advisory Committee has developed a stakeholder plan to more rapidly move us toward a TB-free California.

Table 1. Tuberculosis Cases and Case Rates per 100,000 Population: California, 1985-2015

Year	Cases	Rate	Percent Change in Cases From Previous Year	Percent Change in Rate From Previous Year
1985	3492	13.2	0.0	0.0
1986	3442	12.7	-1.4	-3.8
1987	3719	13.4	8.0	5.5
1988	3468	12.2	-6.7	-9.0
1989	4212	14.5	21.5	18.9
1990	4889	16.4	16.1	13.1
1991	5273	17.3	7.9	5.5
1992	5382	17.4	2.1	0.6
1993	5150	16.4	-4.3	-5.7
1994	4834	15.3	-6.1	-6.7
1995	4656	14.7	-3.7	-3.9
1996	4288	13.4	-7.9	-8.8
1997	4045	12.5	-5.7	-6.7
1998	3850	11.7	-4.8	-6.4
1999	3604	10.8	-6.4	-7.7
2000	3288	9.7	-8.8	-10.2
2001	3329	9.6	1.2	-1.0
2002	3172	9.1	-4.7	-5.2
2003	3218	9.1	1.5	0.0
2004	2992	8.4	-7.0	-7.7
2005	2900	8.1	-3.1	-3.6
2006	2776	7.7	-4.3	-4.9
2007	2725	7.5	-1.8	-2.6
2008	2699	7.3	-1.0	-2.7
2009	2467	6.7	-8.6	-8.2
2010	2325	6.2	-5.8	-7.5
2011	2323	6.2	-0.1	0.0
2012	2187	5.7	-5.9	-8.1
2013	2164	5.6	-1.1	-1.8
2014	2134	5.5	-1.4	-1.8
2015	2133	5.5	0.0	0.0

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change.
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Table 2. Tuberculosis Cases by Race/Ethnicity, Age Group, Sex, and Birthplace: California, 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Total Cases	2776	2725	2699	2467	2325	2323	2187	2164	2134	2133	-23.2	.

Race/Ethnicity	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
White, Not Hispanic	267	237	260	217	185	193	179	178	160	136	-49.1	-15.0
Black, Not Hispanic	208	218	210	190	153	138	137	134	118	98	-52.9	-16.9
Hispanic	1066	995	1059	913	872	851	817	783	762	759	-28.8	-0.4
Asian/Pacific Islander	1222	1260	1160	1135	1114	1136	1045	1065	1089	1139	-6.8	4.6
American Indian/Alaska Native	9	6	9	5	1	5	9	4	4	1	.	.
Unknown	4	9	1	7	.	.	.	.	1	.	.	.

Age Group	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
0-4	91	89	90	70	55	82	48	58	56	36	-60.4	-35.7
5-14	45	46	66	55	46	46	40	32	33	32	-28.9	-3.0
15-24	321	293	279	237	216	180	215	185	187	186	-42.1	-0.5
25-44	855	787	813	736	680	625	596	551	529	507	-40.7	-4.2
45-64	790	861	829	740	737	773	700	665	658	693	-12.3	5.3
65+	674	649	622	629	591	617	588	673	671	679	0.7	1.2

Sex	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Male	1666	1651	1657	1499	1376	1381	1295	1321	1292	1250	-25.0	-3.3
Female	1110	1074	1042	967	949	942	892	843	842	883	-20.5	4.9
Unknown	.	.	.	1	.	.	.	.	.	.	.	.

Birthplace	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
U.S.-born	639	599	673	585	497	518	470	465	460	407	-36.3	-11.5
Foreign-born	2124	2106	2021	1868	1824	1801	1716	1696	1671	1717	-19.2	2.8
Unknown	13	20	5	14	4	4	1	3	3	9	-30.8	.

. Indicates zero cases or percent change not calculated where number of cases is less than 5
California Department of Public Health, Tuberculosis Control Branch

Table 3. Tuberculosis Case Rates per 100,000 Population by Race/Ethnicity, Age Group, Sex, and Birthplace: California, 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Total Cases	7.7	7.5	7.3	6.7	6.2	6.2	5.7	5.6	5.5	5.5	-28.6	.

Race/Ethnicity	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
White, Not Hispanic	1.7	1.5	1.7	1.4	1.2	1.3	1.2	1.2	1.1	0.9	-47.1	-18.2
Black, Not Hispanic	8.8	9.2	8.8	8.0	6.5	5.8	5.7	5.5	4.9	4.0	-54.5	-18.4
Hispanic	8.2	7.5	7.9	6.6	6.2	5.9	5.6	5.3	5.1	5.0	-39.0	-2.0
Asian/Pacific Islander	25.0	25.2	22.8	21.8	20.7	20.8	18.9	18.9	19.0	19.5	-22.0	2.6
American Indian/Alaska Native	2.1	1.4	2.0	1.1	.	1.0	1.8	.	.	.	.	.

Age Group	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
0-4	3.5	3.4	3.5	2.7	2.2	3.2	1.9	2.3	2.2	1.4	-60.0	-36.4
5-14	0.8	0.9	1.3	1.1	0.9	0.9	0.8	0.6	0.7	0.6	-25.0	-14.3
15-24	5.9	5.3	5.0	4.3	3.9	3.2	3.8	3.3	3.3	3.3	-44.1	.
25-44	8.1	7.4	7.7	7.0	6.5	5.9	5.6	5.2	4.9	4.7	-42.0	-4.1
45-64	9.3	9.9	9.3	8.0	7.9	8.1	7.3	6.9	6.7	7.0	-24.7	4.5
65+	17.4	16.5	15.5	15.0	13.8	13.9	12.7	13.9	13.4	13.0	-25.3	-3.0

Sex	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Male	9.2	9.1	9.0	8.1	7.4	7.4	6.8	6.9	6.7	6.4	-30.4	-4.5
Female	6.1	5.8	5.6	5.2	5.1	5.0	4.7	4.4	4.3	4.5	-26.2	4.7

Birthplace	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
U.S.-born	2.4	2.3	2.5	2.2	1.8	1.9	1.7	1.7	1.6	1.4	-41.7	-12.5
Foreign-born	21.6	21.0	20.4	18.8	18.0	17.6	16.7	16.4	16.0	16.3	-24.5	1.9

. Case rate and percent change not calculated where number of cases is less than 5

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change; Race/Ethnic Population with Age and Gender Detail, 2000-2010; P-3 State and County Population Projections by Race/Ethnicity, Sex, and Age, 2010-2060; and the U.S. Census Bureau, American Community Survey.

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Table 4. Tuberculosis Cases by Race/Ethnicity and Age Group: California, 2006-2015

	Age Group	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Total Cases		2776	2725	2699	2467	2325	2323	2187	2164	2134	2133	-23.2	.
White, Not Hispanic		267	237	260	217	185	193	179	178	160	136	-49.1	-15.0
	0-4	1	5	5	4	4	1	2	4	3	1	.	.
	5-14	1	4	2	3	3	.	3	.	1	4	.	.
	15-24	21	4	16	15	11	10	8	4	5	6	-71.4	20.0
	25-44	53	47	48	50	42	37	37	31	23	20	-62.3	-13.0
	45-64	85	84	115	73	63	70	70	76	56	38	-55.3	-32.1
	65+	106	93	74	72	62	75	59	63	72	67	-36.8	-6.9
Black, Not Hispanic		208	218	210	190	153	138	137	134	118	98	-52.9	-16.9
	0-4	5	7	5	7	4	4	1	.	.	2	.	.
	5-14	.	2	7	7	3	4	5	1	1	1	.	.
	15-24	22	28	17	18	12	11	12	8	13	13	-40.9	.
	25-44	74	66	82	57	51	45	43	42	36	33	-55.4	-8.3
	45-64	74	85	76	66	60	56	55	57	48	34	-54.1	-29.2
	65+	33	30	23	35	23	18	21	26	20	15	-54.5	-25.0
Hispanic		1066	995	1059	913	872	851	817	783	762	759	-28.8	-0.4
	0-4	66	62	57	46	36	58	32	36	34	25	-62.1	-26.5
	5-14	35	26	43	36	25	25	26	23	22	22	-37.1	.
	15-24	167	157	162	126	100	87	104	97	92	93	-44.3	1.1
	25-44	376	338	370	310	310	258	258	253	233	204	-45.7	-12.4
	45-64	258	253	269	239	235	261	232	198	203	252	-2.3	24.1
	65+	164	159	158	156	166	162	165	176	178	163	-0.6	-8.4
Asian/Pacific Islander		1222	1260	1160	1135	1114	1136	1045	1065	1089	1139	-6.8	4.6
	0-4	19	15	23	13	11	19	13	18	19	8	-57.9	-57.9
	5-14	9	13	14	9	15	17	6	8	9	5	-44.4	-44.4
	15-24	110	103	84	78	93	72	91	75	77	74	-32.7	-3.9
	25-44	345	329	309	315	277	284	255	225	234	250	-27.5	6.8
	45-64	371	435	364	358	379	383	338	333	349	369	-0.5	5.7
	65+	368	365	366	362	339	361	342	406	401	433	17.7	8.0
American Indian/Alaska Native		9	6	9	5	1	5	9	4	4	1	.	.
	0-4	.	.	.	.	.	.	.	.	.	.	.	.
	5-14	.	.	.	.	.	.	.	.	.	.	.	.
	15-24	1	1	.	.	.	.	.	1	.	.	.	.
	25-44	5	2	4	.	.	1	3	.	3	.	.	.
	45-64	1	1	4	3	.	3	5	1	1	.	.	.
	65+	2	2	1	2	1	1	1	2	.	1	.	.

Table 4. Tuberculosis Cases by Race/Ethnicity and Age Group: California, 2006-2015

	Age Group	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Unknown		4	9	1	7	.	.	.	.	1	.	.	.
	0-4	.	.	.	.	.	.	.	.	.	.	.	.
	5-14	.	1	.	.	.	.	.	.	.	.	.	.
	15-24	.	.	.	.	.	.	.	.	.	.	.	.
	25-44	2	5	.	4	.	.	.	.	.	.	.	.
	45-64	1	3	1	1	.	.	.	.	1	.	.	.
	65+	1	.	.	2	.	.	.	.	.	.	.	.

. Indicates zero cases or percent change not calculated where number of cases is less than 5
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. Case rate and percent change not calculated where number of cases is less than 5

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change; Race/Hispanic Population with Age and Gender Detail, 2000-2010; P-3 State and County Population Projections by Race/Ethnicity, Sex, and Age, 2010-2060; and the U.S. Census Bureau, American Community Survey.

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Table 6. Tuberculosis Cases by Race/Ethnicity, Sex, and Age Group: California, 2015

	All Ages	Age Group					
		0-4	5-14	15-24	25-44	45-64	65+
Total Cases	2133	36	32	186	507	693	679
White, Not Hispanic	136	1	4	6	20	38	67
	Male	94	1	1	4	10	47
	Female	42	.	3	2	10	20
Black, Not Hispanic	98	2	1	13	33	34	15
	Male	54	1	1	6	24	6
	Female	44	1	.	7	17	9
Hispanic	759	25	22	93	204	252	163
	Male	465	11	13	57	171	84
	Female	294	14	9	36	75	79
Asian/Pacific Islander	1139	8	5	74	250	369	433
	Male	636	6	.	39	119	259
	Female	503	2	5	35	131	174
American Indian/Alaska Native	1	1
	Male	1	1
	Female

. Indicates zero cases

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Table 7. Tuberculosis Case Rates per 100,000 Population by Race/Ethnicity, Sex, and Age Group: California, 2015

		All Ages	Age Group					
			0-4	5-14	15-24	25-44	45-64	65+
Total Cases		5.5	1.4	0.6	3.3	4.7	7.0	13.0
White, Not Hispanic		0.9	.	.	0.4	0.5	0.8	2.2
	Male	1.3	.	.	.	0.5	1.3	3.4
	Female	0.6	.	.	.	0.6	0.3	1.2
Black, Not Hispanic		4.0	.	.	3.4	5.0	5.2	5.3
	Male	4.5	.	.	3.0	4.8	7.6	5.0
	Female	3.6	.	.	3.8	5.2	3.0	5.5
Hispanic		5.0	2.0	0.8	3.5	4.4	8.3	16.2
	Male	6.0	1.7	1.0	4.1	5.4	11.4	19.3
	Female	3.9	2.3	0.7	2.8	3.4	5.3	13.9
Asian/Pacific Islander		19.5	2.2	0.7	9.9	14.7	23.9	54.5
	Male	22.9	3.2	.	10.2	14.7	30.1	75.9
	Female	16.5	.	1.5	9.6	14.7	18.6	38.4
American Indian/Alaska Native		.	.	.	.	.	.	.
	Male	.	.	.	.	.	.	.
	Female	.	.	.	.	.	.	.

. Case rates not calculated where number of cases is less than 5

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change; and P-3 State and County Population Projections by Race/Ethnicity, Sex, and Age, 2010-2060.
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Table 8. Tuberculosis Cases and Rates in U.S.-born Persons by Race/Ethnicity, Sex, and Age Group: California, 2015

		All Ages	Case Numbers by Age Group						Case Rates by Age Group						
			0-4	5-14	15-24	25-44	45-64	65+	All Ages	0-4	5-14	15-24	25-44	45-64	65+
Total Cases		407	32	28	79	93	94	81	1.4	1.3	0.6	1.6	1.3	1.6	2.4
White, Not Hispanic		100	1	4	6	14	29	46	0.7	.	.	0.4	0.4	0.7	1.7
	Male	67	1	1	4	6	23	32	0.9	.	.	.	0.3	1.1	2.7
	Female	33	.	3	2	8	6	14	0.5	.	.	.	0.5	0.3	1.0
Black, Not Hispanic		62	2	.	5	16	29	10	2.6	.	.	1.3	2.6	5.0	3.9
	Male	37	1	.	1	8	22	5	3.2	.	.	.	2.5	7.7	4.7
	Female	25	1	.	4	8	7	5	2.1	.	.	.	2.6	2.4	3.4
Hispanic		194	22	19	52	49	31	21	2.0	1.7	0.7	2.3	2.2	3.2	5.8
	Male	111	8	12	26	31	22	12	2.3	1.2	0.9	2.3	2.7	4.7	7.4
	Female	83	14	7	26	18	9	9	1.7	2.2	0.6	2.3	1.6	1.8	4.5
Asian/Pacific Islander		50	7	5	16	14	5	3	2.4	2.7	1.0	3.5	2.5	2.3	.
	Male	25	5	.	8	7	3	2	2.4	3.7	.	3.3	2.5	.	.
	Female	25	2	5	8	7	2	1	2.4	.	2.0	3.6	2.6	.	.
American Indian/Alaska Native		1	.	.	.	.	.	1	.	.	.	.	.	.	.
	Male	1	.	.	.	.	.	1	.	.	.	.	.	.	.
	Female	.	.	.	.	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or rate not calculated where number of cases is less than 5

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change; P-3 State and County Population Projections by Race/Ethnicity, Sex, and Age, 2010-2060; and the U.S. Census Bureau, American Community Survey. California Department of Public Health, Tuberculosis Control Branch

Table 9. Tuberculosis Cases and Rates in Foreign-born Persons by Race/Ethnicity, Sex, and Age Group: California, 2015

		All Ages	Case Numbers by Age Group					
			0-4	5-14	15-24	25-44	45-64	65+
Total Cases		1717	4	4	107	411	596	595
White, Not Hispanic		36	.	.	.	6	9	21
	Male	27	.	.	.	4	8	15
	Female	9	.	.	.	2	1	6
Black, Not Hispanic		36	.	1	8	17	5	5
	Male	17	.	1	5	8	2	1
	Female	19	.	.	3	9	3	4
Hispanic		559	3	3	41	153	220	139
	Male	350	3	1	31	96	149	70
	Female	209	.	2	10	57	71	69
Asian/Pacific Islander		1086	1	.	58	235	362	430
	Male	610	1	.	31	112	209	257
	Female	476	.	.	27	123	153	173

Case Rates by Age Group						
All Ages	0-4	5-14	15-24	25-44	45-64	65+
16.3	.	.	14.0	10.2	15.7	35.9
2.5	.	.	.	1.4	1.8	5.4
3.8	3.3	9.3
1.2	2.6
25.0	.	.	61.5	29.3	9.4	33.7
24.0	.	.	64.6	27.0	.	.
25.9	.	.	.	31.8	.	.
10.3	.	.	9.6	6.6	11.3	23.4
12.8	.	.	13.1	7.9	15.4	28.4
7.8	.	.	5.2	5.2	7.3	19.9
31.0	.	.	25.3	19.2	28.0	65.7
38.4	.	.	26.2	20.2	36.0	92.4
24.8	.	.	24.4	18.4	21.5	46.0

. Indicates zero cases or rate not calculated where number of cases is less than 5

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change; P-3 State and County Population Projections by Race/Ethnicity, Sex, and Age, 2010-2060; and the U.S. Census Bureau, American Community Survey. California Department of Public Health, Tuberculosis Control Branch

Table 10. U.S.- and Foreign-born Tuberculosis Cases by Race/Ethnicity: California, 2006-2015

		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Total Cases		2776		2725		2699		2467		2325		2323		2187		2164		2134		2133		
U.S.-born		639	23.0	599	22.0	673	24.9	585	23.7	497	21.4	518	22.3	470	21.5	465	21.5	460	21.6	407	19.1	
	White, Not Hispanic	182	28.5	171	28.5	197	29.3	158	27.0	119	23.9	137	26.4	118	25.1	109	23.4	107	23.3	100	24.6	
	Black, Not Hispanic	147	23.0	166	27.7	156	23.2	136	23.2	108	21.7	90	17.4	80	17.0	91	19.6	70	15.2	62	15.2	
	Hispanic	239	37.4	202	33.7	252	37.4	217	37.1	214	43.1	220	42.5	205	43.6	201	43.2	207	45.0	194	47.7	
	Asian/Pacific Islander	61	9.5	54	9.0	60	8.9	70	12.0	55	11.1	66	12.7	58	12.3	60	12.9	72	15.7	50	12.3	
	American Indian/Alaska Native	8	1.3	3	0.5	8	1.2	4	0.7	1	0.2	5	1.0	9	1.9	4	0.9	4	0.9	1	0.2	
	Unknown	2	0.3	3	0.5
Foreign-born		2124	76.5	2106	77.3	2021	74.9	1868	75.7	1824	78.5	1801	77.5	1716	78.5	1696	78.4	1671	78.3	1717	80.5	
	White, Not Hispanic	81	3.8	65	3.1	63	3.1	59	3.2	66	3.6	56	3.1	61	3.6	68	4.0	53	3.2	36	2.1	
	Black, Not Hispanic	61	2.9	51	2.4	54	2.7	53	2.8	45	2.5	48	2.7	57	3.3	42	2.5	48	2.9	36	2.1	
	Hispanic	819	38.6	783	37.2	805	39.8	688	36.8	654	35.9	629	34.9	612	35.7	582	34.3	553	33.1	559	32.6	
	Asian/Pacific Islander	1160	54.6	1203	57.1	1097	54.3	1061	56.8	1059	58.1	1068	59.3	986	57.5	1004	59.2	1017	60.9	1086	63.3	
	American Indian/Alaska Native	1	0.0	3	0.1	1	0.0	1	0.1
	Unknown	2	0.1	1	0.0	1	0.0	6	0.3
Unknown		13	0.5	20	0.7	5	0.2	14	0.6	4	0.2	4	0.2	1	0.0	3	0.1	3	0.1	9	0.4	
	White, Not Hispanic	4	30.8	1	5.0	.	.	.	.	.	.	.	.	.	.	1	33.3	.	.	.	.
	Black, Not Hispanic	.	.	1	5.0	.	.	1	7.1	.	.	.	.	.	.	1	33.3	.	.	.	.
	Hispanic	8	61.5	10	50.0	2	40.0	8	57.1	4	100.0	2	50.0	.	.	.	.	2	66.7	6	66.7
	Asian/Pacific Islander	1	7.7	3	15.0	3	60.0	4	28.6	.	.	2	50.0	1	100.0	1	33.3	.	.	3	33.3	
	American Indian/Alaska Native
	Unknown	.	.	5	25.0	.	.	1	7.1	1	33.3	.	.	

. Indicates zero cases or zero percent

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Table 11. Tuberculosis Cases in Foreign-born Persons by Country of Origin and Time in the United States: California, 2015

Country of Origin*	Total Foreign-born Cases	<=1 year		1-2 years		3-5 years		6-10 years		11-20 years		>20 years		Unknown	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	1717	155	9.0	46	2.7	129	7.5	187	10.9	358	20.9	727	42.3	115	6.7
Mexico	445	23	5.2	3	0.7	16	3.6	30	6.7	92	20.7	230	51.7	51	11.5
Philippines	408	36	8.8	8	2.0	26	6.4	51	12.5	90	22.1	181	44.4	16	3.9
Vietnam	218	17	7.8	6	2.8	19	8.7	31	14.2	36	16.5	94	43.1	15	6.9
China**	144	9	6.3	1	0.7	14	9.7	12	8.3	42	29.2	60	41.7	6	4.2
India	113	22	19.5	8	7.1	18	15.9	15	13.3	25	22.1	24	21.2	1	0.9
El Salvador	44	2	4.5	4	9.1	3	6.8	10	22.7	9	20.5	15	34.1	1	2.3
Cambodia	41	.	.	.	.	2	4.9	2	4.9	2	4.9	25	61.0	10	24.4
Guatemala	36	4	11.1	2	5.6	2	5.6	12	33.3	8	22.2	7	19.4	1	2.8
Korea, South	29	1	3.4	1	3.4	2	6.9	.	.	8	27.6	16	55.2	1	3.4
Laos	24	.	.	.	.	1	4.2	.	.	4	16.7	16	66.7	3	12.5
Korea, North	20	2	10.0	1	5.0	1	5.0	1	5.0	5	25.0	9	45.0	1	5.0
Indonesia	16	3	18.8	2	12.5	3	18.8	2	12.5	2	12.5	4	25.0	.	.
Pakistan	15	4	26.7	.	.	2	13.3	1	6.7	1	6.7	4	26.7	3	20.0
Ethiopia	14	4	28.6	.	.	5	35.7	2	14.3	3	21.4	.	.	.	.
Burma	12	3	25.0	.	.	2	16.7	3	25.0	2	16.7	2	16.7	.	.
Peru	12	1	8.3	.	.	.	.	1	8.3	5	41.7	5	41.7	.	.
Thailand	12	2	16.7	1	8.3	.	.	.	.	2	16.7	7	58.3	.	.
Taiwan	12	1	8.3	.	.	.	.	1	8.3	2	16.7	7	58.3	1	8.3
Iran	9	1	11.1	.	.	.	.	.	.	3	33.3	5	55.6	.	.
Honduras	8	.	.	4	50.0	1	12.5	.	.	1	12.5	2	25.0	.	.
Nepal	8	2	25.0	1	12.5	2	25.0	2	25.0	1	12.5	.	.	.	.
Afghanistan	7	1	14.3	1	14.3	.	.	2	28.6	1	14.3	2	28.6	.	.
Bangladesh	5	1	20.0	1	20.0	1	20.0	.	.	2	40.0	.	.	.	.
Nigeria	5	1	20.0	.	.	1	20.0	1	20.0	2	40.0	.	.	.	.
Nicaragua	5	.	.	.	.	1	20.0	.	.	1	20.0	2	40.0	1	20.0
Other Countries	55	15	27.3	2	3.6	7	12.7	8	14.5	9	16.4	10	18.2	4	7.3

. Indicates zero cases or zero percent

* Countries listed in order of number of cases

** People's Republic of China includes Hong Kong

California Department of Public Health, Tuberculosis Control Branch

Table 12. HIV/AIDS-associated Tuberculosis* by Demographic Characteristics and Risk Factors for Tuberculosis: California, 2010-2015

	2010			2011			2012			2013			2014			2015		
	Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
Total	2325	102	4.4	2323	102	4.4	2187	88	4.0	2164	76	3.5	2134	86	4.0	2133	60	2.8
Race/Ethnicity																		
White, Not Hispanic	185	9	4.9	193	9	4.7	179	7	3.9	178	15	8.4	160	8	5.0	136	7	5.1
Black, Not Hispanic	153	20	13.1	138	22	15.9	137	16	11.7	134	21	15.7	118	19	16.1	98	13	13.3
Hispanic	872	62	7.1	851	62	7.3	817	50	6.1	783	29	3.7	762	41	5.4	759	32	4.2
Asian/Pacific Islander	1114	11	1.0	1136	9	0.8	1045	14	1.3	1065	11	1.0	1089	17	1.6	1139	8	0.7
American Indian/Alaska Native	1	.	.	5	.	.	9	1	11.1	4	.	.	4	1	25.0	1	.	.
Unknown	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Age Group																		
0-4	55	.	.	82	.	.	48	.	.	58	.	.	56	.	.	36	.	.
5-14	46	.	.	46	1	2.2	40	.	.	32	.	.	33	.	.	32	.	.
15-24	216	1	0.5	180	2	1.1	215	2	0.9	185	6	3.2	187	5	2.7	186	1	0.5
25-44	680	63	9.3	625	52	8.3	596	47	7.9	551	36	6.5	529	41	7.8	507	28	5.5
45-64	737	35	4.7	773	45	5.8	700	36	5.1	665	29	4.4	658	32	4.9	693	28	4.0
65+	591	3	0.5	617	2	0.3	588	3	0.5	673	5	0.7	671	8	1.2	679	3	0.4
Sex																		
Male	1376	83	6.0	1381	86	6.2	1295	75	5.8	1321	55	4.2	1292	73	5.7	1250	49	3.9
Female	949	19	2.0	942	16	1.7	892	13	1.5	843	21	2.5	842	13	1.5	883	11	1.2
Place of Birth																		
U.S.-born	497	37	7.4	518	32	6.2	470	31	6.6	465	32	6.9	460	35	7.6	407	18	4.4
Foreign-born	1824	64	3.5	1801	70	3.9	1716	57	3.3	1696	44	2.6	1671	51	3.1	1717	42	2.4
Unknown	4	1	25.0	4	.	.	1	.	.	3	.	.	3	.	.	9	.	.
Homeless																		
No	2209	91	4.1	2175	82	3.8	2049	63	3.1	2030	59	2.9	2023	74	3.7	2010	48	2.4
Yes	102	10	9.8	125	19	15.2	129	24	18.6	128	17	13.3	104	12	11.5	114	12	10.5
Unknown	14	1	7.1	23	1	4.3	9	1	11.1	6	.	.	7	.	.	9	.	.
Alcohol Use																		
No	2106	82	3.9	2078	78	3.8	1960	66	3.4	1973	67	3.4	1952	75	3.8	1950	48	2.5
Yes	173	15	8.7	211	21	10.0	199	19	9.5	173	7	4.0	162	9	5.6	153	11	7.2
Unknown	46	5	10.9	34	3	8.8	28	3	10.7	18	2	11.1	20	2	10.0	30	1	3.3

Table 12. HIV/AIDS-associated Tuberculosis* by Demographic Characteristics and Risk Factors for Tuberculosis: California, 2010-2015

	2010			2011			2012			2013			2014			2015		
	Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
Injecting Drug Use																		
No	2264	99	4.4	2261	95	4.2	2122	80	3.8	2114	68	3.2	2076	78	3.8	2073	55	2.7
Yes	26	1	3.8	22	4	18.2	40	5	12.5	31	6	19.4	29	5	17.2	27	1	3.7
Unknown	35	2	5.7	40	3	7.5	25	3	12.0	19	2	10.5	29	3	10.3	33	4	12.1
Non-injecting Drug Use																		
No	2147	79	3.7	2166	80	3.7	2038	66	3.2	2000	57	2.9	1967	59	3.0	1989	43	2.2
Yes	138	21	15.2	119	20	16.8	120	19	15.8	144	17	11.8	144	25	17.4	110	16	14.5
Unknown	40	2	5.0	38	2	5.3	29	3	10.3	20	2	10.0	23	2	8.7	34	1	2.9
Diagnosed in Correctional Facility																		
No	2243	93	4.1	2229	94	4.2	2123	84	4.0	2090	72	3.4	2069	78	3.8	2090	59	2.8
Yes	79	9	11.4	75	8	10.7	59	3	5.1	73	4	5.5	63	8	12.7	41	1	2.4
Unknown	3	.	.	19	.	.	5	1	20.0	1	.	.	2	.	.	2	.	.

. Indicates zero cases or zero percent

* Match found in HIV/AIDS Case Registry, California Office of AIDS or HIV-positive status reported on RVCT
California Department of Public Health, Tuberculosis Control Branch

Table 13. Tuberculosis Cases, Rates per 100,000 Population, and Rank* According to Rate: Reporting Jurisdictions in California, 2014-2015

Reporting Jurisdiction	2014 Rank	2014 Cases	2014 Rate	2015 Rank	2015 Cases	2015 Rate
Imperial	1	37	20.2	1	31	16.8
San Francisco	2	112	13.1	2	96	11.1
Santa Clara	4	162	8.6	3	198	10.3
Alameda	6	108	7.3	4	139	9.3
Long Beach	9	30	6.3	5	39	8.2
San Joaquin	5	54	7.5	6	58	8.0
San Mateo	3	74	9.8	7	57	7.5
San Diego	7	220	6.8	8	234	7.1
Merced	30	6	2.2	9	19	7.0
Los Angeles	10	586	6.2	10	604	6.3
Berkeley	19	5	4.2	11	7	5.8
California	.	.	.	.	.	5.5
Solano	12	24	5.6	12	23	5.4
Yolo	21	8	3.8	13	11	5.2
Orange	11	187	6.0	14	161	5.1
Sacramento	16	70	4.8	15	73	4.9
Santa Barbara	8	29	6.6	16	19	4.3
Fresno	14	51	5.3	17	40	4.1
Contra Costa	18	48	4.4	18	45	4.0
Monterey	19	18	4.2	19	16	3.7
Marin	23	9	3.5	20	9	3.4
Kern	17	40	4.6	21	29	3.3
Stanislaus	27	13	2.4	21	18	3.3
Kings	32	3	.	21	5	3.3
San Bernardino	27	50	2.4	24	69	3.2
Tulare	22	17	3.7	24	15	3.2
United States	.	.	.	.	.	3.0
Ventura	13	46	5.4	26	24	2.8
Riverside	24	65	2.8	27	52	2.2
Sonoma	27	12	2.4	28	9	1.8
Healthy People 2020 Target	.	.	.	.	.	1.0
Madera	15	8	5.2	29	4	.
Placer	32	4	.	29	4	.
Shasta	32	2	.	29	4	.
Butte	25	6	2.7	29	3	.
El Dorado	25	5	2.7	29	3	.
Napa	32	3	.	29	3	.
Pasadena	32	4	.	29	2	.
San Luis Obispo	32	3	.	29	2	.
Santa Cruz	31	5	1.8	29	2	.
Sutter	32	2	.	29	2	.
Glenn	45	.	.	29	1	.
Nevada	45	.	.	29	1	.
San Benito	32	1	.	29	1	.
Trinity	45	.	.	29	1	.
Alpine	45	.	.	43	.	.

**Table 13. Tuberculosis Cases, Rates per 100,000 Population, and Rank* According to Rate:
Reporting Jurisdictions in California, 2014-2015**

Reporting Jurisdiction	2014 Rank	2014 Cases	2014 Rate	2015 Rank	2015 Cases	2015 Rate
Amador	45	.	.	43	.	.
Calaveras	32	1	.	43	.	.
Colusa	45	.	.	43	.	.
Del Norte	45	.	.	43	.	.
Humboldt	32	2	.	43	.	.
Inyo	45	.	.	43	.	.
Lake	45	.	.	43	.	.
Lassen	45	.	.	43	.	.
Mariposa	45	.	.	43	.	.
Mendocino	32	1	.	43	.	.
Modoc	45	.	.	43	.	.
Mono	45	.	.	43	.	.
Plumas	45	.	.	43	.	.
Sierra	45	.	.	43	.	.
Siskiyou	32	1	.	43	.	.
Tehama	45	.	.	43	.	.
Tuolumne	45	.	.	43	.	.
Yuba	32	2	.	43	.	.

* All jurisdictions with one to four cases are given the same rank, and all jurisdictions with zero cases are given the same rank.

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change, and E-4 Historical Population Estimates for Cities, Counties, and the State.

. Indicates zero cases or rate not calculated where number of cases is less than 5

California Department of Public Health, Tuberculosis Control Branch

Table 14. Tuberculosis Cases by Year: Reporting Jurisdictions in California, 2006-2015

Reporting Jurisdiction	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
California	2776	2725	2699	2467	2325	2323	2187	2164	2134	2133	-23.2	.
Alameda	141	149	134	156	178	132	136	114	108	139	-1.4	28.7
Alpine	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	1	.	1	.	.	.	.	.
Berkeley	5	6	4	4	9	1	6	5	5	7	40.0	40.0
Butte	3	3	3	2	2	.	4	4	6	3	.	.
Calaveras	.	1	.	2	.	1	1	.	1	.	.	.
Colusa	2	.	1	.	3	.	2	.	.	.	.	.
Contra Costa	50	51	79	47	33	60	55	57	48	45	-10.0	-6.3
Del Norte	1	.	.	1	.	.	.	.	.	.	.	.
El Dorado	4	3	4	1	1	3	2	1	5	3	.	.
Fresno	62	41	75	66	55	46	34	38	51	40	-35.5	-21.6
Glenn	1	2	1	.	1	.	3	1	.	1	.	.
Humboldt	1	.	.	2	1	1	5	2	2	.	.	.
Imperial	33	29	21	36	24	27	30	38	37	31	-6.1	-16.2
Inyo	.	1	.	.	1	.	.	.	.	.	.	.
Kern	41	38	50	41	35	40	34	28	40	29	-29.3	-27.5
Kings	2	6	5	4	4	6	5	6	3	5	.	.
Lake	1	1	2	.	2	1	2	2	.	.	.	.
Lassen	.	.	.	1	.	.	2	.	.	.	.	.
Long Beach	39	39	47	44	42	29	34	38	30	39	.	30.0
Los Angeles	879	815	790	702	675	680	625	660	586	604	-31.3	3.1
Madera	3	1	20	8	3	12	10	6	8	4	.	.
Marin	6	16	6	14	11	12	15	13	9	9	50.0	.
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	4	3	4	3	.	2	2	1	1	.	.	.
Merced	9	5	5	11	6	6	19	12	6	19	111.1	216.7
Modoc	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	29	22	24	16	21	25	18	17	18	16	-44.8	-11.1
Napa	7	7	3	8	6	6	3	3	3	3	.	.
Nevada	2	.	3	.	.	1	1	.	.	1	.	.
Orange	226	217	210	197	224	209	192	187	187	161	-28.8	-13.9
Pasadena	7	5	6	3	5	5	11	5	4	2	.	.
Placer	6	14	2	7	3	6	6	6	4	4	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	74	80	79	69	73	68	57	54	65	52	-29.7	-20.0
Sacramento	97	109	110	98	65	75	63	84	70	73	-24.7	4.3
San Benito	1	.	1	.	1	3	.	1	1	1	.	.
San Bernardino	58	59	74	76	60	53	58	58	50	69	19.0	38.0
San Diego	315	280	264	223	222	263	234	206	220	234	-25.7	6.4
San Francisco	120	143	118	115	98	108	116	107	112	96	-20.0	-14.3
San Joaquin	78	51	66	76	46	44	44	43	54	58	-25.6	7.4
San Luis Obispo	2	3	1	3	4	6	3	4	3	2	.	.
San Mateo	78	89	64	66	59	59	54	58	74	57	-26.9	-23.0

Table 14. Tuberculosis Cases by Year: Reporting Jurisdictions in California, 2006-2015

Reporting Jurisdiction	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Santa Barbara	15	14	34	22	30	21	24	26	29	19	26.7	-34.5
Santa Clara	228	240	197	197	193	180	175	181	162	198	-13.2	22.2
Santa Cruz	6	10	10	5	10	10	7	5	5	2	.	.
Shasta	5	4	2	1	2	.	1	4	2	4	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	1	.	.	.
Solano	26	37	33	23	20	34	17	12	24	23	-11.5	-4.2
Sonoma	14	13	9	9	9	13	13	8	12	9	-35.7	-25.0
Stanislaus	16	16	20	20	16	9	7	10	13	18	12.5	38.5
Sutter	3	1	6	1	3	6	5	4	2	2	.	.
Tehama	2	4	1	2	.	1	.	.	.	.	.	.
Trinity	1	.	.	.	.	.	.	.	.	1	.	.
Tulare	21	25	33	24	26	20	12	16	17	15	-28.6	-11.8
Tuolumne	.	.	.	1	.	.	.	.	.	.	.	.
Ventura	49	57	65	48	33	35	34	28	46	24	-51.0	-47.8
Yolo	3	9	8	12	8	3	3	6	8	11	.	37.5
Yuba	.	6	5	.	1	1	2	5	2	.	.	.

. Indicates zero cases or percent change not calculated where number of cases is less than 5
 California Department of Public Health, Tuberculosis Control Branch

Table 15. Tuberculosis Case Rates per 100,000 Population: Reporting Jurisdictions in California, 2006-2015

Reporting Jurisdiction	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
California	7.7	7.5	7.3	6.7	6.2	6.2	5.7	5.6	5.5	5.5	-28.6	.
Alameda	10.4	10.9	9.7	11.2	12.7	9.3	9.5	7.8	7.3	9.3	-10.6	27.4
Alpine	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.	.	.
Berkeley	4.6	5.5	.	.	8.0	.	5.2	4.3	4.2	5.8	26.1	38.1
Butte	.	.	.	.	.	.	.	.	2.7	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	4.9	5.0	7.6	4.5	3.1	5.6	5.1	5.2	4.4	4.0	-18.4	-9.1
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	.	.	.	.	.	.	.	.	2.7	.	.	.
Fresno	7.0	4.6	8.2	7.1	5.9	4.9	3.6	4.0	5.3	4.1	-41.4	-22.6
Glenn	.	.	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	3.7	.	.	.	.	.
Imperial	20.3	17.4	12.3	20.8	13.7	15.2	16.7	21.1	20.2	16.8	-17.2	-16.8
Inyo	.	.	.	.	.	.	.	.	.	.	.	.
Kern	5.2	4.7	6.1	4.9	4.2	4.7	4.0	3.2	4.6	3.3	-36.5	-28.3
Kings	.	4.0	3.3	.	.	4.0	3.3	4.0	.	3.3	.	.
Lake	.	.	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	8.4	8.4	10.1	9.5	9.1	6.2	7.2	8.0	6.3	8.2	-2.4	30.2
Los Angeles	9.6	8.9	8.6	7.6	7.3	7.3	6.7	7.0	6.2	6.3	-34.4	1.6
Madera	.	.	13.4	5.3	.	7.9	6.6	3.9	5.2	.	.	.
Marin	2.4	6.4	2.4	5.6	4.4	4.7	5.9	5.0	3.5	3.4	41.7	-2.9
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.	.	.
Merced	3.7	2.0	2.0	4.3	2.3	2.3	7.2	4.5	2.2	7.0	89.2	218.2
Modoc	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	7.1	5.4	5.8	3.9	5.1	6.0	4.3	4.0	4.2	3.7	-47.9	-11.9
Napa	5.3	5.3	.	5.9	4.4	4.4	.	.	.	.	.	.
Nevada	.	.	.	.	.	.	.	.	.	.	.	.
Orange	7.6	7.3	7.0	6.6	7.4	6.8	6.2	6.0	6.0	5.1	-32.9	-15.0
Pasadena	5.1	3.7	4.4	.	3.6	3.6	7.8	3.5	.	.	.	.
Placer	1.9	4.2	.	2.0	.	1.7	1.7	1.6	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	3.7	3.8	3.7	3.2	3.3	3.1	2.5	2.4	2.8	2.2	-40.5	-21.4
Sacramento	7.1	7.9	7.9	6.9	4.6	5.2	4.4	5.8	4.8	4.9	-31.0	2.1
San Benito	.	.	.	.	.	.	.	.	.	.	.	.
San Bernardino	2.9	2.9	3.7	3.8	2.9	2.6	2.8	2.8	2.4	3.2	10.3	33.3
San Diego	10.6	9.3	8.7	7.2	7.2	8.4	7.4	6.4	6.8	7.1	-33.0	4.4
San Francisco	15.3	18.1	14.8	14.3	12.1	13.2	13.9	12.7	13.1	11.1	-27.5	-15.3
San Joaquin	11.8	7.6	9.8	11.2	6.7	6.3	6.3	6.1	7.5	8.0	-32.2	6.7
San Luis Obispo	.	.	.	.	.	2.2	.	.	.	.	.	.
San Mateo	11.2	12.6	9.0	9.2	8.2	8.1	7.3	7.8	9.8	7.5	-33.0	-23.5
Santa Barbara	3.6	3.4	8.1	5.2	7.1	4.9	5.6	6.0	6.6	4.3	19.4	-34.8

Table 15. Tuberculosis Case Rates per 100,000 Population: Reporting Jurisdictions in California, 2006-2015

Reporting Jurisdiction	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Percent Change 2006-2015	Percent Change 2014-2015
Santa Clara	13.3	13.8	11.2	11.1	10.8	9.9	9.5	9.7	8.6	10.3	-22.6	19.8
Santa Cruz	2.3	3.9	3.8	1.9	3.8	3.8	2.6	1.8	1.8	.	.	.
Shasta	2.9	.	.	.	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.
Solano	6.3	9.0	8.0	5.6	4.8	8.2	4.1	2.9	5.6	5.4	-14.3	-3.6
Sonoma	3.0	2.7	1.9	1.9	1.9	2.7	2.7	1.6	2.4	1.8	-40.0	-25.0
Stanislaus	3.2	3.1	3.9	3.9	3.1	1.7	1.3	1.9	2.4	3.3	3.1	37.5
Sutter	.	.	6.4	.	.	6.3	5.2	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.
Tulare	5.0	5.9	7.6	5.5	5.9	4.5	2.7	3.5	3.7	3.2	-36.0	-13.5
Tuolumne	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	6.1	7.1	8.0	5.9	4.0	4.2	4.1	3.3	5.4	2.8	-54.1	-48.1
Yolo	.	4.6	4.0	6.0	4.0	.	.	2.9	3.8	5.2	.	36.8
Yuba	.	8.5	7.0	.	.	.	.	6.7	.	.	.	.

. Rates and rate change not calculated where number of cases is less than 5

Note: Denominators for computing rates are from the California Department of Finance, E-2 California County Population Estimates and Components of Change, and E-4 Historical Population Estimates for Cities, Counties, and the State.
California Department of Public Health, Tuberculosis Control Branch

Table 16. Tuberculosis Cases by Age Group: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	All Ages	Age Group					
		0-4	5-14	15-24	25-44	45-64	65+
California	2133	36	32	186	507	693	679
Alameda	139	1	1	13	33	43	48
Berkeley	7	.	.	4	.	2	1
Contra Costa	45	1	.	4	7	19	14
Fresno	40	3	.	6	7	14	10
Imperial	31	2	.	6	10	6	7
Kern	29	.	.	1	6	16	6
Kings	5	.	.	1	1	3	.
Long Beach	39	.	.	3	6	20	10
Los Angeles	604	5	6	40	135	225	193
Marin	9	.	.	4	3	.	2
Merced	19	2	4	1	3	3	6
Monterey	16	.	2	.	4	2	8
Orange	161	1	2	14	27	58	59
Riverside	52	3	.	9	10	18	12
Sacramento	73	.	3	9	19	16	26
San Bernardino	69	3	2	8	12	25	19
San Diego	234	5	6	29	60	66	68
San Francisco	96	2	.	1	23	28	42
San Joaquin	58	3	1	5	17	18	14
San Mateo	57	.	1	3	19	16	18
Santa Barbara	19	2	.	5	5	4	3
Santa Clara	198	1	.	9	66	59	63
Solano	23	1	1	.	6	8	7
Sonoma	9	.	.	3	3	2	1
Stanislaus	18	1	1	1	3	4	8
Tulare	15	.	.	2	3	6	4
Ventura	24	.	1	2	5	5	11
Yolo	11	.	1	1	4	1	4
All Other Jurisdictions*	33	.	.	2	10	6	15

. Indicates zero cases

* Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 17. Tuberculosis Cases in Persons 0-4 Years of Age: Reporting Jurisdictions in California, 2007-2015

Reporting Jurisdiction	2007		2008		2009		2010		2011		2012		2013		2014		2015	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yuba	.	.	.	.	.	.	.	.	.	.	.	.	1	20.0	.	.	.	.
All Other Jurisdictions*	3	11.1	.	.	.	.	.	.	.	.	1	3.1	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Reporting jurisdictions with fewer than 5 total cases in any year

California Department of Public Health, Tuberculosis Control Branch

Table 18. Tuberculosis Cases in Persons 0-14 Years of Age that Lived Outside the United States for Greater than Two Months: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Cases 0-4 Yrs	Cases with Information		Lived Outside U.S. > Two Months		Cases 5-14 Yrs	Cases with Information		Lived Outside U.S. > Two Months	
		No.	%	No.	%		No.	%	No.	%
California	36	34	94.4	4	11.8	32	30	93.8	6	20.0
Alameda	1	1	100.0	.	.	1	1	100.0	.	.
Berkeley	.	.	.	.	.	.	.	.	.	.
Contra Costa	1	1	100.0	.	.	.	.	.	.	.
Fresno	3	3	100.0	.	.	.	.	.	.	.
Imperial	2	2	100.0	.	.	.	.	.	.	.
Kern	.	.	.	.	.	.	.	.	.	.
Kings	.	.	.	.	.	.	.	.	.	.
Long Beach	.	.	.	.	.	.	.	.	.	.
Los Angeles	5	4	80.0	.	.	6	4	66.7	1	25.0
Marin	.	.	.	.	.	.	.	.	.	.
Merced	2	2	100.0	.	.	4	4	100.0	.	.
Monterey	.	.	.	.	.	2	2	100.0	1	50.0
Orange	1	1	100.0	.	.	2	2	100.0	1	50.0
Riverside	3	2	66.7	1	50.0	.	.	.	.	.
Sacramento	.	.	.	.	.	3	3	100.0	.	.
San Bernardino	3	3	100.0	1	33.3	2	2	100.0	.	.
San Diego	5	5	100.0	1	20.0	6	6	100.0	2	33.3
San Francisco	2	2	100.0	1	50.0	.	.	.	.	.
San Joaquin	3	3	100.0	.	.	1	1	100.0	.	.
San Mateo	.	.	.	.	.	1	1	100.0	.	.
Santa Barbara	2	2	100.0	.	.	.	.	.	.	.
Santa Clara	1	1	100.0	.	.	.	.	.	.	.
Solano	1	1	100.0	.	.	1	1	100.0	.	.
Sonoma	.	.	.	.	.	.	.	.	.	.
Stanislaus	1	1	100.0	.	.	1	1	100.0	.	.
Tulare	.	.	.	.	.	.	.	.	.	.
Ventura	.	.	.	.	.	1	1	100.0	1	100.0
Yolo	.	.	.	.	.	1	1	100.0	.	.
All Other Jurisdictions*	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Reporting jurisdictions with fewer than 5 total cases

California Department of Public Health, Tuberculosis Control Branch

Table 19. Tuberculosis Cases by Race/Ethnicity: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Race/Ethnicity													
		White, Not Hispanic		Black, Not Hispanic		Hispanic		Asian		Amer Indian/ Alaska Native		Native Hawaiian/ Pacific Islander		Multi-race*	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2133	136	6.4	97	4.5	759	35.6	1128	52.9	1	0.0	10	0.5	2	0.1
Alameda	139	9	6.5	16	11.5	14	10.1	99	71.2	.	.	1	0.7	.	.
Berkeley	7	1	14.3	1	14.3	.	.	5	71.4	.	.	.	.	.	.
Contra Costa	45	4	8.9	2	4.4	13	28.9	26	57.8	.	.	.	.	.	.
Fresno	40	5	12.5	2	5.0	25	62.5	8	20.0	.	.	.	.	.	.
Imperial	31	1	3.2	.	.	29	93.5	1	3.2	.	.	.	.	.	.
Kern	29	.	.	1	3.4	20	69.0	7	24.1	.	.	1	3.4	.	.
Kings	5	1	20.0	.	.	1	20.0	3	60.0	.	.	.	.	.	.
Long Beach	39	4	10.3	1	2.6	8	20.5	26	66.7	.	.	.	.	.	.
Los Angeles	604	33	5.5	42	7.0	255	42.2	270	44.7	.	.	3	0.5	1	0.2
Marin	9	2	22.2	.	.	6	66.7	1	11.1	.	.	.	.	.	.
Merced	19	.	.	.	.	17	89.5	2	10.5	.	.	.	.	.	.
Monterey	16	.	.	.	.	9	56.3	7	43.8	.	.	.	.	.	.
Orange	161	8	5.0	1	0.6	34	21.1	117	72.7	.	.	.	.	1	0.6
Riverside	52	4	7.7	4	7.7	30	57.7	14	26.9	.	.	.	.	.	.
Sacramento	73	1	1.4	3	4.1	10	13.7	59	80.8	.	.	.	.	.	.
San Bernardino	69	2	2.9	3	4.3	36	52.2	28	40.6	.	.	.	.	.	.
San Diego	234	17	7.3	4	1.7	124	53.0	87	37.2	.	.	2	0.9	.	.
San Francisco	96	6	6.3	6	6.3	15	15.6	69	71.9	.	.	.	.	.	.
San Joaquin	58	5	8.6	2	3.4	22	37.9	29	50.0	.	.	.	.	.	.
San Mateo	57	6	10.5	.	.	12	21.1	37	64.9	.	.	2	3.5	.	.
Santa Barbara	19	3	15.8	.	.	13	68.4	3	15.8	.	.	.	.	.	.
Santa Clara	198	5	2.5	4	2.0	21	10.6	167	84.3	.	.	1	0.5	.	.
Solano	23	.	.	4	17.4	2	8.7	17	73.9	.	.	.	.	.	.
Sonoma	9	.	.	.	.	6	66.7	3	33.3	.	.	.	.	.	.
Stanislaus	18	2	11.1	.	.	9	50.0	7	38.9	.	.	.	.	.	.
Tulare	15	1	6.7	.	.	10	66.7	4	26.7	.	.	.	.	.	.
Ventura	24	6	25.0	.	.	10	41.7	8	33.3	.	.	.	.	.	.
Yolo	11	2	18.2	1	9.1	1	9.1	7	63.6	.	.	.	.	.	.
All Other Jurisdictions**	33	8	24.2	.	.	7	21.2	17	51.5	1	3.0	.	.	.	.

. Indicates zero cases or zero percent

* Two or more races reported

** Reporting jurisdictions with fewer than 5 total cases

California Department of Public Health, Tuberculosis Control Branch

**Table 20. Tuberculosis Cases by U.S.-born and Foreign-born Persons:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	All Cases	U.S.-born		Foreign-born		Unknown	
		No.	%	No.	%	No.	%
California	2133	407	19.1	1717	80.5	9	0.4
Alameda	139	20	14.4	119	85.6	.	.
Berkeley	7	2	28.6	5	71.4	.	.
Contra Costa	45	8	17.8	37	82.2	.	.
Fresno	40	17	42.5	23	57.5	.	.
Imperial	31	16	51.6	15	48.4	.	.
Kern	29	5	17.2	24	82.8	.	.
Kings	5	2	40.0	3	60.0	.	.
Long Beach	39	6	15.4	33	84.6	.	.
Los Angeles	604	111	18.4	487	80.6	6	1.0
Marin	9	3	33.3	6	66.7	.	.
Merced	19	8	42.1	11	57.9	.	.
Monterey	16	3	18.8	13	81.3	.	.
Orange	161	16	9.9	145	90.1	.	.
Riverside	52	16	30.8	34	65.4	2	3.8
Sacramento	73	12	16.4	61	83.6	.	.
San Bernardino	69	12	17.4	57	82.6	.	.
San Diego	234	61	26.1	173	73.9	.	.
San Francisco	96	13	13.5	83	86.5	.	.
San Joaquin	58	23	39.7	35	60.3	.	.
San Mateo	57	5	8.8	52	91.2	.	.
Santa Barbara	19	6	31.6	13	68.4	.	.
Santa Clara	198	9	4.5	188	94.9	1	0.5
Solano	23	2	8.7	21	91.3	.	.
Sonoma	9	2	22.2	7	77.8	.	.
Stanislaus	18	5	27.8	13	72.2	.	.
Tulare	15	3	20.0	12	80.0	.	.
Ventura	24	9	37.5	15	62.5	.	.
Yolo	11	3	27.3	8	72.7	.	.
All Other Jurisdictions*	33	9	27.3	24	72.7	.	.

. Indicates zero cases or zero percent

* Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 21. Tuberculosis Cases in Foreign-born Persons by Time in the United States: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Foreign-born Cases	<= 1 year		1-2 years		3-5 years		6-10 years		11-20 years		>20 years		Unknown Time in U.S.	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	1717	155	9.0	46	2.7	129	7.5	187	10.9	358	20.9	727	42.3	115	6.7
Alameda	119	16	13.4	5	4.2	20	16.8	14	11.8	24	20.2	37	31.1	3	2.5
Berkeley	5	2	40.0	.	.	.	.	.	.	.	.	1	20.0	2	40.0
Contra Costa	37	6	16.2	1	2.7	2	5.4	3	8.1	10	27.0	14	37.8	1	2.7
Fresno	23	2	8.7	.	.	2	8.7	.	.	3	13.0	16	69.6	.	.
Imperial	15	1	6.7	.	.	2	13.3	.	.	4	26.7	8	53.3	.	.
Kern	24	2	8.3	.	.	3	12.5	1	4.2	7	29.2	8	33.3	3	12.5
Kings	3	.	.	.	.	.	.	1	33.3	1	33.3	1	33.3	.	.
Long Beach	33	2	6.1	.	.	.	.	1	3.0	3	9.1	20	60.6	7	21.2
Los Angeles	487	26	5.3	10	2.1	27	5.5	50	10.3	123	25.3	251	51.5	.	.
Marin	6	1	16.7	.	.	.	.	4	66.7	1	16.7	.	.	.	.
Merced	11	2	18.2	.	.	.	.	.	.	7	63.6	2	18.2	.	.
Monterey	13	1	7.7	.	.	.	.	1	7.7	1	7.7	5	38.5	5	38.5
Orange	145	13	9.0	2	1.4	9	6.2	21	14.5	22	15.2	69	47.6	9	6.2
Riverside	34	5	14.7	2	5.9	2	5.9	1	2.9	2	5.9	13	38.2	9	26.5
Sacramento	61	5	8.2	3	4.9	4	6.6	8	13.1	11	18.0	23	37.7	7	11.5
San Bernardino	57	2	3.5	1	1.8	4	7.0	3	5.3	3	5.3	17	29.8	27	47.4
San Diego	173	18	10.4	2	1.2	13	7.5	16	9.2	33	19.1	82	47.4	9	5.2
San Francisco	83	10	12.0	3	3.6	6	7.2	8	9.6	22	26.5	32	38.6	2	2.4
San Joaquin	35	2	5.7	.	.	3	8.6	4	11.4	7	20.0	15	42.9	4	11.4
San Mateo	52	5	9.6	4	7.7	2	3.8	12	23.1	10	19.2	19	36.5	.	.
Santa Barbara	13	1	7.7	.	.	1	7.7	3	23.1	5	38.5	3	23.1	.	.
Santa Clara	188	21	11.2	11	5.9	22	11.7	21	11.2	38	20.2	61	32.4	14	7.4
Solano	21	4	19.0	.	.	1	4.8	4	19.0	2	9.5	7	33.3	3	14.3
Sonoma	7	1	14.3	1	14.3	.	.	1	14.3	1	14.3	2	28.6	1	14.3
Stanislaus	13	2	15.4	1	7.7	1	7.7	.	.	2	15.4	4	30.8	3	23.1
Tulare	12	1	8.3	.	.	1	8.3	1	8.3	1	8.3	3	25.0	5	41.7
Ventura	15	2	13.3	.	.	.	.	3	20.0	6	40.0	3	20.0	1	6.7
Yolo	8	1	12.5	.	.	1	12.5	2	25.0	1	12.5	3	37.5	.	.
All Other Jurisdictions*	24	1	4.2	.	.	3	12.5	4	16.7	8	33.3	8	33.3	.	.

. Indicates zero cases or zero percent

* Reporting jurisdictions with fewer than 5 total cases

California Department of Public Health, Tuberculosis Control Branch

Table 22. Immigration Status* of Foreign-born Tuberculosis Cases at First Entry into the United States: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Foreign-born Cases with Information	Immigrant Visa		Student Visa		Employment Visa		Tourist Visa		Family/fiance Visa		Refugee		Asylee or Parolee		Other Immigration Status**		Unknown***	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	1710	751	43.9	53	3.1	39	2.3	42	2.5	63	3.7	63	3.7	5	0.3	323	18.9	371	21.7
Alameda	119	79	66.4	6	5.0	5	4.2	5	4.2	3	2.5	7	5.9	1	0.8	9	7.6	4	3.4
Berkeley	5	1	20.0	4	80.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	37	21	56.8	3	8.1	2	5.4	4	10.8	.	.	1	2.7	1	2.7	5	13.5	.	.
Fresno	23	6	26.1	.	.	.	.	.	.	.	.	.	.	.	.	15	65.2	2	8.7
Imperial	15	1	6.7	.	.	.	.	.	.	.	.	.	.	.	.	14	93.3	.	.
Kern	24	4	16.7	.	.	.	.	.	.	4	16.7	.	.	.	.	16	66.7	.	.
Kings	3	3	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	33	13	39.4	.	.	.	.	1	3.0	.	.	6	18.2	.	.	5	15.2	8	24.2
Los Angeles	483	98	20.3	11	2.3	3	0.6	6	1.2	2	0.4	8	1.7	.	.	61	12.6	294	60.9
Marin	6	1	16.7	.	.	.	.	.	.	.	.	.	.	.	.	5	83.3	.	.
Merced	11	3	27.3	.	.	.	.	1	9.1	.	.	1	9.1	1	9.1	5	45.5	.	.
Monterey	13	6	46.2	.	.	1	7.7	.	.	2	15.4	1	7.7	.	.	3	23.1	.	.
Orange	144	94	65.3	8	5.6	4	2.8	5	3.5	.	.	8	5.6	.	.	23	16.0	2	1.4
Riverside	34	6	17.6	1	2.9	.	.	.	.	.	.	.	.	.	.	4	11.8	23	67.6
Sacramento	61	57	93.4	.	.	.	.	.	.	.	.	1	1.6	.	.	1	1.6	2	3.3
San Bernardino	56	7	12.5	.	.	1	1.8	1	1.8	4	7.1	1	1.8	.	.	36	64.3	6	10.7
San Diego	173	115	66.5	3	1.7	2	1.2	5	2.9	12	6.9	6	3.5	.	.	27	15.6	3	1.7
San Francisco	83	78	94.0	1	1.2	1	1.2	1	1.2	.	.	1	1.2	.	.	1	1.2	.	.
San Joaquin	34	15	44.1	1	2.9	1	2.9	.	.	1	2.9	5	14.7	1	2.9	8	23.5	2	5.9
San Mateo	52	10	19.2	.	.	.	.	2	3.8	.	.	.	.	.	.	33	63.5	7	13.5
Santa Barbara	13	6	46.2	.	.	.	.	.	.	.	.	.	.	.	.	7	53.8	.	.
Santa Clara	188	78	41.5	12	6.4	18	9.6	9	4.8	32	17.0	14	7.4	1	0.5	19	10.1	5	2.7
Solano	21	20	95.2	.	.	.	.	1	4.8	.	.	.	.	.	.	.	.	.	.
Sonoma	7	.	.	1	14.3	.	.	.	.	1	14.3	.	.	.	.	.	.	5	71.4
Stanislaus	13	3	23.1	.	.	.	.	.	.	.	.	1	7.7	.	.	8	61.5	1	7.7
Tulare	12	4	33.3	.	.	.	.	.	.	.	.	.	.	.	.	7	58.3	1	8.3
Ventura	15	9	60.0	.	.	.	.	1	6.7	.	.	.	.	.	.	4	26.7	1	6.7
Yolo	8	5	62.5	2	25.0	.	.	.	.	.	.	.	.	.	.	.	.	1	12.5
All Other Jurisdictions†	24	8	33.3	.	.	1	4.2	.	.	2	8.3	2	8.3	.	.	7	29.2	4	16.7

* See Technical Notes for more information on reporting immigration status.

** Foreign-born TB patients who first entered the United States with a status that is other than those listed and whose status is not known

*** Foreign-born TB patients who do not know their immigration status at first entry to the United States or patients in jurisdictions with policies that forbid asking patients their immigration status

. Indicates zero cases or zero percent

† Reporting jurisdictions with fewer than 5 cases

Table 23. Primary Reason Evaluated for Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Cases with Information on Reason Evaluated		Primary Reason Evaluated for TB Disease*																
				TB Symptoms		Abnormal Chest Radiograph		Contact Investigation		Targeted Testing		Health Care Worker		Employment/Administrative Testing		Immigration Medical Exam		Incidental Lab Result		
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
California	2133	2119	99.3	1259	59.4	460	21.7	56	2.6	53	2.5	4	0.2	7	0.3	39	1.8	241	11.4	
Alameda	139	139	100.0	101	72.7	22	15.8	3	2.2	1	0.7	.	.	.	.	.	.	12	8.6	
Alpine	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berkeley	7	7	100.0	3	42.9	4	57.1	.	.	.	.	.	.	.	.	.	.	.	.	.
Butte	3	3	100.0	.	.	3	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	45	45	100.0	34	75.6	5	11.1	.	.	.	.	.	.	.	.	2	4.4	4	8.9	
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	3	3	100.0	1	33.3	.	.	.	.	.	.	.	.	.	.	.	.	2	66.7	
Fresno	40	40	100.0	34	85.0	2	5.0	3	7.5	.	.	.	.	.	.	1	2.5	.	.	
Glenn	1	1	100.0	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Imperial	31	31	100.0	5	16.1	22	71.0	4	12.9	.	.	.	.	.	.	.	.	.	.	.
Inyo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kern	29	29	100.0	21	72.4	4	13.8	.	.	.	.	.	.	.	.	.	.	4	13.8	
Kings	5	5	100.0	1	20.0	2	40.0	.	.	.	.	.	.	.	.	1	20.0	1	20.0	
Lake	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	39	39	100.0	17	43.6	15	38.5	.	.	.	.	1	2.6	.	.	2	5.1	4	10.3	
Los Angeles	604	604	100.0	311	51.5	186	30.8	15	2.5	11	1.8	1	0.2	3	0.5	9	1.5	68	11.3	
Madera	4	4	100.0	2	50.0	2	50.0	.	.	.	.	.	.	.	.	.	.	.	.	.
Marin	9	9	100.0	7	77.8	2	22.2	.	.	.	.	.	.	.	.	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Merced	19	18	94.7	14	77.8	.	.	2	11.1	.	.	.	.	.	.	.	.	2	11.1	
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	16	16	100.0	8	50.0	3	18.8	1	6.3	.	.	.	.	.	.	1	6.3	3	18.8	
Napa	3	2	66.7	.	.	2	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.
Nevada	1	1	100.0	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Orange	161	161	100.0	113	70.2	30	18.6	1	0.6	.	.	.	.	.	.	4	2.5	13	8.1	

Table 23. Primary Reason Evaluated for Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Cases with Information on Reason Evaluated		Primary Reason Evaluated for TB Disease*															
				TB Symptoms		Abnormal Chest Radiograph		Contact Investigation		Targeted Testing		Health Care Worker		Employment/Administrative Testing		Immigration Medical Exam		Incidental Lab Result	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasadena	2	2	100.0	1	50.0	1	50.0	.	.	.	.	.	.	.	.	.	.	.	.
Placer	4	4	100.0	3	75.0	1	25.0	.	.	.	.	.	.	.	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	52	47	90.4	27	57.4	10	21.3	.	.	1	2.1	.	.	.	.	.	.	9	19.1
Sacramento	73	73	100.0	57	78.1	1	1.4	7	9.6	7	9.6	.	.	.	.	.	.	1	1.4
San Benito	1	1	100.0	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
San Bernardino	69	68	98.6	57	83.8	4	5.9	.	.	1	1.5	.	.	.	.	.	.	6	8.8
San Diego	234	234	100.0	127	54.3	32	13.7	9	3.8	19	8.1	.	.	1	0.4	8	3.4	38	16.2
San Francisco	96	96	100.0	83	86.5	8	8.3	1	1.0	.	.	.	.	.	.	3	3.1	1	1.0
San Joaquin	58	56	96.6	20	35.7	15	26.8	7	12.5	4	7.1	.	.	.	.	.	.	10	17.9
San Luis Obispo	2	2	100.0	1	50.0	1	50.0	.	.	.	.	.	.	.	.	.	.	.	.
San Mateo	57	57	100.0	32	56.1	11	19.3	.	.	.	.	.	.	2	3.5	1	1.8	11	19.3
Santa Barbara	19	19	100.0	12	63.2	4	21.1	.	.	.	.	.	.	.	.	1	5.3	2	10.5
Santa Clara	198	197	99.5	103	52.3	38	19.3	2	1.0	7	3.6	1	0.5	1	0.5	5	2.5	40	20.3
Santa Cruz	2	2	100.0	.	.	1	50.0	.	.	.	.	.	.	.	.	.	.	1	50.0
Shasta	4	4	100.0	3	75.0	1	25.0	.	.	.	.	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solano	23	23	100.0	13	56.5	7	30.4	.	.	1	4.3	.	.	.	.	1	4.3	1	4.3
Sonoma	9	8	88.9	3	37.5	2	25.0	.	.	.	.	.	.	.	.	.	.	3	37.5
Stanislaus	18	16	88.9	7	43.8	7	43.8	1	6.3	.	.	.	.	.	.	.	.	1	6.3
Sutter	2	2	100.0	1	50.0	1	50.0	.	.	.	.	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	100.0	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tulare	15	15	100.0	11	73.3	4	26.7	.	.	.	.	.	.	.	.	.	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	24	24	100.0	18	75.0	4	16.7	.	.	1	4.2	1	4.2	.	.	.	.	.	.
Yolo	11	11	100.0	4	36.4	3	27.3	.	.	.	.	.	.	.	.	.	.	4	36.4
Yuba	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* See Technical Notes for details about reporting the primary reason patient was evaluated for TB.

California Department of Public Health, Tuberculosis Control Branch

Table 24. Tuberculosis Cases by Form of Disease: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Pulmonary*		Extrapulmonary**		Both Pulmonary and Extrapulmonary	
		No.	%	No.	%	No.	%
California	2133	1504	69.9	419	19.5	210	9.8
Alameda	139	98	70.5	25	18.0	16	11.5
Alpine	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.
Berkeley	7	3	42.9	3	42.9	1	14.3
Butte	3	3	100.0	.	.	.	.
Calaveras	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.
Contra Costa	45	26	57.8	11	24.4	8	17.8
Del Norte	.	.	.	.	.	.	.
El Dorado	3	3	100.0	.	.	.	.
Fresno	40	35	87.5	3	7.5	2	5.0
Glenn	1	1	100.0	.	.	.	.
Humboldt	.	.	.	.	.	.	.
Imperial	31	25	80.6	3	9.7	3	9.7
Inyo	.	.	.	.	.	.	.
Kern	29	20	69.0	6	20.7	3	10.3
Kings	5	4	80.0	1	20.0	.	.
Lake	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.
Long Beach	39	27	69.2	5	12.8	7	17.9
Los Angeles	604	437	72.4	105	17.4	62	10.3
Madera	4	3	75.0	1	25.0	.	.
Marin	9	6	66.7	3	33.3	.	.
Mariposa	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.
Merced	19	15	78.9	4	21.1	.	.
Modoc	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.
Monterey	16	8	50.0	5	31.3	3	18.8
Napa	3	2	66.7	1	33.3	.	.
Nevada	1	1	100.0	.	.	.	.
Orange	161	121	75.2	28	17.4	12	7.5
Pasadena	2	2	100.0	.	.	.	.
Placer	4	4	100.0	.	.	.	.
Plumas	.	.	.	.	.	.	.
Riverside	52	38	73.1	11	21.2	3	5.8
Sacramento	73	53	72.6	6	8.2	14	19.2
San Benito	1	1	100.0	.	.	.	.
San Bernardino	69	50	72.5	15	21.7	4	5.8
San Diego	234	168	71.8	39	16.7	27	11.5
San Francisco	96	68	70.8	22	22.9	6	6.3
San Joaquin	58	42	72.4	10	17.2	6	10.3
San Luis Obispo	2	2	100.0	.	.	.	.
San Mateo	57	35	61.4	21	36.8	1	1.8
Santa Barbara	19	15	78.9	4	21.1	.	.
Santa Clara	198	117	59.1	60	30.3	21	10.6
Santa Cruz	2	1	50.0	.	.	1	50.0
Shasta	4	4	100.0	.	.	.	.

Table 24. Tuberculosis Cases by Form of Disease: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Pulmonary*		Extrapulmonary**		Both Pulmonary and Extrapulmonary	
		No.	%	No.	%	No.	%
Sierra	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.
Solano	23	14	60.9	9	39.1	.	.
Sonoma	9	3	33.3	5	55.6	1	11.1
Stanislaus	18	15	83.3	3	16.7	.	.
Sutter	2	1	50.0	1	50.0	.	.
Tehama	.	.	.	.	.	.	.
Trinity	1	1	100.0	.	.	.	.
Tulare	15	7	46.7	2	13.3	6	40.0
Tuolumne	.	.	.	.	.	.	.
Ventura	24	18	75.0	6	25.0	.	.
Yolo	11	7	63.6	1	9.1	3	27.3
Yuba	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Cases with only pulmonary site of disease

** Cases with pleural, lymphatic, bone and/or joint, meningeal, peritoneal, or other site of disease. No cases of pulmonary disease are included.

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Table 25. Verification Criteria* by Diagnostic Classification of Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Laboratory Confirmation of TB						Clinical Confirmation of TB			
		Positive Culture		Positive NAAT**		Positive Smear		Clinical Case		Provider Diagnosis	
		No.	%	No.	%	No.	%	No.	%	No.	%
Shasta	4	4	100.0	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.
Solano	23	17	73.9	2	8.7	.	.	4	17.4	.	.
Sonoma	9	7	77.8	.	.	.	.	1	11.1	1	11.1
Stanislaus	18	14	77.8	2	11.1	.	.	1	5.6	1	5.6
Sutter	2	1	50.0	1	50.0	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	100.0	.	.	.	.	.	.	.	.
Tulare	15	11	73.3	.	.	.	.	2	13.3	2	13.3
Tuolumne	.	.	.	.	.	.	.	.	.	.	.
Ventura	24	18	75.0	.	.	.	.	5	20.8	1	4.2
Yolo	11	9	81.8	2	18.2	.	.	.	.	.	.
Yuba	.	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* See Technical Notes for description of verification criteria of TB.

** NAAT=Nucleic Acid Amplification Test

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Table 26. Tuberculosis Cases by Sputum Smear Status: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Pulmonary Cases	Sputum Smear Positive		Sputum Smear Negative		Sputum Smear Not Done		Sputum Smear Unknown	
		No.	%	No.	%	No.	%	No.	%
California	1714	908	53.0	711	41.5	92	5.4	3	0.2
Alameda	114	48	42.1	60	52.6	6	5.3	.	.
Alpine	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.
Berkeley	4	.	.	4	100.0	.	.	.	.
Butte	3	2	66.7	.	.	1	33.3	.	.
Calaveras	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.
Contra Costa	34	20	58.8	12	35.3	2	5.9	.	.
Del Norte	.	.	.	.	.	.	.	.	.
El Dorado	3	1	33.3	2	66.7	.	.	.	.
Fresno	37	22	59.5	11	29.7	4	10.8	.	.
Glenn	1	.	.	.	.	1	100.0	.	.
Humboldt	.	.	.	.	.	.	.	.	.
Imperial	28	14	50.0	12	42.9	2	7.1	.	.
Inyo	.	.	.	.	.	.	.	.	.
Kern	23	12	52.2	10	43.5	1	4.3	.	.
Kings	4	3	75.0	1	25.0	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.
Long Beach	34	18	52.9	16	47.1	.	.	.	.
Los Angeles	499	280	56.1	194	38.9	24	4.8	1	0.2
Madera	3	2	66.7	1	33.3	.	.	.	.
Marin	6	5	83.3	1	16.7	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.
Merced	15	7	46.7	6	40.0	2	13.3	.	.
Modoc	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.
Monterey	11	5	45.5	5	45.5	1	9.1	.	.
Napa	2	.	.	2	100.0	.	.	.	.
Nevada	1	.	.	1	100.0	.	.	.	.
Orange	133	88	66.2	43	32.3	2	1.5	.	.
Pasadena	2	2	100.0	.	.	.	.	.	.
Placer	4	3	75.0	1	25.0	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.
Riverside	41	20	48.8	16	39.0	3	7.3	2	4.9
Sacramento	67	37	55.2	29	43.3	1	1.5	.	.
San Benito	1	.	.	1	100.0	.	.	.	.
San Bernardino	54	28	51.9	21	38.9	5	9.3	.	.
San Diego	195	104	53.3	81	41.5	10	5.1	.	.
San Francisco	74	28	37.8	41	55.4	5	6.8	.	.
San Joaquin	48	19	39.6	20	41.7	9	18.8	.	.
San Luis Obispo	2	1	50.0	1	50.0	.	.	.	.
San Mateo	36	12	33.3	22	61.1	2	5.6	.	.
Santa Barbara	15	9	60.0	3	20.0	3	20.0	.	.
Santa Clara	138	73	52.9	62	44.9	3	2.2	.	.

Table 26. Tuberculosis Cases by Sputum Smear Status: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Pulmonary Cases	Sputum Smear Positive		Sputum Smear Negative		Sputum Smear Not Done		Sputum Smear Unknown	
		No.	%	No.	%	No.	%	No.	%
Santa Cruz	2	.	.	2	100.0	.	.	.	.
Shasta	4	4	100.0	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.
Solano	14	4	28.6	10	71.4	.	.	.	.
Sonoma	4	4	100.0	.	.	.	.	.	.
Stanislaus	15	9	60.0	4	26.7	2	13.3	.	.
Sutter	1	1	100.0	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.
Trinity	1	1	100.0	.	.	.	.	.	.
Tulare	13	8	61.5	4	30.8	1	7.7	.	.
Tuolumne	.	.	.	.	.	.	.	.	.
Ventura	18	9	50.0	7	38.9	2	11.1	.	.
Yolo	10	5	50.0	5	50.0	.	.	.	.
Yuba	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent
 California Department of Public Health, Tuberculosis Control Branch

**Table 27. Nucleic Acid Amplification Test (NAAT) Results at the Time of Diagnosis:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	NAAT Test Done		Positive Test Results	
		No.	%	No.	%
California	2133	1319	61.8	1007	76.3
Alameda	139	70	50.4	57	81.4
Alpine	.	.	.	.	.
Amador	.	.	.	.	.
Berkeley	7	4	57.1	3	75.0
Butte	3	2	66.7	2	100.0
Calaveras	.	.	.	.	.
Colusa	.	.	.	.	.
Contra Costa	45	36	80.0	25	69.4
Del Norte	.	.	.	.	.
El Dorado	3	1	33.3	1	100.0
Fresno	40	21	52.5	21	100.0
Glenn	1	1	100.0	.	.
Humboldt	.	.	.	.	.
Imperial	31	27	87.1	18	66.7
Inyo	.	.	.	.	.
Kern	29	7	24.1	7	100.0
Kings	5	1	20.0	1	100.0
Lake	.	.	.	.	.
Lassen	.	.	.	.	.
Long Beach	39	20	51.3	19	95.0
Los Angeles	604	454	75.2	294	64.8
Madera	4	.	.	.	.
Marin	9	7	77.8	4	57.1
Mariposa	.	.	.	.	.
Mendocino	.	.	.	.	.
Merced	19	9	47.4	7	77.8
Modoc	.	.	.	.	.
Mono	.	.	.	.	.
Monterey	16	15	93.8	12	80.0
Napa	3	1	33.3	.	.
Nevada	1	1	100.0	1	100.0
Orange	161	102	63.4	93	91.2
Pasadena	2	1	50.0	1	100.0
Placer	4	1	25.0	1	100.0
Plumas	.	.	.	.	.
Riverside	52	22	42.3	21	95.5
Sacramento	73	49	67.1	43	87.8
San Benito	1	.	.	.	.
San Bernardino	69	53	76.8	48	90.6
San Diego	234	138	59.0	108	78.3
San Francisco	96	60	62.5	37	61.7
San Joaquin	58	29	50.0	27	93.1
San Luis Obispo	2	1	50.0	1	100.0
San Mateo	57	25	43.9	21	84.0
Santa Barbara	19	14	73.7	13	92.9
Santa Clara	198	89	44.9	71	79.8
Santa Cruz	2	2	100.0	2	100.0
Shasta	4	4	100.0	4	100.0

**Table 27. Nucleic Acid Amplification Test (NAAT) Results at the Time of Diagnosis:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	NAAT Test Done		Positive Test Results	
		No.	%	No.	%
Sierra	.	.	.	.	.
Siskiyou	.	.	.	.	.
Solano	23	20	87.0	16	80.0
Sonoma	9	6	66.7	6	100.0
Stanislaus	18	7	38.9	7	100.0
Sutter	2	2	100.0	2	100.0
Tehama	.	.	.	.	.
Trinity	1	1	100.0	1	100.0
Tulare	15	6	40.0	3	50.0
Tuolumne	.	.	.	.	.
Ventura	24	3	12.5	3	100.0
Yolo	11	7	63.6	6	85.7
Yuba	.	.	.	.	.

. Indicates zero cases or zero percent

California Department of Public Health, Tuberculosis Control Branch

Table 28. Tuberculosis Cases by Chest X-ray (CXR) Status: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Pulmonary Cases	CXR Done	Abnormal CXR, Consistent with TB							
			Normal CXR		Total Abnormal		Cavity		Miliary	
			No.	%	No.	%	No.	%	No.	%
California	1714	1659	56	3.4	1603	96.6	367	22.9	35	2.2
Alameda	114	109	4	3.7	105	96.3	20	19.0	2	1.9
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	4	4	.	.	4	100.0	2	50.0	.	.
Butte	3	3	.	.	3	100.0	1	33.3	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	34	33	2	6.1	31	93.9	13	41.9	2	6.5
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	3	3	.	.	3	100.0	.	.	.	.
Fresno	37	35	.	.	35	100.0	6	17.1	1	2.9
Glenn	1	1	1	100.0	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	28	24	1	4.2	23	95.8	7	30.4	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	.	.	23	100.0	5	21.7	1	4.3
Kings	4	4	.	.	4	100.0	3	75.0	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	34	34	1	2.9	33	97.1	6	18.2	1	3.0
Los Angeles	499	495	11	2.2	484	97.8	125	25.8	11	2.3
Madera	3	3	.	.	3	100.0	3	100.0	.	.
Marin	6	6	.	.	6	100.0	3	50.0	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	15	15	.	.	15	100.0	6	40.0	1	6.7
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	11	11	.	.	11	100.0	2	18.2	.	.
Napa	2	2	.	.	2	100.0	1	50.0	.	.
Nevada	1	1	.	.	1	100.0	.	.	.	.
Orange	133	128	7	5.5	121	94.5	20	16.5	2	1.7
Pasadena	2	2	.	.	2	100.0	2	100.0	1	50.0
Placer	4	4	.	.	4	100.0	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	41	37	1	2.7	36	97.3	6	16.7	1	2.8
Sacramento	67	67	.	.	67	100.0	20	29.9	.	.
San Benito	1	1	.	.	1	100.0	.	.	.	.
San Bernardino	54	52	2	3.8	50	96.2	14	28.0	1	2.0
San Diego	195	195	9	4.6	186	95.4	30	16.1	3	1.6
San Francisco	74	68	4	5.9	64	94.1	17	26.6	3	4.7
San Joaquin	48	46	5	10.9	41	89.1	14	34.1	1	2.4
San Luis Obispo	2	2	.	.	2	100.0	.	.	.	.
San Mateo	36	34	1	2.9	33	97.1	4	12.1	.	.
Santa Barbara	15	14	.	.	14	100.0	.	.	.	.
Santa Clara	138	131	1	0.8	130	99.2	22	16.9	2	1.5
Santa Cruz	2	2	1	50.0	1	50.0	.	.	.	.
Shasta	4	4	.	.	4	100.0	1	25.0	1	25.0

Table 28. Tuberculosis Cases by Chest X-ray (CXR) Status: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Pulmonary Cases	CXR Done	Abnormal CXR, Consistent with TB								
			Normal CXR		Total Abnormal		Cavity		Miliary		
			No.	%	No.	%	No.	%	No.	%	
Sierra
Siskiyou
Solano	14	14	1	7.1	13	92.9	1	7.7	.	.	
Sonoma	4	3	.	.	3	100.0	1	33.3	1	33.3	
Stanislaus	15	13	.	.	13	100.0	4	30.8	.	.	
Sutter	1	.	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	100.0	.	.	.	.
Tulare	13	12	.	.	12	100.0	4	33.3	.	.	
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	17	1	5.9	16	94.1	4	25.0	.	.	
Yolo	10	6	3	50.0	3	50.0	
Yuba	

. Indicates zero cases or zero percent

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Table 29. Tuberculosis Cases by Chest CT Scan or Other Chest Imaging Study: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Pulmonary Cases	CT Scan Done	Normal CT Scan		Abnormal CT, Consistent with TB					
					Total Abnormal		Cavity		Miliary	
			No.	%	No.	%	No.	%	No.	%
California	1714	1012	4	0.4	1008	99.6	407	40.4	44	4.4
Alameda	114	99	.	.	99	100.0	34	34.3	7	7.1
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	4	2	.	.	2	100.0	1	50.0	.	.
Butte	3	3	.	.	3	100.0	1	33.3	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	34	21	1	4.8	20	95.2	8	40.0	2	10.0
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	3	1	.	.	1	100.0	.	.	.	.
Fresno	37	24	.	.	24	100.0	8	33.3	1	4.2
Glenn	1	1	.	.	1	100.0	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	28	20	.	.	20	100.0	10	50.0	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	19	.	.	19	100.0	8	42.1	2	10.5
Kings	4	1	.	.	1	100.0	1	100.0	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	34	23	.	.	23	100.0	11	47.8	1	4.3
Los Angeles	499	222	1	0.5	221	99.6	95	43.0	14	6.3
Madera	3	1	.	.	1	100.0	1	100.0	.	.
Marin	6	3	.	.	3	100.0	2	66.7	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	15	10	.	.	10	100.0	7	70.0	.	.
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	11	4	.	.	4	100.0	2	50.0	.	.
Napa	2	1	.	.	1	100.0	1	100.0	.	.
Nevada	1	1	.	.	1	100.0	.	.	.	.
Orange	133	86	.	.	86	100.0	32	37.2	2	2.3
Pasadena	2	2	.	.	2	100.0	2	100.0	.	.
Placer	4	4	.	.	4	100.0	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	41	31	.	.	31	100.0	17	54.8	2	6.5
Sacramento	67	48	.	.	48	100.0	20	41.7	.	.
San Benito	1	1	.	.	1	100.0	.	.	.	.
San Bernardino	54	39	.	.	39	100.0	19	48.7	1	2.6
San Diego	195	130	.	.	130	100.0	51	39.2	10	7.7
San Francisco	74	10	.	.	10	100.0	3	30.0	.	.
San Joaquin	48	31	.	.	31	100.0	14	45.2	1	3.2
San Luis Obispo	2	1	.	.	1	100.0	.	.	.	.
San Mateo	36	26	.	.	26	100.0	8	30.8	.	.
Santa Barbara	15	8	.	.	8	100.0	6	75.0	.	.
Santa Clara	138	88	.	.	88	100.0	26	29.5	.	.
Santa Cruz	2	1	.	.	1	100.0	.	.	.	.

Table 29. Tuberculosis Cases by Chest CT Scan or Other Chest Imaging Study: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Pulmonary Cases	CT Scan Done	Normal CT Scan		Abnormal CT, Consistent with TB					
					Total Abnormal		Cavity		Miliary	
			No.	%	No.	%	No.	%	No.	%
Shasta	4	2	.	.	2	100.0	2	100.0	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	14	11	.	.	11	100.0	5	45.5	.	.
Sonoma	4	3	.	.	3	100.0	1	33.3	1	33.3
Stanislaus	15	7	.	.	7	100.0	4	57.1	.	.
Sutter	1	1	.	.	1	100.0	1	100.0	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	100.0	.	.	.	.
Tulare	13	8	.	.	8	100.0	2	25.0	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	13	.	.	13	100.0	4	30.8	.	.
Yolo	10	4	2	50.0	2	50.0	.	.	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent
 California Department of Public Health, Tuberculosis Control Branch

**Table 30. Interferon Gamma Release Assay (IGRA) and Tuberculin Skin Test (TST) at Diagnosis:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	IGRA Test Done		IGRA Positive Result		TST Test Done		TST Positive Result	
		No.	%	No.	%	No.	%	No.	%
California	2133	1290	60.5	1037	80.4	547	25.6	432	79.0
Alameda	139	94	67.6	74	78.7	24	17.3	20	83.3
Alpine	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.
Berkeley	7	6	85.7	6	100.0	2	28.6	2	100.0
Butte	3	3	100.0	3	100.0	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.
Contra Costa	45	25	55.6	19	76.0	11	24.4	10	90.9
Del Norte	.	.	.	.	.	.	.	.	.
El Dorado	3	.	.	.	.	.	.	.	.
Fresno	40	29	72.5	22	75.9	10	25.0	7	70.0
Glenn	1	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.
Imperial	31	23	74.2	19	82.6	8	25.8	4	50.0
Inyo	.	.	.	.	.	.	.	.	.
Kern	29	20	69.0	13	65.0	11	37.9	10	90.9
Kings	5	3	60.0	3	100.0	3	60.0	1	33.3
Lake	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.
Long Beach	39	20	51.3	18	90.0	10	25.6	7	70.0
Los Angeles	604	434	71.9	353	81.3	165	27.3	130	78.8
Madera	4	4	100.0	4	100.0	1	25.0	1	100.0
Marin	9	6	66.7	3	50.0	3	33.3	3	100.0
Mariposa	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.
Merced	19	9	47.4	9	100.0	6	31.6	6	100.0
Modoc	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.
Monterey	16	15	93.8	13	86.7	1	6.3	1	100.0
Napa	3	3	100.0	3	100.0	.	.	.	.
Nevada	1	1	100.0	1	100.0	.	.	.	.
Orange	161	49	30.4	41	83.7	61	37.9	48	78.7
Pasadena	2	2	100.0	1	50.0	.	.	.	.
Placer	4	1	25.0	1	100.0	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.
Riverside	52	25	48.1	21	84.0	16	30.8	12	75.0
Sacramento	73	26	35.6	21	80.8	20	27.4	18	90.0
San Benito	1	1	100.0	1	100.0	.	.	.	.
San Bernardino	69	23	33.3	21	91.3	21	30.4	9	42.9
San Diego	234	144	61.5	105	72.9	47	20.1	36	76.6
San Francisco	96	73	76.0	59	80.8	23	24.0	20	87.0
San Joaquin	58	39	67.2	35	89.7	30	51.7	27	90.0
San Luis Obispo	2	1	50.0	1	100.0	2	100.0	1	50.0
San Mateo	57	41	71.9	36	87.8	8	14.0	8	100.0
Santa Barbara	19	12	63.2	11	91.7	4	21.1	4	100.0
Santa Clara	198	96	48.5	73	76.0	18	9.1	16	88.9
Santa Cruz	2	2	100.0	1	50.0	.	.	.	.

**Table 30. Interferon Gamma Release Assay (IGRA) and Tuberculin Skin Test (TST) at Diagnosis:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	IGRA Test Done		IGRA Positive Result		TST Test Done		TST Positive Result	
		No.	%	No.	%	No.	%	No.	%
Shasta	4	3	75.0	1	33.3	2	50.0	1	50.0
Sierra	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.
Solano	23	14	60.9	12	85.7	9	39.1	8	88.9
Sonoma	9	4	44.4	4	100.0	1	11.1	1	100.0
Stanislaus	18	7	38.9	5	71.4	11	61.1	8	72.7
Sutter	2	1	50.0	1	100.0	1	50.0	1	100.0
Tehama	.	.	.	.	.	.	.	.	.
Trinity	1	1	100.0	1	100.0	.	.	.	.
Tulare	15	9	60.0	6	66.7	11	73.3	6	54.5
Tuolumne	.	.	.	.	.	.	.	.	.
Ventura	24	17	70.8	13	76.5	4	16.7	4	100.0
Yolo	11	4	36.4	3	75.0	3	27.3	2	66.7
Yuba	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent
California Department of Public Health, Tuberculosis Control Branch

**Table 31. Tuberculosis Cases by Vital Status at Diagnosis and Initiation of Treatment:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	Dead at Diagnosis		Total Alive at Diagnosis		Alive and Started Treatment	
		No.	%	No.	%	No.	%
California	2133	41	1.9	2092	98.1	2068	97.0
Alameda	139	.	.	139	100.0	136	97.8
Alpine	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.
Berkeley	7	.	.	7	100.0	7	100.0
Butte	3	.	.	3	100.0	3	100.0
Calaveras	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.
Contra Costa	45	1	2.2	44	97.8	44	97.8
Del Norte	.	.	.	.	.	.	.
El Dorado	3	.	.	3	100.0	3	100.0
Fresno	40	.	.	40	100.0	40	100.0
Glenn	1	.	.	1	100.0	1	100.0
Humboldt	.	.	.	.	.	.	.
Imperial	31	.	.	31	100.0	31	100.0
Inyo	.	.	.	.	.	.	.
Kern	29	1	3.4	28	96.6	27	93.1
Kings	5	.	.	5	100.0	5	100.0
Lake	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.
Long Beach	39	2	5.1	37	94.9	37	94.9
Los Angeles	604	17	2.8	587	97.2	578	95.7
Madera	4	.	.	4	100.0	4	100.0
Marin	9	.	.	9	100.0	9	100.0
Mariposa	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.
Merced	19	.	.	19	100.0	19	100.0
Modoc	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.
Monterey	16	.	.	16	100.0	16	100.0
Napa	3	.	.	3	100.0	3	100.0
Nevada	1	.	.	1	100.0	1	100.0
Orange	161	2	1.2	159	98.8	157	97.5
Pasadena	2	.	.	2	100.0	2	100.0
Placer	4	.	.	4	100.0	4	100.0
Plumas	.	.	.	.	.	.	.
Riverside	52	2	3.8	50	96.2	48	92.3
Sacramento	73	1	1.4	72	98.6	72	98.6
San Benito	1	.	.	1	100.0	1	100.0
San Bernardino	69	3	4.3	66	95.7	66	95.7
San Diego	234	3	1.3	231	98.7	228	97.4
San Francisco	96	4	4.2	92	95.8	92	95.8
San Joaquin	58	.	.	58	100.0	56	96.6
San Luis Obispo	2	.	.	2	100.0	2	100.0
San Mateo	57	.	.	57	100.0	57	100.0
Santa Barbara	19	.	.	19	100.0	19	100.0
Santa Clara	198	.	.	198	100.0	197	99.5

**Table 31. Tuberculosis Cases by Vital Status at Diagnosis and Initiation of Treatment:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	Dead at Diagnosis		Total Alive at Diagnosis		Alive and Started Treatment	
		No.	%	No.	%	No.	%
Santa Cruz	2	.	.	2	100.0	2	100.0
Shasta	4	.	.	4	100.0	4	100.0
Sierra	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.
Solano	23	1	4.3	22	95.7	22	95.7
Sonoma	9	.	.	9	100.0	8	88.9
Stanislaus	18	1	5.6	17	94.4	17	94.4
Sutter	2	.	.	2	100.0	2	100.0
Tehama	.	.	.	.	.	.	.
Trinity	1	.	.	1	100.0	1	100.0
Tulare	15	1	6.7	14	93.3	14	93.3
Tuolumne	.	.	.	.	.	.	.
Ventura	24	1	4.2	23	95.8	23	95.8
Yolo	11	1	9.1	10	90.9	10	90.9
Yuba

. Indicates zero cases or zero percent

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Table 32. Deaths in Persons with Tuberculosis: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Total Cases	Total Deaths		Dead at Diagnosis		Died Before Starting TB Treatment		Died During TB Treatment	
		No.	%	No.	%	No.	%	No.	%
California	2164	215	9.9	44	2.0	5	0.2	166	7.7
Alameda	114	8	7.0	1	0.9	1	0.9	6	5.3
Alpine	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.
Berkeley	5	.	.	.	.	.	.	.	.
Butte	4	1	25.0	.	.	.	.	1	25.0
Calaveras	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.
Contra Costa	57	4	7.0	.	.	.	.	4	7.0
Del Norte	.	.	.	.	.	.	.	.	.
El Dorado	1	.	.	.	.	.	.	.	.
Fresno	38	3	7.9	.	.	.	.	3	7.9
Glenn	1	.	.	.	.	.	.	.	.
Humboldt	2	.	.	.	.	.	.	.	.
Imperial	38	3	7.9	1	2.6	1	2.6	1	2.6
Inyo	.	.	.	.	.	.	.	.	.
Kern	28	3	10.7	.	.	.	.	3	10.7
Kings	6	1	16.7	.	.	.	.	1	16.7
Lake	2	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.
Long Beach	38	7	18.4	3	7.9	.	.	4	10.5
Los Angeles	660	82	12.4	20	3.0	.	.	62	9.4
Madera	6	1	16.7	1	16.7	.	.	.	.
Marin	13	1	7.7	.	.	.	.	1	7.7
Mariposa	.	.	.	.	.	.	.	.	.
Mendocino	1	.	.	.	.	.	.	.	.
Merced	12	4	33.3	.	.	.	.	4	33.3
Modoc	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.
Monterey	17	.	.	.	.	.	.	.	.
Napa	3	.	.	.	.	.	.	.	.
Nevada	.	.	.	.	.	.	.	.	.
Orange	187	9	4.8	1	0.5	.	.	8	4.3
Pasadena	5	2	40.0	.	.	.	.	2	40.0
Placer	6	.	.	.	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.
Riverside	54	4	7.4	1	1.9	1	1.9	2	3.7
Sacramento	84	10	11.9	4	4.8	.	.	6	7.1
San Benito	1	.	.	.	.	.	.	.	.
San Bernardino	58	3	5.2	.	.	.	.	3	5.2
San Diego	206	16	7.8	4	1.9	.	.	12	5.8
San Francisco	107	9	8.4	1	0.9	.	.	8	7.5
San Joaquin	43	7	16.3	3	7.0	.	.	4	9.3
San Luis Obispo	4	.	.	.	.	.	.	.	.
San Mateo	58	5	8.6	.	.	.	.	5	8.6
Santa Barbara	26	5	19.2	.	.	1	3.8	4	15.4

Table 32. Deaths in Persons with Tuberculosis: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Total Cases	Total Deaths		Dead at Diagnosis		Died Before Starting TB Treatment		Died During TB Treatment	
		No.	%	No.	%	No.	%	No.	%
Santa Clara	181	13	7.2	3	1.7	.	.	10	5.5
Santa Cruz	5	.	.	.	.	.	.	.	.
Shasta	4	2	50.0	1	25.0	.	.	1	25.0
Sierra	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.
Solano	12	3	25.0	.	.	.	.	3	25.0
Sonoma	8	.	.	.	.	.	.	.	.
Stanislaus	10	1	10.0	.	.	.	.	1	10.0
Sutter	4	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.
Tulare	16	3	18.8	.	.	.	.	3	18.8
Tuolumne	.	.	.	.	.	.	.	.	.
Ventura	28	3	10.7	.	.	1	3.6	2	7.1
Yolo	6
Yuba	5	2	40.0	2	40.0

. Indicates zero cases or zero percent

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Table 33. Tuberculosis Cases by Initial Drug Regimen*: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Cases Alive at Diagnosis	Cases Started on Initial Drug Regimen		Initial Drug Regimen*				
		No.	%	IR	IRZ	IRE	IRZ,E/S	Other
				%	%	%	%	%
California	2092	2068	98.9	0.1	0.9	1.7	90.1	7.2
Alameda	139	136	97.8	.	.	0.7	86.8	12.5
Alpine	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.
Berkeley	7	7	100.0	.	.	.	100.0	.
Butte	3	3	100.0	.	.	.	66.7	33.3
Calaveras	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.
Contra Costa	44	44	100.0	.	.	2.3	86.4	11.4
Del Norte	.	.	.	.	.	.	.	.
El Dorado	3	3	100.0	.	.	.	100.0	.
Fresno	40	40	100.0	.	2.5	.	92.5	5.0
Glenn	1	1	100.0	.	.	.	100.0	.
Humboldt	.	.	.	.	.	.	.	.
Imperial	31	31	100.0	.	.	3.2	93.5	3.2
Inyo	.	.	.	.	.	.	.	.
Kern	28	27	96.4	.	.	7.4	92.6	.
Kings	5	5	100.0	.	20.0	.	60.0	20.0
Lake	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.
Long Beach	37	37	100.0	.	.	.	94.6	5.4
Los Angeles	587	578	98.5	.	0.9	1.7	90.0	7.4
Madera	4	4	100.0	.	.	.	100.0	.
Marin	9	9	100.0	.	.	.	100.0	.
Mariposa	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.
Merced	19	19	100.0	.	.	.	89.5	10.5
Modoc	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.
Monterey	16	16	100.0	.	.	.	100.0	.
Napa	3	3	100.0	.	.	.	66.7	33.3
Nevada	1	1	100.0	.	.	.	100.0	.
Orange	159	157	98.7	.	0.6	2.5	89.8	7.0
Pasadena	2	2	100.0	.	.	.	50.0	50.0
Placer	4	4	100.0	.	25.0	.	75.0	.
Plumas	.	.	.	.	.	.	.	.
Riverside	50	48	96.0	.	.	.	97.9	2.1
Sacramento	72	72	100.0	.	.	.	94.4	5.6
San Benito	1	1	100.0	.	.	.	100.0	.
San Bernardino	66	66	100.0	.	1.5	.	93.9	4.5
San Diego	231	228	98.7	0.9	0.9	3.1	88.2	7.0
San Francisco	92	92	100.0	.	.	.	81.5	18.5
San Joaquin	58	56	96.6	.	1.8	1.8	92.9	3.6
San Luis Obispo	2	2	100.0	.	.	.	100.0	.
San Mateo	57	57	100.0	.	.	.	100.0	.
Santa Barbara	19	19	100.0	.	.	.	100.0	.
Santa Clara	198	197	99.5	.	2.0	2.0	89.3	6.6
Santa Cruz	2	2	100.0	.	.	.	100.0	.
Shasta	4	4	100.0	.	.	.	75.0	25.0

Table 33. Tuberculosis Cases by Initial Drug Regimen*: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Cases Alive at Diagnosis	Cases Started on Initial Drug Regimen		Initial Drug Regimen*				
		No.	%	IR	IRZ	IRE	IRZ,E/S	Other
				%	%	%	%	%
Sierra	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.
Solano	22	22	100.0	.	4.5	.	95.5	.
Sonoma	9	8	88.9	.	.	.	87.5	12.5
Stanislaus	17	17	100.0	.	.	.	100.0	.
Sutter	2	2	100.0	.	.	.	100.0	.
Tehama	.	.	.	.	.	.	.	.
Trinity	1	1	100.0	.	.	.	100.0	.
Tulare	14	14	100.0	.	.	.	100.0	.
Tuolumne	.	.	.	.	.	.	.	.
Ventura	23	23	100.0	.	.	13.0	82.6	4.3
Yolo	10	10	100.0	.	.	10.0	60.0	30.0
Yuba	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* I=isoniazid; R=rifampin; Z=pyrazinamide; E=ethambutol; E/S=ethambutol and/or streptomycin; Other=all other combinations

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Table 34. Tuberculosis Cases by Type of Health Care Provider: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Total Cases	Cases w/ Initial Drug Regimen Prescribed	Cases w/ Information on Type of Health Care Provider		Health Department Only		Private Only		Both Health Dept. and Private		Institutional Only		Inpatient Only		Other	
	No.	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2164	2107	2089	99.1	1135	54.3	579	27.7	180	8.6	42	2.0	76	3.6	77	3.7
Alameda	114	111	111	100.0	.	.	100	90.1	.	.	4	3.6	7	6.3	.	.
Alpine	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berkeley	5	5	5	100.0	.	.	3	60.0	1	20.0	.	.	.	.	1	20.0
Butte	4	4	4	100.0	1	25.0	1	25.0	1	25.0	.	.	1	25.0	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	57	57	56	98.2	16	28.6	34	60.7	5	8.9	.	.	.	.	1	1.8
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	1	1	1	100.0	.	.	.	.	1	100.0	.	.	.	.	.	.
Fresno	38	38	38	100.0	33	86.8	3	7.9	1	2.6	.	.	1	2.6	.	.
Glenn	1	1	1	100.0	1	100.0	.	.	.	.	.	.	.	.	.	.
Humboldt	2	2	1	50.0	.	.	.	.	1	100.0	.	.	.	.	.	.
Imperial	38	36	35	97.2	23	65.7	2	5.7	1	2.9	3	8.6	.	.	6	17.1
Inyo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kern	28	28	28	100.0	10	35.7	11	39.3	2	7.1	2	7.1	3	10.7	.	.
Kings	6	6	6	100.0	4	66.7	.	.	.	.	1	16.7	.	.	1	16.7
Lake	2	2	2	100.0	.	.	1	50.0	.	.	.	.	.	.	1	50.0
Lassen	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	38	35	35	100.0	26	74.3	2	5.7	2	5.7	.	.	4	11.4	1	2.9
Los Angeles	660	639	634	99.2	440	69.4	65	10.3	76	12.0	5	0.8	20	3.2	28	4.4
Madera	6	5	5	100.0	5	100.0	.	.	.	.	.	.	.	.	.	.
Marin	13	13	13	100.0	5	38.5	4	30.8	2	15.4	.	.	.	.	2	15.4
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	1	1	1	100.0	1	100.0	.	.	.	.	.	.	.	.	.	.
Merced	12	12	12	100.0	3	25.0	3	25.0	5	41.7	.	.	1	8.3	.	.
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	17	17	17	100.0	8	47.1	3	17.6	4	23.5	.	.	.	.	2	11.8
Napa	3	3	3	100.0	.	.	2	66.7	1	33.3	.	.	.	.	.	.
Nevada	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Orange	187	184	180	97.8	134	74.4	20	11.1	11	6.1	1	0.6	7	3.9	7	3.9

Table 34. Tuberculosis Cases by Type of Health Care Provider: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Total Cases	Cases w/ Initial Drug Regimen Prescribed	Cases w/ Information on Type of Health Care Provider		Health Department Only		Private Only		Both Health Dept. and Private		Institutional Only		Inpatient Only		Other	
	No.	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasadena	5	5	5	100.0	3	60.0	1	20.0	.	.	.	.	1	20.0	.	.
Placer	6	6	6	100.0	.	.	6	100.0	.	.	.	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	54	52	50	96.2	31	62.0	.	.	17	34.0	.	.	.	.	2	4.0
Sacramento	84	80	80	100.0	58	72.5	16	20.0	3	3.8	1	1.3	2	2.5	.	.
San Benito	1	1	1	100.0	.	.	.	.	1	100.0	.	.	.	.	.	.
San Bernardino	58	58	58	100.0	26	44.8	26	44.8	1	1.7	2	3.4	3	5.2	.	.
San Diego	206	202	202	100.0	36	17.8	119	58.9	18	8.9	20	9.9	5	2.5	4	2.0
San Francisco	107	106	105	99.1	97	92.4	3	2.9	1	1.0	.	.	4	3.8	.	.
San Joaquin	43	39	38	97.4	.	.	17	44.7	.	.	2	5.3	1	2.6	18	47.4
San Luis Obispo	4	4	4	100.0	1	25.0	1	25.0	.	.	1	25.0	.	.	1	25.0
San Mateo	58	58	58	100.0	24	41.4	29	50.0	1	1.7	.	.	4	6.9	.	.
Santa Barbara	26	25	25	100.0	22	88.0	1	4.0	.	.	.	.	2	8.0	.	.
Santa Clara	181	177	176	99.4	80	45.5	85	48.3	10	5.7	.	.	1	0.6	.	.
Santa Cruz	5	5	5	100.0	3	60.0	1	20.0	1	20.0	.	.	.	.	.	.
Shasta	4	3	3	100.0	1	33.3	.	.	1	33.3	.	.	1	33.3	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solano	12	12	12	100.0	2	16.7	6	50.0	2	16.7	.	.	2	16.7	.	.
Sonoma	8	7	7	100.0	5	71.4	2	28.6	.	.	.	.	.	.	.	.
Stanislaus	10	10	10	100.0	3	30.0	2	20.0	5	50.0	.	.	.	.	.	.
Sutter	4	3	3	100.0	.	.	3	100.0	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tulare	16	16	16	100.0	11	68.8	.	.	2	12.5	.	.	2	12.5	1	6.3
Tuolumne	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	28	27	26	96.3	21	80.8	1	3.8	1	3.8	.	.	2	7.7	1	3.8
Yolo	6	6	6	100.0	1	16.7	4	66.7	1	16.7
Yuba	5	5	5	100.0	.	.	2	40.0	1	20.0	.	.	2	40.0	.	.

. Indicates zero cases or zero percent

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Table 35. Tuberculosis Cases by Type of Therapy Administration: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Total Cases	Cases w/ Initial Drug Regimen Prescribed	Cases w/ Information on Type of Therapy Administration		Type of Therapy Administration*					
					SAT Only		DOT Only		DOT and SAT	
			No.	%	No.	%	No.	%	No.	%
California	2164	2107	2084	98.9	216	10.4	1105	53.0	763	36.6
Alameda	114	111	110	99.1	26	23.6	66	60.0	18	16.4
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	5	5	5	100.0	.	.	.	.	5	100.0
Butte	4	4	4	100.0	.	.	2	50.0	2	50.0
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	57	57	56	98.2	17	30.4	28	50.0	11	19.6
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	1	1	1	100.0	.	.	.	.	1	100.0
Fresno	38	38	38	100.0	1	2.6	19	50.0	18	47.4
Glenn	1	1	1	100.0	.	.	.	.	1	100.0
Humboldt	2	2	1	50.0	.	.	1	100.0	.	.
Imperial	38	36	33	91.7	1	3.0	29	87.9	3	9.1
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	28	28	28	100.0	2	7.1	22	78.6	4	14.3
Kings	6	6	6	100.0	.	.	2	33.3	4	66.7
Lake	2	2	2	100.0	.	.	.	.	2	100.0
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	38	35	35	100.0	5	14.3	23	65.7	7	20.0
Los Angeles	660	639	633	99.1	79	12.5	343	54.2	211	33.3
Madera	6	5	5	100.0	.	.	2	40.0	3	60.0
Marin	13	13	13	100.0	6	46.2	2	15.4	5	38.5
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	1	1	1	100.0	.	.	.	.	1	100.0
Merced	12	12	12	100.0	.	.	1	8.3	11	91.7
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	17	17	17	100.0	.	.	15	88.2	2	11.8
Napa	3	3	3	100.0	.	.	.	.	3	100.0
Nevada	.	.	.	.	.	.	.	.	.	.
Orange	187	184	180	97.8	4	2.2	140	77.8	36	20.0
Pasadena	5	5	5	100.0	1	20.0	1	20.0	3	60.0
Placer	6	6	6	100.0	.	.	.	.	6	100.0
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	54	52	50	96.2	2	4.0	12	24.0	36	72.0
Sacramento	84	80	79	98.8	1	1.3	77	97.5	1	1.3
San Benito	1	1	1	100.0	.	.	1	100.0	.	.
San Bernardino	58	58	58	100.0	13	22.4	33	56.9	12	20.7
San Diego	206	202	202	100.0	5	2.5	34	16.8	163	80.7
San Francisco	107	106	105	99.1	4	3.8	96	91.4	5	4.8
San Joaquin	43	39	38	97.4	1	2.6	2	5.3	35	92.1
San Luis Obispo	4	4	4	100.0	.	.	2	50.0	2	50.0
San Mateo	58	58	58	100.0	8	13.8	27	46.6	23	39.7

Table 35. Tuberculosis Cases by Type of Therapy Administration: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Total Cases	Cases w/ Initial Drug Regimen Prescribed	Cases w/ Information on Type of Therapy Administration		Type of Therapy Administration*					
					SAT Only		DOT Only		DOT and SAT	
			No.	%	No.	%	No.	%	No.	%
Santa Barbara	26	25	25	100.0	1	4.0	21	84.0	3	12.0
Santa Clara	181	177	176	99.4	33	18.8	56	31.8	87	49.4
Santa Cruz	5	5	5	100.0	.	.	.	.	5	100.0
Shasta	4	3	3	100.0	.	.	1	33.3	2	66.7
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	12	12	12	100.0	1	8.3	4	33.3	7	58.3
Sonoma	8	7	7	100.0	2	28.6	5	71.4	.	.
Stanislaus	10	10	10	100.0	2	20.0	2	20.0	6	60.0
Sutter	4	3	3	100.0	.	.	1	33.3	2	66.7
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.
Tulare	16	16	16	100.0	.	.	2	12.5	14	87.5
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	28	27	26	96.3	.	.	25	96.2	1	3.8
Yolo	6	6	6	100.0	1	16.7	3	50.0	2	33.3
Yuba	5	5	5	100.0	.	.	5	100.0	.	.

. Indicates zero cases or zero percent

* SAT=self-administered therapy; DOT=directly observed therapy

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Table 36. Tuberculosis Cases by HIV/AIDS Diagnosis*: Reporting Jurisdictions in California, 2010-2015

Reporting Jurisdiction	2010			2011			2012			2013			2014			2015		
	Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS		Total Cases	HIV/AIDS	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
California	2325	102	4.4	2323	102	4.4	2187	88	4.0	2164	76	3.5	2134	86	4.0	2133	60	2.8
Alameda	178	10	5.6	132	5	3.8	136	7	5.1	114	6	5.3	108	4	3.7	139	6	4.3
Contra Costa	33	1	3.0	60	2	3.3	55	3	5.5	57	1	1.8	48	2	4.2	45	1	2.2
Fresno	55	1	1.8	46	2	4.3	34	3	8.8	38	1	2.6	51	2	3.9	40	1	2.5
Imperial	24	3	12.5	27	3	11.1	30	2	6.7	38	.	.	37	2	5.4	31	.	.
Kern	35	3	8.6	40	2	5.0	34	.	.	28	2	7.1	40	2	5.0	29	1	3.4
Long Beach	42	2	4.8	29	2	6.9	34	1	2.9	38	.	.	30	1	3.3	39	.	.
Los Angeles	675	35	5.2	680	41	6.0	625	28	4.5	660	22	3.3	586	23	3.9	604	15	2.5
Marin	11	2	18.2	12	.	.	15	.	.	13	.	.	9	1	11.1	9	1	11.1
Merced	6	.	.	6	.	.	19	.	.	12	.	.	6	.	.	19	1	5.3
Monterey	21	.	.	25	.	.	18	.	.	17	1	5.9	18	1	5.6	16	.	.
Orange	224	3	1.3	209	4	1.9	192	1	0.5	187	5	2.7	187	3	1.6	161	4	2.5
Riverside	73	.	.	68	5	7.4	57	.	.	54	.	.	65	3	4.6	52	2	3.8
Sacramento	65	3	4.6	75	4	5.3	63	3	4.8	84	6	7.1	70	1	1.4	73	1	1.4
San Bernardino	60	3	5.0	53	1	1.9	58	1	1.7	58	1	1.7	50	2	4.0	69	2	2.9
San Diego	222	15	6.8	263	18	6.8	234	18	7.7	206	15	7.3	220	17	7.7	234	12	5.1
San Francisco	98	4	4.1	108	3	2.8	116	7	6.0	107	8	7.5	112	9	8.0	96	5	5.2
San Joaquin	46	5	10.9	44	1	2.3	44	.	.	43	1	2.3	54	.	.	58	2	3.4
San Mateo	59	2	3.4	59	1	1.7	54	2	3.7	58	.	.	74	2	2.7	57	1	1.8
Santa Barbara	30	1	3.3	21	1	4.8	24	1	4.2	26	.	.	29	.	.	19	.	.
Santa Clara	193	4	2.1	180	3	1.7	175	6	3.4	181	2	1.1	162	7	4.3	198	2	1.0
Solano	20	1	5.0	34	1	2.9	17	.	.	12	.	.	24	1	4.2	23	1	4.3
Sonoma	9	.	.	13	.	.	13	1	7.7	8	.	.	12	1	8.3	9	.	.
Stanislaus	16	1	6.3	9	.	.	7	1	14.3	10	.	.	13	.	.	18	.	.
Tulare	26	.	.	20	.	.	12	.	.	16	1	6.3	17	2	11.8	15	.	.
Ventura	33	1	3.0	35	3	8.6	34	.	.	28	1	3.6	46	.	.	24	.	.
All Other Jurisdictions**	71	2	2.8	75	.	.	87	3	3.4	71	3	4.2	66	.	.	56	2	3.6

. Indicates zero cases or zero percent

* Match found in HIV/AIDS Case Registry, California Office of AIDS or HIV-positive status reported on RVCT

** Reporting jurisdictions with fewer than 5 total cases in any year (2010-2015)

California Department of Public Health, Tuberculosis Control Branch

Table 37. HIV Status at Time of Tuberculosis Diagnosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	HIV Testing Status											
		Positive		Negative		Not Offered		Results Unknown		Procedure Refused		Unknown	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2133	60	2.8	1795	84.2	172	8.1	4	0.2	39	1.8	63	3.0
Alameda	139	6	4.3	118	84.9	4	2.9	2	1.4	2	1.4	7	5.0
Berkeley	7	.	.	7	100.0	.	.	.	.	.	.	.	.
Contra Costa	45	1	2.2	42	93.3	1	2.2	.	.	1	2.2	.	.
Fresno	40	1	2.5	37	92.5	2	5.0	.	.	.	.	.	.
Imperial	31	.	.	31	100.0	.	.	.	.	.	.	.	.
Kern	29	1	3.4	24	82.8	1	3.4	1	3.4	2	6.9	.	.
Kings	5	.	.	5	100.0	.	.	.	.	.	.	.	.
Long Beach	39	.	.	33	84.6	.	.	.	.	2	5.1	4	10.3
Los Angeles	604	15	2.5	490	81.1	96	15.9	.	.	3	0.5	.	.
Marin	9	1	11.1	8	88.9	.	.	.	.	.	.	.	.
Merced	19	1	5.3	8	42.1	8	42.1	.	.	.	.	2	10.5
Monterey	16	.	.	16	100.0	.	.	.	.	.	.	.	.
Orange	161	4	2.5	136	84.5	4	2.5	.	.	13	8.1	4	2.5
Riverside	52	2	3.8	38	73.1	3	5.8	.	.	.	.	9	17.3
Sacramento	73	1	1.4	64	87.7	7	9.6	.	.	.	.	1	1.4
San Bernardino	69	2	2.9	60	87.0	5	7.2	.	.	2	2.9	.	.
San Diego	234	12	5.1	197	84.2	18	7.7	.	.	7	3.0	.	.
San Francisco	96	5	5.2	77	80.2	9	9.4	.	.	2	2.1	3	3.1
San Joaquin	58	2	3.4	52	89.7	1	1.7	.	.	.	.	3	5.2
San Mateo	57	1	1.8	53	93.0	1	1.8	.	.	2	3.5	.	.
Santa Barbara	19	.	.	19	100.0	.	.	.	.	.	.	.	.
Santa Clara	198	2	1.0	179	90.4	4	2.0	.	.	.	.	13	6.6
Solano	23	1	4.3	18	78.3	2	8.7	.	.	2	8.7	.	.
Sonoma	9	.	.	6	66.7	.	.	.	.	.	.	3	33.3
Stanislaus	18	.	.	15	83.3	1	5.6	.	.	.	.	2	11.1
Tulare	15	.	.	13	86.7	.	.	.	.	1	6.7	1	6.7
Ventura	24	.	.	20	83.3	3	12.5	.	.	.	.	1	4.2
Yolo	11	1	9.1	3	27.3	1	9.1	.	.	.	.	6	54.5
All Other Jurisdictions*	33	1	3.0	26	78.8	1	3.0	1	3.0	.	.	4	12.1

. Indicates zero cases or zero percent

* Reporting jurisdictions with fewer than 5 total cases

California Department of Public Health, Tuberculosis Control Branch

Table 38. Medical Risk Factors for Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Diabetes Mellitus		Non-HIV Immuno-suppressive Condition		HIV*		End-stage Renal Disease		Post-organ Transplantation		TNF-alpha Antagonist Therapy**	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2133	586	27.5	114	5.3	60	3.2	83	3.9	9	0.4	13	0.6
Alameda	139	30	21.6	8	5.8	6	4.8	7	5.0	.	.	.	.
Berkeley	7	1	14.3	.	.	.	.	.	.	.	.	.	.
Contra Costa	45	15	33.3	8	17.8	1	2.3	1	2.2	1	2.2	.	.
Fresno	40	12	30.0	.	.	1	2.6	.	.	.	.	.	.
Imperial	31	9	29.0	.	.	.	.	.	.	.	.	.	.
Kern	29	3	10.3	2	6.9	1	4.0	1	3.4	1	3.4	.	.
Kings	5	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	39	18	46.2	2	5.1	.	.	5	12.8	.	.	.	.
Los Angeles	604	176	29.1	54	8.9	15	3.0	27	4.5	4	0.7	3	0.5
Marin	9	1	11.1	1	11.1	1	11.1	.	.	.	.	.	.
Merced	19	7	36.8	.	.	1	11.1	.	.	.	.	.	.
Monterey	16	4	25.0	.	.	.	.	1	6.3	.	.	1	6.3
Orange	161	41	25.5	6	3.7	4	2.9	3	1.9	.	.	2	1.2
Riverside	52	18	34.6	1	1.9	2	5.0	1	1.9	.	.	.	.
Sacramento	73	23	31.5	.	.	1	1.5	3	4.1	.	.	1	1.4
San Bernardino	69	23	33.3	3	4.3	2	3.2	2	2.9	.	.	.	.
San Diego	234	61	26.1	14	6.0	12	5.7	9	3.8	1	0.4	3	1.3
San Francisco	96	18	18.8	1	1.0	5	6.1	3	3.1	.	.	1	1.0
San Joaquin	58	17	29.3	2	3.4	2	3.7	2	3.4	1	1.7	.	.
San Mateo	57	19	33.3	2	3.5	1	1.9	2	3.5	.	.	.	.
Santa Barbara	19	4	21.1	.	.	.	.	.	.	.	.	.	.
Santa Clara	198	53	26.8	6	3.0	2	1.1	11	5.6	1	0.5	2	1.0
Solano	23	4	17.4	1	4.3	1	5.3	.	.	.	.	.	.
Sonoma	9	2	22.2	.	.	.	.	1	11.1	.	.	.	.
Stanislaus	18	5	27.8	1	5.6	.	.	.	.	.	.	.	.
Tulare	15	3	20.0	.	.	.	.	1	6.7	.	.	.	.
Ventura	24	8	33.3	1	4.2	.	.	.	.	.	.	.	.
Yolo	11	2	18.2	1	9.1	1	25.0	.	.	.	.	.	.
All Other Jurisdictions***	33	9	27.3	.	.	1	3.7	3	9.1	.	.	.	.

. Indicates zero cases or zero percent

* The denominator for HIV percent is the number of cases with HIV testing (n=1855).

** Tumor necrosis factor-alpha antagonist therapy

*** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 39. Non-medical Risk Factors* for Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Contact to MDR-TB** Patient		Contact to Infectious TB Patient		Missed Contact of TB Case		Incomplete LTBI*** Treatment	
		No.	%	No.	%	No.	%	No.	%
California	2133	2	0.1	91	4.3	5	0.2	20	0.9
Alameda	139	.	.	8	5.8	.	.	.	.
Berkeley	7	.	.	1	14.3	.	.	.	.
Contra Costa	45	.	.	.	.	.	.	.	.
Fresno	40	1	2.5	5	12.5	.	.	.	.
Imperial	31	.	.	4	12.9	.	.	.	.
Kern	29	.	.	.	.	.	.	.	.
Kings	5	.	.	2	40.0	.	.	1	20.0
Long Beach	39	.	.	.	.	.	.	.	.
Los Angeles	604	1	0.2	21	3.5	1	0.2	2	0.3
Marin	9	.	.	3	33.3	.	.	1	11.1
Merced	19	.	.	3	15.8	.	.	.	.
Monterey	16	.	.	.	.	.	.	.	.
Orange	161	.	.	4	2.5	1	0.6	1	0.6
Riverside	52	.	.	1	1.9	.	.	.	.
Sacramento	73	.	.	9	12.3	.	.	.	.
San Bernardino	69	.	.	2	2.9	.	.	.	.
San Diego	234	.	.	10	4.3	.	.	.	.
San Francisco	96	.	.	2	2.1	2	2.1	3	3.1
San Joaquin	58	.	.	4	6.9	.	.	3	5.2
San Mateo	57	.	.	2	3.5	.	.	.	.
Santa Barbara	19	.	.	1	5.3	.	.	1	5.3
Santa Clara	198	.	.	2	1.0	.	.	3	1.5
Solano	23	.	.	1	4.3	1	4.3	.	.
Sonoma	9	.	.	.	.	.	.	1	11.1
Stanislaus	18	.	.	2	11.1	.	.	.	.
Tulare	15	.	.	.	.	.	.	3	20.0
Ventura	24	.	.	2	8.3	.	.	1	4.2
Yolo	11	.	.	.	.	.	.	.	.
All Other Jurisdictions†	33	.	.	2	6.1	.	.	.	.

. Indicates zero cases or zero percent

* See Technical Notes for definition of these risk factors.

** Multidrug-resistant tuberculosis

*** Latent tuberculosis infection

† Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 40. Tuberculosis Cases Among Residents of Correctional Facilities*: Reporting Jurisdictions in California, 2015

						Type of Correctional Facility												
Reporting Jurisdiction	Total Cases	Cases with Information on Residence in a Correctional Facility		Total Cases Diagnosed in Correctional Facility		Federal Prison		State Prison		Local Jail		Juvenile Facility		Other Facility		In Immigration and Customs Enforcement (ICE) Custody**		
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	

. Indicates zero cases or zero percent

* Residence in correctional facility at the time of diagnosis

** Patient was under the custody of ICE at the time of diagnosis in a correctional facility. Persons in ICE custody can be housed in other correctional facilities (e.g., federal or state prison, local jail) when a standalone ICE detention center is not available.

*** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 41. Tuberculosis Cases By Homeless Status*: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Cases with Information on Homeless Status		Cases with Homeless Status	
		No.	%	No.	%
California	2133	2124	99.6	114	5.4
Alameda	139	139	100.0	2	1.4
Berkeley	7	7	100.0	.	.
Contra Costa	45	45	100.0	3	6.7
Fresno	40	40	100.0	5	12.5
Imperial	31	31	100.0	5	16.1
Kern	29	27	93.1	2	7.4
Kings	5	5	100.0	1	20.0
Long Beach	39	39	100.0	3	7.7
Los Angeles	604	598	99.0	44	7.4
Marin	9	9	100.0	.	.
Merced	19	19	100.0	1	5.3
Monterey	16	16	100.0	.	.
Orange	161	161	100.0	2	1.2
Riverside	52	52	100.0	1	1.9
Sacramento	73	73	100.0	.	.
San Bernardino	69	69	100.0	4	5.8
San Diego	234	234	100.0	18	7.7
San Francisco	96	96	100.0	8	8.3
San Joaquin	58	58	100.0	4	6.9
San Mateo	57	57	100.0	.	.
Santa Barbara	19	19	100.0	1	5.3
Santa Clara	198	197	99.5	2	1.0
Solano	23	23	100.0	1	4.3
Sonoma	9	9	100.0	1	11.1
Stanislaus	18	18	100.0	.	.
Tulare	15	15	100.0	.	.
Ventura	24	24	100.0	1	4.2
Yolo	11	11	100.0	.	.
All Other Jurisdictions**	33	33	100.0	5	15.2

. Indicates zero cases or zero percent

* Homeless at any time during the 12 months prior to the initiation of TB diagnostic evaluation

** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 42. Tuberculosis Cases Among Persons in Long-term Care Facilities*: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Cases with Information on Residence in Long-term Care Facility		Cases Diagnosed in a Long-term Care Facility	
		No.	%	No.	%
California	2133	2133	100.0	58	2.7
Alameda	139	139	100.0	6	4.3
Berkeley	7	7	100.0	.	.
Contra Costa	45	45	100.0	.	.
Fresno	40	40	100.0	1	2.5
Imperial	31	31	100.0	.	.
Kern	29	29	100.0	.	.
Kings	5	5	100.0	.	.
Long Beach	39	39	100.0	3	7.7
Los Angeles	604	604	100.0	17	2.8
Marin	9	9	100.0	.	.
Merced	19	19	100.0	1	5.3
Monterey	16	16	100.0	.	.
Orange	161	161	100.0	5	3.1
Riverside	52	52	100.0	.	.
Sacramento	73	73	100.0	2	2.7
San Bernardino	69	69	100.0	2	2.9
San Diego	234	234	100.0	5	2.1
San Francisco	96	96	100.0	4	4.2
San Joaquin	58	58	100.0	.	.
San Mateo	57	57	100.0	2	3.5
Santa Barbara	19	19	100.0	.	.
Santa Clara	198	198	100.0	5	2.5
Solano	23	23	100.0	.	.
Sonoma	9	9	100.0	.	.
Stanislaus	18	18	100.0	1	5.6
Tulare	15	15	100.0	.	.
Ventura	24	24	100.0	2	8.3
Yolo	11	11	100.0	.	.
All Other Jurisdictions**	33	33	100.0	2	6.1

. Indicates zero cases or zero percent

* Residence in long-term care facility at time of diagnosis

** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

**Table 43. Tuberculosis Cases Among Persons Using Injecting Drugs*:
Reporting Jurisdictions in California, 2015**

Reporting Jurisdiction	Total Cases	Injecting Drug Use		Cases with Injecting Drug Use	
		No.	%	No.	%
California	2133	2100	98.5	27	1.3
Alameda	139	139	100.0	1	0.7
Berkeley	7	7	100.0	.	.
Contra Costa	45	45	100.0	1	2.2
Fresno	40	40	100.0	.	.
Imperial	31	31	100.0	2	6.5
Kern	29	29	100.0	1	3.4
Kings	5	5	100.0	1	20.0
Long Beach	39	37	94.9	.	.
Los Angeles	604	583	96.5	5	0.9
Marin	9	9	100.0	.	.
Merced	19	18	94.7	.	.
Monterey	16	16	100.0	.	.
Orange	161	161	100.0	.	.
Riverside	52	50	96.2	4	8.0
Sacramento	73	73	100.0	1	1.4
San Bernardino	69	69	100.0	1	1.4
San Diego	234	234	100.0	8	3.4
San Francisco	96	96	100.0	.	.
San Joaquin	58	58	100.0	1	1.7
San Mateo	57	57	100.0	.	.
Santa Barbara	19	19	100.0	.	.
Santa Clara	198	196	99.0	1	0.5
Solano	23	23	100.0	.	.
Sonoma	9	8	88.9	.	.
Stanislaus	18	16	88.9	.	.
Tulare	15	15	100.0	.	.
Ventura	24	23	95.8	.	.
Yolo	11	10	90.9	.	.
All Other Jurisdictions**	33	33	100.0	.	.

. Indicates zero cases or zero percent

* Injection drug use in the last 12 months

** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 44. Tuberculosis Cases Among Persons Using Non-injecting Drugs*: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Cases with Information on Non-injecting Drug Use		Cases with Non-injecting Drug Use	
		No.	%	No.	%
California	2133	2099	98.4	110	5.2
Alameda	139	139	100.0	4	2.9
Berkeley	7	7	100.0	.	.
Contra Costa	45	45	100.0	1	2.2
Fresno	40	40	100.0	4	10.0
Imperial	31	31	100.0	7	22.6
Kern	29	28	96.6	4	14.3
Kings	5	5	100.0	2	40.0
Long Beach	39	37	94.9	1	2.7
Los Angeles	604	582	96.4	26	4.5
Marin	9	9	100.0	.	.
Merced	19	19	100.0	2	10.5
Monterey	16	16	100.0	.	.
Orange	161	161	100.0	1	0.6
Riverside	52	49	94.2	3	6.1
Sacramento	73	73	100.0	2	2.7
San Bernardino	69	69	100.0	5	7.2
San Diego	234	234	100.0	29	12.4
San Francisco	96	96	100.0	5	5.2
San Joaquin	58	58	100.0	8	13.8
San Mateo	57	57	100.0	.	.
Santa Barbara	19	19	100.0	.	.
Santa Clara	198	196	99.0	1	0.5
Solano	23	23	100.0	1	4.3
Sonoma	9	8	88.9	.	.
Stanislaus	18	16	88.9	.	.
Tulare	15	15	100.0	1	6.7
Ventura	24	23	95.8	.	.
Yolo	11	11	100.0	1	9.1
All Other Jurisdictions**	33	33	100.0	2	6.1

. Indicates zero cases or zero percent

* Non-injection drug use in the last 12 months

** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 45. Tuberculosis Cases Among Persons Using Excess Alcohol*: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Cases with Information on Excess Alcohol Use		Cases with Excess Alcohol Use	
		No.	%	No.	%
California	2133	2103	98.6	153	7.3
Alameda	139	139	100.0	7	5.0
Berkeley	7	7	100.0	.	.
Contra Costa	45	45	100.0	5	11.1
Fresno	40	40	100.0	4	10.0
Imperial	31	31	100.0	1	3.2
Kern	29	29	100.0	4	13.8
Kings	5	5	100.0	1	20.0
Long Beach	39	37	94.9	3	8.1
Los Angeles	604	585	96.9	58	9.9
Marin	9	9	100.0	.	.
Merced	19	18	94.7	3	16.7
Monterey	16	16	100.0	1	6.3
Orange	161	161	100.0	5	3.1
Riverside	52	50	96.2	1	2.0
Sacramento	73	73	100.0	3	4.1
San Bernardino	69	69	100.0	6	8.7
San Diego	234	234	100.0	20	8.5
San Francisco	96	96	100.0	9	9.4
San Joaquin	58	58	100.0	7	12.1
San Mateo	57	57	100.0	2	3.5
Santa Barbara	19	19	100.0	2	10.5
Santa Clara	198	196	99.0	3	1.5
Solano	23	23	100.0	1	4.3
Sonoma	9	8	88.9	.	.
Stanislaus	18	16	88.9	.	.
Tulare	15	15	100.0	4	26.7
Ventura	24	23	95.8	.	.
Yolo	11	11	100.0	1	9.1
All Other Jurisdictions**	33	33	100.0	2	6.1

. Indicates zero cases or zero percent

* Excess alcohol use in the last 12 months

** Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 46. Tuberculosis Cases by Occupation*, Age >= 15: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Cases Age >= 15	Cases with Information on Occupation		Health Care Worker		Correctional Facility Employee		Migrant or Seasonal Worker		Other Occupation		Retired**		Unemployed**		Not Seeking Employment**	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2065	2034	98.5	92	4.5	2	0.1	30	1.5	685	33.7	482	23.7	382	18.8	361	17.7
Alameda	137	136	99.3	7	5.1	1	0.7	1	0.7	39	28.7	5	3.7	13	9.6	70	51.5
Berkeley	7	7	100.0	.	.	.	.	.	.	4	57.1	.	.	.	.	3	42.9
Contra Costa	44	44	100.0	5	11.4	.	.	.	.	16	36.4	15	34.1	6	13.6	2	4.5
Fresno	37	37	100.0	.	.	.	.	4	10.8	15	40.5	5	13.5	5	13.5	8	21.6
Imperial	29	29	100.0	.	.	.	.	2	6.9	6	20.7	5	17.2	5	17.2	11	37.9
Kern	29	28	96.6	1	3.6	.	.	5	17.9	10	35.7	6	21.4	4	14.3	2	7.1
Kings	5	5	100.0	1	20.0	.	.	.	.	2	40.0	.	.	1	20.0	1	20.0
Long Beach	39	38	97.4	3	7.9	.	.	.	.	9	23.7	5	13.2	5	13.2	16	42.1
Los Angeles	593	577	97.3	21	3.6	.	.	1	0.2	203	35.2	156	27.0	143	24.8	53	9.2
Marin	9	9	100.0	.	.	.	.	.	.	8	88.9	.	.	.	.	1	11.1
Merced	13	13	100.0	.	.	.	.	2	15.4	3	23.1	6	46.2	.	.	2	15.4
Monterey	14	14	100.0	1	7.1	.	.	3	21.4	2	14.3	7	50.0	1	7.1	.	.
Orange	158	158	100.0	10	6.3	.	.	.	.	58	36.7	46	29.1	22	13.9	22	13.9
Riverside	49	44	89.8	2	4.5	.	.	.	.	12	27.3	7	15.9	4	9.1	19	43.2
Sacramento	70	70	100.0	3	4.3	.	.	.	.	18	25.7	7	10.0	12	17.1	30	42.9
San Bernardino	64	64	100.0	4	6.3	.	.	.	.	18	28.1	9	14.1	20	31.3	13	20.3
San Diego	223	223	100.0	5	2.2	.	.	1	0.4	67	30.0	63	28.3	55	24.7	32	14.4
San Francisco	94	93	98.9	.	.	.	.	.	.	30	32.3	33	35.5	26	28.0	4	4.3
San Joaquin	54	54	100.0	1	1.9	.	.	3	5.6	20	37.0	13	24.1	2	3.7	15	27.8
San Mateo	56	55	98.2	5	9.1	.	.	.	.	22	40.0	9	16.4	5	9.1	14	25.5
Santa Barbara	17	17	100.0	1	5.9	.	.	2	11.8	8	47.1	1	5.9	4	23.5	1	5.9
Santa Clara	197	195	99.0	13	6.7	1	0.5	1	0.5	87	44.6	43	22.1	31	15.9	19	9.7
Solano	21	21	100.0	4	19.0	.	.	.	.	6	28.6	7	33.3	2	9.5	2	9.5
Sonoma	9	9	100.0	1	11.1	.	.	.	.	3	33.3	1	11.1	1	11.1	3	33.3
Stanislaus	16	16	100.0	.	.	.	.	2	12.5	3	18.8	2	12.5	4	25.0	5	31.3
Tulare	15	14	93.3	2	14.3	.	.	2	14.3	3	21.4	5	35.7	.	.	2	14.3
Ventura	23	23	100.0	1	4.3	.	.	.	.	6	26.1	11	47.8	1	4.3	4	17.4
Yolo	10	8	80.0	.	.	.	.	.	.	.	.	4	50.0	1	12.5	3	37.5
All Other Jurisdictions+	33	33	100.0	1	3.0	.	.	1	3.0	7	21.2	11	33.3	9	27.3	4	12.1

* Primary occupation in the last 12 months

** Retired=person who was retired during the 12 months before the TB diagnostic evaluation; unemployed=person not employed during the 12 months before the diagnostic evaluation; not seeking employment=student, homemaker, person receiving permanent disability benefits, or person who was institutionalized

+ Reporting jurisdictions with fewer than 5 cases

California Department of Public Health, Tuberculosis Control Branch

Table 47. Tuberculosis Cases by Initial Drug Susceptibility Testing: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Total Culture Positive Cases		Cases with Initial Drug Susceptibility Testing	
		No.	%	No.	%
California	2133	1762	82.6	1734	98.4
Alameda	139	100	71.9	99	99.0
Alpine	.	.	.	.	.
Amador	.	.	.	.	.
Berkeley	7	3	42.9	3	100.0
Butte	3	3	100.0	3	100.0
Calaveras	.	.	.	.	.
Colusa	.	.	.	.	.
Contra Costa	45	38	84.4	38	100.0
Del Norte	.	.	.	.	.
El Dorado	3	2	66.7	2	100.0
Fresno	40	32	80.0	32	100.0
Glenn	1	.	.	.	.
Humboldt	.	.	.	.	.
Imperial	31	26	83.9	26	100.0
Inyo	.	.	.	.	.
Kern	29	23	79.3	23	100.0
Kings	5	5	100.0	5	100.0
Lake	.	.	.	.	.
Lassen	.	.	.	.	.
Long Beach	39	31	79.5	31	100.0
Los Angeles	604	519	85.9	507	97.7
Madera	4	4	100.0	4	100.0
Marin	9	5	55.6	4	80.0
Mariposa	.	.	.	.	.
Mendocino	.	.	.	.	.
Merced	19	12	63.2	12	100.0
Modoc	.	.	.	.	.
Mono	.	.	.	.	.
Monterey	16	13	81.3	13	100.0
Napa	3	1	33.3	1	100.0
Nevada	1	1	100.0	1	100.0
Orange	161	148	91.9	148	100.0
Pasadena	2	2	100.0	2	100.0
Placer	4	4	100.0	4	100.0
Plumas	.	.	.	.	.
Riverside	52	46	88.5	45	97.8
Sacramento	73	57	78.1	56	98.2
San Benito	1	.	.	.	.
San Bernardino	69	55	79.7	50	90.9
San Diego	234	204	87.2	204	100.0
San Francisco	96	67	69.8	66	98.5
San Joaquin	58	42	72.4	41	97.6
San Luis Obispo	2	2	100.0	2	100.0
San Mateo	57	45	78.9	45	100.0
Santa Barbara	19	18	94.7	18	100.0
Santa Clara	198	170	85.9	168	98.8
Santa Cruz	2	2	100.0	2	100.0

Table 47. Tuberculosis Cases by Initial Drug Susceptibility Testing: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Cases	Total Culture Positive Cases		Cases with Initial Drug Susceptibility Testing	
		No.	%	No.	%
Shasta	4	4	100.0	4	100.0
Sierra	.	.	.	.	.
Siskiyou	.	.	.	.	.
Solano	23	17	73.9	17	100.0
Sonoma	9	7	77.8	7	100.0
Stanislaus	18	14	77.8	14	100.0
Sutter	2	1	50.0	1	100.0
Tehama	.	.	.	.	.
Trinity	1	1	100.0	1	100.0
Tulare	15	11	73.3	10	90.9
Tuolumne	.	.	.	.	.
Ventura	24	18	75.0	18	100.0
Yolo	11	9	81.8	7	77.8
Yuba	.	.	.	.	.

. Indicates zero cases or zero percent

California Department of Public Health, Tuberculosis Control Branch

Table 48. Tuberculosis Cases by Resistance to Isoniazid and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with INH** Susceptibility Testing	Total Cases with Resistance to INH		No Prior TB			Prior TB		
			No.	%	No. with INH Susceptibility Testing	Cases with Resistance to INH		No. with INH Susceptibility Testing	Cases with Resistance to INH	
						No.	%		No.	%
California	1762	1729	188	10.9	1635	172	10.5	89	16	18.0
Alameda	100	99	13	13.1	93	11	11.8	6	2	33.3
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	3	3	.	.	3	.	.	.	.	.
Butte	3	3	1	33.3	3	1	33.3	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	38	38	7	18.4	35	6	17.1	3	1	33.3
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	2	2	.	.	2	.	.	.	.	.
Fresno	32	32	1	3.1	30	1	3.3	2	.	.
Glenn	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	26	25	3	12.0	24	3	12.5	1	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	2	8.7	23	2	8.7	.	.	.
Kings	5	5	.	.	5	.	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	31	31	1	3.2	31	1	3.2	.	.	.
Los Angeles	519	507	53	10.5	485	47	9.7	21	6	28.6
Madera	4	4	1	25.0	4	1	25.0	.	.	.
Marin	5	3	.	.	3	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	12	12	2	16.7	10	1	10.0	2	1	50.0
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	13	12	1	8.3	12	1	8.3	.	.	.
Napa	1	1	.	.	1	.	.	.	.	.
Nevada	1	1	.	.	1	.	.	.	.	.
Orange	148	148	15	10.1	142	15	10.6	6	.	.
Pasadena	2	2	.	.	2	.	.	.	.	.
Placer	4	4	.	.	4	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	46	45	4	8.9	41	4	9.8	1	.	.
Sacramento	57	56	11	19.6	56	11	19.6	.	.	.
San Benito	.	.	.	.	.	.	.	.	.	.
San Bernardino	55	50	3	6.0	47	2	4.3	3	1	33.3
San Diego	204	204	16	7.8	197	16	8.1	7	.	.
San Francisco	67	66	7	10.6	58	7	12.1	8	.	.
San Joaquin	42	40	1	2.5	39	1	2.6	1	.	.
San Luis Obispo	2	2	1	50.0	2	1	50.0	.	.	.

Table 48. Tuberculosis Cases by Resistance to Isoniazid and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with INH** Susceptibility Testing	Total Cases with Resistance to INH		No Prior TB			Prior TB		
			No.	%	No. with INH Susceptibility Testing	Cases with Resistance to INH		No. with INH Susceptibility Testing	Cases with Resistance to INH	
						No.	%		No.	%
San Mateo	45	45	9	20.0	38	7	18.4	7	2	28.6
Santa Barbara	18	18	4	22.2	18	4	22.2	.	.	.
Santa Clara	170	167	25	15.0	151	23	15.2	15	2	13.3
Santa Cruz	2	2	.	.	2	.	.	.	.	.
Shasta	4	4	.	.	4	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	17	2	11.8	14	1	7.1	3	1	33.3
Sonoma	7	7	2	28.6	6	2	33.3	1	.	.
Stanislaus	14	14	1	7.1	14	1	7.1	.	.	.
Sutter	1	1	.	.	1	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	.	.	.	.	.
Tulare	11	10	1	10.0	10	1	10.0	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	18	.	.	17	.	.	1	.	.
Yolo	9	7	1	14.3	6	1	16.7	1	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

** INH=isoniazid

California Department of Public Health, Tuberculosis Control Branch

Table 49. Tuberculosis Cases by Resistance to Rifampin and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with RIF** Susceptibility Testing	Total Cases with Resistance to RIF		No Prior TB			Prior TB		
					No. with RIF Susceptibility Testing	Cases with Resistance to RIF		No. with RIF Susceptibility Testing	Cases with Resistance to RIF	
			No.	%		No.	%		No.	%
California	1762	1727	25	1.4	1633	20	1.2	89	5	5.6
Alameda	100	99	3	3.0	93	2	2.2	6	1	16.7
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	3	3	.	.	3	.	.	.	.	.
Butte	3	3	.	.	3	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	38	38	.	.	35	.	.	3	.	.
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	2	2	.	.	2	.	.	.	.	.
Fresno	32	32	.	.	30	.	.	2	.	.
Glenn	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	26	26	.	.	25	.	.	1	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	.	.	23	.	.	.	.	.
Kings	5	5	.	.	5	.	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	31	31	1	3.2	31	1	3.2	.	.	.
Los Angeles	519	506	6	1.2	484	5	1.0	21	1	4.8
Madera	4	4	.	.	4	.	.	.	.	.
Marin	5	3	.	.	3	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	12	12	1	8.3	10	.	.	2	1	50.0
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	13	11	.	.	11	.	.	.	.	.
Napa	1	1	.	.	1	.	.	.	.	.
Nevada	1	1	.	.	1	.	.	.	.	.
Orange	148	147	2	1.4	141	2	1.4	6	.	.
Pasadena	2	2	.	.	2	.	.	.	.	.
Placer	4	4	.	.	4	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	46	45	.	.	41	.	.	1	.	.
Sacramento	57	56	2	3.6	56	2	3.6	.	.	.
San Benito	.	.	.	.	.	.	.	.	.	.
San Bernardino	55	50	.	.	47	.	.	3	.	.
San Diego	204	204	1	0.5	197	1	0.5	7	.	.
San Francisco	67	66	2	3.0	58	2	3.4	8	.	.
San Joaquin	42	40	.	.	39	.	.	1	.	.
San Luis Obispo	2	2	1	50.0	2	1	50.0	.	.	.

Table 49. Tuberculosis Cases by Resistance to Rifampin and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with RIF** Susceptibility Testing	Total Cases with Resistance to RIF		No Prior TB			Prior TB		
					No. with RIF Susceptibility Testing	Cases with Resistance to RIF		No. with RIF Susceptibility Testing	Cases with Resistance to RIF	
			No.	%		No.	%		No.	%
San Mateo	45	45	1	2.2	38	1	2.6	7	.	.
Santa Barbara	18	18	.	.	18	.	.	.	.	.
Santa Clara	170	168	5	3.0	152	3	2.0	15	2	13.3
Santa Cruz	2	2	.	.	2	.	.	.	.	.
Shasta	4	4	.	.	4	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	17	.	.	14	.	.	3	.	.
Sonoma	7	6	.	.	5	.	.	1	.	.
Stanislaus	14	14	.	.	14	.	.	.	.	.
Sutter	1	1	.	.	1	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	.	.	.	.	.
Tulare	11	10	.	.	10	.	.	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	18	.	.	17	.	.	1	.	.
Yolo	9	7	.	.	6	.	.	1	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

** RIF=rifampin

California Department of Public Health, Tuberculosis Control Branch

Table 50. Tuberculosis Cases by Resistance to Ethambutol and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with EMB** Susceptibility Testing	Total Cases with Resistance to EMB		No Prior TB			Prior TB		
			No.	%	No. with EMB Susceptibility Testing	Cases with Resistance to EMB		No. with EMB Susceptibility Testing	Cases with Resistance to EMB	
						No.	%		No.	%
California	1762	1722	12	0.7	1628	9	0.6	89	3	3.4
Alameda	100	98	2	2.0	92	1	1.1	6	1	16.7
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	3	3	.	.	3	.	.	.	.	.
Butte	3	3	.	.	3	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	38	38	1	2.6	35	1	2.9	3	.	.
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	2	2	.	.	2	.	.	.	.	.
Fresno	32	32	1	3.1	30	1	3.3	2	.	.
Glenn	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	26	26	.	.	25	.	.	1	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	.	.	23	.	.	.	.	.
Kings	5	5	.	.	5	.	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	31	31	.	.	31	.	.	.	.	.
Los Angeles	519	506	.	.	484	.	.	21	.	.
Madera	4	4	.	.	4	.	.	.	.	.
Marin	5	3	.	.	3	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	12	12	1	8.3	10	.	.	2	1	50.0
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	13	11	.	.	11	.	.	.	.	.
Napa	1	1	.	.	1	.	.	.	.	.
Nevada	1	1	.	.	1	.	.	.	.	.
Orange	148	146	.	.	140	.	.	6	.	.
Pasadena	2	2	.	.	2	.	.	.	.	.
Placer	4	4	.	.	4	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	46	45	.	.	41	.	.	1	.	.
Sacramento	57	56	1	1.8	56	1	1.8	.	.	.
San Benito	.	.	.	.	.	.	.	.	.	.
San Bernardino	55	50	.	.	47	.	.	3	.	.
San Diego	204	204	1	0.5	197	1	0.5	7	.	.
San Francisco	67	65	.	.	57	.	.	8	.	.
San Joaquin	42	40	.	.	39	.	.	1	.	.
San Luis Obispo	2	1	.	.	1	.	.	.	.	.

Table 50. Tuberculosis Cases by Resistance to Ethambutol and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with EMB** Susceptibility Testing	Total Cases with Resistance to EMB		No Prior TB			Prior TB		
			No.	%	No. with EMB Susceptibility Testing	Cases with Resistance to EMB		No. with EMB Susceptibility Testing	Cases with Resistance to EMB	
						No.	%		No.	%
San Mateo	45	45	.	.	38	.	.	7	.	.
Santa Barbara	18	17	1	5.9	17	1	5.9	.	.	.
Santa Clara	170	168	3	1.8	152	2	1.3	15	1	6.7
Santa Cruz	2	2	.	.	2	.	.	.	.	.
Shasta	4	4	.	.	4	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	17	.	.	14	.	.	3	.	.
Sonoma	7	6	.	.	5	.	.	1	.	.
Stanislaus	14	14	.	.	14	.	.	.	.	.
Sutter	1	1	.	.	1	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	.	.	.	.	.
Tulare	11	10	1	10.0	10	1	10.0	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	18	.	.	17	.	.	1	.	.
Yolo	9	7	.	.	6	.	.	1	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

** EMB=ethambutol

California Department of Public Health, Tuberculosis Control Branch

Table 51. Tuberculosis Cases by Resistance to Pyrazinamide and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with PZA** Susceptibility Testing	Total Cases with Resistance to PZA		No Prior TB			Prior TB		
			No.	%	No. with PZA Susceptibility Testing	Cases with Resistance to PZA		No. with PZA Susceptibility Testing	Cases with Resistance to PZA	
						No.	%		No.	%
California	1762	1710	88	5.1	1617	83	5.1	88	4	4.5
Alameda	100	99	2	2.0	93	2	2.2	6	.	.
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	3	3	.	.	3	.	.	.	.	.
Butte	3	3	.	.	3	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	38	38	1	2.6	35	1	2.9	3	.	.
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	2	2	.	.	2	.	.	.	.	.
Fresno	32	32	.	.	30	.	.	2	.	.
Glenn	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	26	25	.	.	24	.	.	1	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	3	13.0	23	3	13.0	.	.	.
Kings	5	5	.	.	5	.	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	31	31	3	9.7	31	3	9.7	.	.	.
Los Angeles	519	499	22	4.4	477	21	4.4	21	.	.
Madera	4	4	.	.	4	.	.	.	.	.
Marin	5	3	.	.	3	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	12	11	2	18.2	9	2	22.2	2	.	.
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	13	13	2	15.4	13	2	15.4	.	.	.
Napa	1	.	.	.	.	.	.	.	.	.
Nevada	1	1	.	.	1	.	.	.	.	.
Orange	148	147	2	1.4	141	2	1.4	6	.	.
Pasadena	2	2	.	.	2	.	.	.	.	.
Placer	4	4	.	.	4	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	46	43	3	7.0	39	3	7.7	1	.	.
Sacramento	57	56	6	10.7	56	6	10.7	.	.	.
San Benito	.	.	.	.	.	.	.	.	.	.
San Bernardino	55	49	4	8.2	47	4	8.5	2	.	.
San Diego	204	203	19	9.4	196	19	9.7	7	.	.
San Francisco	67	65	1	1.5	57	1	1.8	8	.	.
San Joaquin	42	40	2	5.0	39	2	5.1	1	.	.
San Luis Obispo	2	1	.	.	1	.	.	.	.	.

Table 51. Tuberculosis Cases by Resistance to Pyrazinamide and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with PZA** Susceptibility Testing	Total Cases with Resistance to PZA		No Prior TB			Prior TB		
			No.	%	No. with PZA Susceptibility Testing	Cases with Resistance to PZA		No. with PZA Susceptibility Testing	Cases with Resistance to PZA	
						No.	%		No.	%
San Mateo	45	45	4	8.9	38	3	7.9	7	1	14.3
Santa Barbara	18	17	2	11.8	17	2	11.8	.	.	.
Santa Clara	170	166	7	4.2	150	5	3.3	15	2	13.3
Santa Cruz	2	2	.	.	2	.	.	.	.	.
Shasta	4	4	.	.	4	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	17	.	.	14	.	.	3	.	.
Sonoma	7	6	1	16.7	5	.	.	1	1	100.0
Stanislaus	14	14	.	.	14	.	.	.	.	.
Sutter	1	1	.	.	1	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	.	.	.	.	.
Tulare	11	10	.	.	10	.	.	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	18	2	11.1	17	2	11.8	1	.	.
Yolo	9	7	.	.	6	.	.	1	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

** PZA=pyrazinamide

California Department of Public Health, Tuberculosis Control Branch

Table 52. Tuberculosis Cases by Resistance to Streptomycin and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases* with SM** Susceptibility Testing	Total Cases with Resistance to SM		No Prior TB			Prior TB		
					No. with SM Susceptibility Testing	Cases with Resistance to SM		No. with SM Susceptibility Testing	Cases with Resistance to SM	
			No.	%		No.	%		No.	%
San Mateo	45	6	1	16.7	6	1	16.7	.	.	.
Santa Barbara	18	17	1	5.9	17	1	5.9	.	.	.
Santa Clara	170	90	12	13.3	78	10	12.8	12	2	16.7
Santa Cruz	2	.	.	.	.	.	.	.	.	.
Shasta	4	.	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	1	.	.	1	.	.	.	.	.
Sonoma	7	1	.	.	.	.	.	1	.	.
Stanislaus	14	1	.	.	1	.	.	.	.	.
Sutter	1	.	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	.	.	.	.	.	.	.	.	.
Tulare	11	6	1	16.7	6	1	16.7	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	12	.	.	11	.	.	1	.	.
Yolo	9	.	.	.	.	.	.	.	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

** SM=streptomycin

California Department of Public Health, Tuberculosis Control Branch

Table 53. Multidrug-resistant (MDR) Tuberculosis Cases* by History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases** with MDR Susceptibility Testing	Cases with Multidrug Resistance		No Prior TB			Prior TB		
			No.	%	No. with MDR Susceptibility Testing	Cases with Multidrug Resistance		No. with MDR Susceptibility Testing	Cases with Multidrug Resistance	
						No.	%		No.	%
California	1762	1725	23	1.3	1631	18	1.1	89	5	5.6
Alameda	100	99	3	3.0	93	2	2.2	6	1	16.7
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	3	3	.	.	3	.	.	.	.	.
Butte	3	3	.	.	3	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	38	38	.	.	35	.	.	3	.	.
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	2	2	.	.	2	.	.	.	.	.
Fresno	32	32	.	.	30	.	.	2	.	.
Glenn	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	26	25	.	.	24	.	.	1	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	.	.	23	.	.	.	.	.
Kings	5	5	.	.	5	.	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	31	31	1	3.2	31	1	3.2	.	.	.
Los Angeles	519	506	6	1.2	484	5	1.0	21	1	4.8
Madera	4	4	.	.	4	.	.	.	.	.
Marin	5	3	.	.	3	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	12	12	1	8.3	10	.	.	2	1	50.0
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	13	11	.	.	11	.	.	.	.	.
Napa	1	1	.	.	1	.	.	.	.	.
Nevada	1	1	.	.	1	.	.	.	.	.
Orange	148	147	2	1.4	141	2	1.4	6	.	.
Pasadena	2	2	.	.	2	.	.	.	.	.
Placer	4	4	.	.	4	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	46	45	.	.	41	.	.	1	.	.
Sacramento	57	56	2	3.6	56	2	3.6	.	.	.
San Benito	.	.	.	.	.	.	.	.	.	.
San Bernardino	55	50	.	.	47	.	.	3	.	.
San Diego	204	204	1	0.5	197	1	0.5	7	.	.
San Francisco	67	66	1	1.5	58	1	1.7	8	.	.
San Joaquin	42	40	.	.	39	.	.	1	.	.
San Luis Obispo	2	2	1	50.0	2	1	50.0	.	.	.
San Mateo	45	45	1	2.2	38	1	2.6	7	.	.
Santa Barbara	18	18	.	.	18	.	.	.	.	.

Table 53. Multidrug-resistant (MDR) Tuberculosis Cases* by History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases** with MDR Susceptibility Testing	Cases with Multidrug Resistance		No Prior TB			Prior TB		
			No.	%	No. with MDR Susceptibility Testing	Cases with Multidrug Resistance		No. with MDR Susceptibility Testing	Cases with Multidrug Resistance	
						No.	%		No.	%
Santa Clara	170	167	4	2.4	151	2	1.3	15	2	13.3
Santa Cruz	2	2	.	.	2	.	.	.	.	.
Shasta	4	4	.	.	4	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	17	.	.	14	.	.	3	.	.
Sonoma	7	6	.	.	5	.	.	1	.	.
Stanislaus	14	14	.	.	14	.	.	.	.	.
Sutter	1	1	.	.	1	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	.	.	.	.	.
Tulare	11	10	.	.	10	.	.	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	18	.	.	17	.	.	1	.	.
Yolo	9	7	.	.	6	.	.	1	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* Cases with resistance to at least isoniazid and rifampin

** Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

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Table 54. Tuberculosis Cases by Resistance to at Least One First-line Drug* and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases** with Susceptibility Testing	Total Cases with Resistance to >=One Drug		No Prior TB			Prior TB		
			No.	%	No. with Susceptibility Testing	Cases with Resistance to >=One Drug		No. with Susceptibility Testing	Cases with Resistance to >=One Drug	
						No.	%		No.	%
California	1762	1732	266	15.4	1638	246	15.0	89	19	21.3
Alameda	100	99	14	14.1	93	12	12.9	6	2	33.3
Alpine	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.
Berkeley	3	3	.	.	3	.	.	.	.	.
Butte	3	3	1	33.3	3	1	33.3	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.
Contra Costa	38	38	8	21.1	35	7	20.0	3	1	33.3
Del Norte	.	.	.	.	.	.	.	.	.	.
El Dorado	2	2	.	.	2	.	.	.	.	.
Fresno	32	32	1	3.1	30	1	3.3	2	.	.
Glenn	.	.	.	.	.	.	.	.	.	.
Humboldt	.	.	.	.	.	.	.	.	.	.
Imperial	26	26	3	11.5	25	3	12.0	1	.	.
Inyo	.	.	.	.	.	.	.	.	.	.
Kern	23	23	5	21.7	23	5	21.7	.	.	.
Kings	5	5	.	.	5	.	.	.	.	.
Lake	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.
Long Beach	31	31	4	12.9	31	4	12.9	.	.	.
Los Angeles	519	507	73	14.4	485	66	13.6	21	6	28.6
Madera	4	4	1	25.0	4	1	25.0	.	.	.
Marin	5	3	.	.	3	.	.	.	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.
Mendocino	.	.	.	.	.	.	.	.	.	.
Merced	12	12	4	33.3	10	3	30.0	2	1	50.0
Modoc	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.
Monterey	13	13	2	15.4	13	2	15.4	.	.	.
Napa	1	1	.	.	1	.	.	.	.	.
Nevada	1	1	.	.	1	.	.	.	.	.
Orange	148	148	16	10.8	142	16	11.3	6	.	.
Pasadena	2	2	.	.	2	.	.	.	.	.
Placer	4	4	.	.	4	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.
Riverside	46	45	6	13.3	41	6	14.6	1	.	.
Sacramento	57	56	17	30.4	56	17	30.4	.	.	.
San Benito	.	.	.	.	.	.	.	.	.	.
San Bernardino	55	50	6	12.0	47	5	10.6	3	1	33.3
San Diego	204	204	35	17.2	197	35	17.8	7	.	.
San Francisco	67	66	9	13.6	58	9	15.5	8	.	.
San Joaquin	42	40	3	7.5	39	3	7.7	1	.	.
San Luis Obispo	2	2	1	50.0	2	1	50.0	.	.	.
San Mateo	45	45	11	24.4	38	8	21.1	7	3	42.9

Table 54. Tuberculosis Cases by Resistance to at Least One First-line Drug* and History of Prior Tuberculosis: Reporting Jurisdictions in California, 2015

Reporting Jurisdiction	Total Culture Positive Cases	Total Cases** with Susceptibility Testing	Total Cases with Resistance to >=One Drug		No Prior TB			Prior TB		
					No. with Susceptibility Testing	Cases with Resistance to >=One Drug		No. with Susceptibility Testing	Cases with Resistance to >=One Drug	
			No.	%		No.	%		No.	%
Santa Barbara	18	18	5	27.8	18	5	27.8	.	.	.
Santa Clara	170	168	31	18.5	152	28	18.4	15	3	20.0
Santa Cruz	2	2	.	.	2	.	.	.	.	.
Shasta	4	4	.	.	4	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.
Solano	17	17	2	11.8	14	1	7.1	3	1	33.3
Sonoma	7	7	3	42.9	6	2	33.3	1	1	100.0
Stanislaus	14	14	1	7.1	14	1	7.1	.	.	.
Sutter	1	1	.	.	1	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.
Trinity	1	1	.	.	1	.	.	.	.	.
Tulare	11	10	1	10.0	10	1	10.0	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.
Ventura	18	18	2	11.1	17	2	11.8	1	.	.
Yolo	9	7	1	14.3	6	1	16.7	1	.	.
Yuba	.	.	.	.	.	.	.	.	.	.

. Indicates zero cases or zero percent

* First-line drugs include isoniazid, rifampin, ethambutol and pyrazinamide

** Sum of cases with prior TB and without prior TB may not equal all cases due to inclusion of those with unknown history of TB.

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Table 55. Tuberculosis Cases by Resistance to Isoniazid (INH): Reporting Jurisdictions in California, 2009-2015*

Reporting Jurisdiction	2009			2010			2011			2012			2013			2014			2015			
	No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%	No.
California	1919	192	10.0	1828	173	9.5	1824	195	10.7	1725	176	10.2	1739	191	11.0	1700	164	9.6	1729	188	10.9	
Alameda	111	12	10.8	125	13	10.4	91	5	5.5	99	13	13.1	86	13	15.1	78	15	19.2	99	13	13.1	
Alpine
Amador	.	.	.	1	1
Berkeley	2	.	.	5	.	.	1	.	.	6	.	.	5	.	.	2	.	.	3	.	.	
Butte	2	.	.	2	.	.	.	.	.	2	.	.	4	1	25.0	4	2	50.0	3	1	33.3
Calaveras	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Colusa	.	.	.	3	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	34	5	14.7	29	2	6.9	33	4	12.1	45	3	6.7	42	2	4.8	39	6	15.4	38	7	18.4	
Del Norte
El Dorado	.	.	.	1	1	100.0	3	1	33.3	2	.	.	1	.	.	2	.	.	2	.	.	
Fresno	47	7	14.9	43	3	7.0	35	2	5.7	29	3	10.3	34	4	11.8	45	4	8.9	32	1	3.1	
Glenn	.	.	.	1	.	.	.	.	.	2	.	.	1	1	100.0	.	.	.	.	.	.
Humboldt	1	.	.	1	.	.	1	.	.	1	.	.	1	.	.	2	.	.	.	.	.
Imperial	34	.	.	21	1	4.8	25	.	.	28	3	10.7	30	1	3.3	27	1	3.7	25	3	12.0	
Inyo
Kern	37	.	.	28	4	14.3	31	2	6.5	25	2	8.0	23	3	13.0	32	3	9.4	23	2	8.7	
Kings	4	.	.	3	.	.	5	1	20.0	5	.	.	5	.	.	3	.	.	5	.	.	
Lake	.	.	.	1	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Lassen	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Long Beach	40	1	2.5	36	5	13.9	22	3	13.6	26	1	3.8	30	3	10.0	22	2	9.1	31	1	3.2	
Los Angeles	557	47	8.4	523	47	9.0	536	48	9.0	502	35	7.0	529	51	9.6	471	51	10.8	507	53	10.5	
Madera	4	.	.	2	.	.	9	.	.	3	.	.	5	.	.	8	3	37.5	4	1	25.0	
Marin	8	.	.	7	3	42.9	10	2	20.0	9	.	.	7	.	.	5	.	.	3	.	.	
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	1	.	.	.	.	.	2	.	.	.	.	.	1	.	.	1	.	.	.	.	.
Merced	10	.	.	6	.	.	6	.	.	16	1	6.3	12	3	25.0	3	.	.	12	2	16.7	
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	13	1	7.7	18	2	11.1	23	4	17.4	14	2	14.3	15	.	.	12	2	16.7	12	1	8.3	
Napa	4	2	50.0	4	.	.	5	.	.	2	1	50.0	2	.	.	3	.	.	1	.	.	
Nevada	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Orange	165	29	17.6	199	23	11.6	181	29	16.0	176	25	14.2	158	22	13.9	158	17	10.8	148	15	10.1	

Table 55. Tuberculosis Cases by Resistance to Isoniazid (INH): Reporting Jurisdictions in California, 2009-2015*

Reporting Jurisdiction	2009			2010			2011			2012			2013			2014			2015		
	No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH		No. with INH Testing	Cases with Resistance to INH	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
Pasadena	3	.	.	4	.	.	4	.	.	10	1	10.0	4	.	.	3	.	.	2	.	.
Placer	3	1	33.3	2	.	.	4	.	.	3	.	.	4	2	50.0	4	.	.	4	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	52	5	9.6	64	9	14.1	55	2	3.6	52	4	7.7	49	8	16.3	56	5	8.9	45	4	8.9
Sacramento	71	10	14.1	43	.	.	54	2	3.7	46	6	13.0	71	7	9.9	57	7	12.3	56	11	19.6
San Benito	.	.	.	1	.	.	3	.	.	.	.	.	1	.	.	1	.	.	.	.	.
San Bernardino	63	5	7.9	48	3	6.3	44	7	15.9	50	8	16.0	48	3	6.3	35	2	5.7	50	3	6.0
San Diego	176	16	9.1	183	15	8.2	216	32	14.8	183	18	9.8	169	15	8.9	187	12	6.4	204	16	7.8
San Francisco	85	8	9.4	77	13	16.9	74	10	13.5	84	16	19.0	74	10	13.5	93	10	10.8	66	7	10.6
San Joaquin	56	6	10.7	37	3	8.1	40	4	10.0	35	3	8.6	38	4	10.5	38	3	7.9	40	1	2.5
San Luis Obispo	3	1	33.3	3	.	.	2	1	50.0	3	.	.	4	.	.	2	.	.	2	1	50.0
San Mateo	53	8	15.1	45	6	13.3	46	8	17.4	40	2	5.0	46	5	10.9	57	1	1.8	45	9	20.0
Santa Barbara	17	4	23.5	26	2	7.7	17	1	5.9	21	1	4.8	24	6	25.0	26	1	3.8	18	4	22.2
Santa Clara	151	13	8.6	150	16	10.7	155	20	12.9	133	20	15.0	143	18	12.6	130	11	8.5	167	25	15.0
Santa Cruz	5	.	.	7	.	.	5	1	20.0	2	1	50.0	2	.	.	4	1	25.0	2	.	.
Shasta	1	.	.	1	.	.	.	.	.	1	.	.	3	1	33.3	2	.	.	4	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solano	18	1	5.6	14	1	7.1	18	1	5.6	11	2	18.2	9	1	11.1	19	3	15.8	17	2	11.8
Sonoma	8	1	12.5	8	.	.	10	2	20.0	8	.	.	7	2	28.6	9	.	.	7	2	28.6
Stanislaus	18	4	22.2	9	.	.	9	.	.	6	.	.	7	.	.	10	.	.	14	1	7.1
Sutter	.	.	.	3	.	.	4	.	.	4	2	50.0	4	1	25.0	1	.	.	1	.	.
Tehama	1	1	100.0	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Tulare	15	1	6.7	22	1	4.5	13	.	.	7	.	.	9	1	11.1	11	.	.	10	1	10.0
Tuolumne	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	35	2	5.7	14	.	.	25	1	4.0	27	2	7.4	22	2	9.1	28	1	3.6	18	.	.
Yolo	7	1	14.3	7	.	.	3	1	33.3	3	1	33.3	5	.	.	7	.	.	7	1	14.3
Yuba	.	.	.	1	.	.	1	1	100.0	1	.	.	4	1	25.0	2	1	50.0	.	.	.

. Indicates zero cases or zero percent

* At the time of report preparation, drug susceptibility testing was 98 percent complete for culture positive cases reported in 2015.

As additional Initial Drug Susceptibility Reports are submitted, overall proportions of drug resistance may change slightly.

California Department of Public Health, Tuberculosis Control Branch

Table 56. Multidrug-resistant (MDR) Tuberculosis Cases*: Reporting Jurisdictions in California, 2009-2015**

Reporting Jurisdiction	2009			2010			2011			2012			2013			2014			2015			
	No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		
		No.	%		No.	No.		%	No.		No.	%		No.	No.		%	No.		No.	%	No.
California	1919	33	1.7	1828	23	1.3	1824	35	1.9	1723	14	0.8	1739	26	1.5	1700	18	1.1	1725	23	1.3	
Alameda	111	4	3.6	125	3	2.4	91	.	.	99	2	2.0	86	.	.	78	1	1.3	99	3	3.0	
Alpine
Amador	.	.	.	1	1
Berkeley	2	.	.	5	.	.	1	.	.	6	.	.	5	.	.	2	.	.	3	.	.	
Butte	2	.	.	2	.	.	.	.	.	2	.	.	4	.	.	4	1	25.0	3	.	.
Calaveras	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Colusa	.	.	.	3	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	34	1	2.9	29	.	.	33	1	3.0	45	.	.	42	.	.	39	.	.	38	.	.	
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	.	.	.	1	.	.	3	1	33.3	2	.	.	1	.	.	2	.	.	2	.	.	
Fresno	47	3	6.4	43	1	2.3	35	.	.	28	.	.	34	1	2.9	45	2	4.4	32	.	.	
Glenn	.	.	.	1	.	.	.	.	.	2	.	.	1	.	.	.	.	.	.	.	.
Humboldt	1	.	.	1	.	.	1	.	.	1	.	.	1	.	.	2	.	.	.	.	.
Imperial	34	.	.	21	.	.	25	.	.	28	.	.	30	.	.	27	1	3.7	25	.	.	
Inyo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kern	37	.	.	28	.	.	31	1	3.2	25	.	.	23	.	.	32	.	.	23	.	.	
Kings	4	.	.	3	.	.	5	1	20.0	5	.	.	5	.	.	3	.	.	5	.	.	
Lake	.	.	.	1	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Lassen	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Long Beach	40	.	.	36	.	.	22	.	.	26	.	.	30	.	.	22	.	.	31	1	3.2	
Los Angeles	557	5	0.9	523	8	1.5	536	12	2.2	502	4	0.8	529	6	1.1	471	5	1.1	506	6	1.2	
Madera	4	.	.	2	.	.	9	.	.	3	.	.	5	.	.	8	.	.	4	.	.	
Marin	8	.	.	7	.	.	10	.	.	9	.	.	7	.	.	5	.	.	3	.	.	
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	1	.	.	.	.	.	2	.	.	.	.	.	1	.	.	1	.	.	.	.	.
Merced	10	.	.	6	.	.	6	.	.	16	.	.	12	.	.	3	.	.	12	1	8.3	
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	13	.	.	18	.	.	23	.	.	14	.	.	15	.	.	12	.	.	11	.	.	
Napa	4	.	.	4	.	.	5	.	.	2	.	.	2	.	.	3	.	.	1	.	.	
Nevada	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Orange	165	6	3.6	199	1	0.5	181	5	2.8	176	1	0.6	158	2	1.3	158	.	.	147	2	1.4	
Pasadena	3	.	.	4	.	.	4	.	.	10	.	.	4	.	.	3	.	.	2	.	.	

Table 56. Multidrug-resistant (MDR) Tuberculosis Cases*: Reporting Jurisdictions in California, 2009-2015**

Reporting Jurisdiction	2009			2010			2011			2012			2013			2014			2015			
	No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		No. with MDR Testing	Cases with Multidrug Resistance		
		No.	%		No.	No.		%	No.		No.	%		No.	No.		%	No.		No.	%	No.
Placer	3	.	.	2	.	.	4	.	.	3	.	.	4	1	25.0	4	.	.	4	.	.	
Plumas
Riverside	52	1	1.9	64	2	3.1	55	1	1.8	52	.	.	49	.	.	56	.	.	45	.	.	
Sacramento	71	2	2.8	43	.	.	54	.	.	46	.	.	71	3	4.2	57	1	1.8	56	2	3.6	
San Benito	.	.	.	1	.	.	3	.	.	.	.	.	1	.	.	1	.	.	.	.	.
San Bernardino	63	.	.	48	.	.	44	.	.	50	1	2.0	48	.	.	35	1	2.9	50	.	.	
San Diego	176	3	1.7	183	1	0.5	216	3	1.4	183	2	1.1	169	3	1.8	187	2	1.1	204	1	0.5	
San Francisco	85	.	.	77	3	3.9	74	.	.	84	1	1.2	74	3	4.1	93	2	2.2	66	1	1.5	
San Joaquin	56	4	7.1	37	.	.	40	1	2.5	35	.	.	38	1	2.6	38	.	.	40	.	.	
San Luis Obispo	3	.	.	3	.	.	2	.	.	3	.	.	4	.	.	2	.	.	2	1	50.0	
San Mateo	53	1	1.9	45	1	2.2	46	4	8.7	40	.	.	46	.	.	57	.	.	45	1	2.2	
Santa Barbara	17	.	.	26	.	.	17	1	5.9	21	.	.	24	1	4.2	26	.	.	18	.	.	
Santa Clara	151	2	1.3	150	3	2.0	155	4	2.6	132	3	2.3	143	4	2.8	130	1	0.8	167	4	2.4	
Santa Cruz	5	.	.	7	.	.	5	.	.	2	.	.	2	.	.	4	.	.	2	.	.	
Shasta	1	.	.	1	.	.	.	.	.	1	.	.	3	.	.	2	.	.	4	.	.
Sierra
Siskiyou
Solano	18	.	.	14	.	.	18	.	.	11	.	.	9	.	.	19	1	5.3	17	.	.	
Sonoma	8	.	.	8	.	.	10	.	.	8	.	.	7	.	.	9	.	.	6	.	.	
Stanislaus	18	.	.	9	.	.	9	.	.	6	.	.	7	.	.	10	.	.	14	.	.	
Sutter	.	.	.	3	.	.	4	.	.	4	.	.	4	.	.	1	.	.	1	.	.	
Tehama	1	1
Trinity	1	.	.	.
Tulare	15	.	.	22	.	.	13	.	.	7	.	.	9	.	.	11	.	.	10	.	.	
Tuolumne	1
Ventura	35	.	.	14	.	.	25	.	.	27	.	.	22	.	.	28	.	.	18	.	.	
Yolo	7	1	14.3	7	.	.	3	.	.	3	.	.	5	.	.	7	.	.	7	.	.	
Yuba	.	.	.	1	.	.	1	.	.	1	.	.	4	1	25.0	2	.	.	.	.	.

. Indicates zero cases or zero percent

* Cases with resistance to at least isoniazid and rifampin

** At the time of report preparation, drug susceptibility testing was 98 percent complete for culture positive cases reported in 2015

As additional Initial Drug Susceptibility Reports are submitted, overall proportions of drug resistance may change slightly.

California Department of Public Health, Tuberculosis Control Branch

Table 57. Multidrug-resistant (MDR) Tuberculosis Cases* by Country of Origin: Reporting Jurisdictions in California, 2011-2015

Birth Country	No. with MDR Testing	Cases with Multidrug Resistance		Time in U.S. at TB diagnosis: <1 year		Time in U.S. at TB diagnosis: 1-2 years		Time in U.S. at TB diagnosis: 3-5 years		Time in U.S. at TB diagnosis: >5 years	
		No.	%	No.	%	No.	%	No.	%	No.	%
California	8711	116	1.3	23	19.8	7	6.0	16	13.8	55	47.4
Kyrgyzstan	1	1	100.0	.	.	1	100.0	.	.	.	.
Ukraine	11	3	27.3	1	33.3	.	.	.	.	2	66.7
Malaysia	5	1	20.0	.	.	.	.	1	100.0	.	.
Haiti	9	1	11.1	.	.	.	.	.	.	1	100.0
Bangladesh	11	1	9.1	.	.	.	.	1	100.0	.	.
Armenia	12	1	8.3	.	.	.	.	.	.	1	100.0
Somalia	17	1	5.9	.	.	.	.	.	.	1	100.0
Laos	117	6	5.1	.	.	.	.	.	.	5	83.3
Burma	59	2	3.4	1	50.0	.	.	1	50.0	.	.
Korea, South	123	4	3.3	.	.	.	.	2	50.0	2	50.0
Japan	31	1	3.2	.	.	.	.	.	.	1	100.0
India	385	12	3.1	3	25.0	.	.	2	16.7	7	58.3
Guatemala	165	5	3.0	1	20.0	.	.	.	.	4	80.0
Peru	39	1	2.6	1	100.0	.	.	.	.	.	.
Korea, North	117	3	2.6	.	.	.	.	1	33.3	2	66.7
Ethiopia	51	1	2.0	.	.	.	.	1	100.0	.	.
Philippines	1587	27	1.7	7	25.9	1	3.7	2	7.4	17	63.0
Taiwan	59	1	1.7	.	.	.	.	1	100.0	.	.
Vietnam	906	13	1.4	4	30.8	5	38.5	1	7.7	2	15.4
China**	536	6	1.1	5	83.3	.	.	1	16.7	.	.
United States	1595	13	0.8	.	.	.	.	.	.	.	.
Cambodia	136	1	0.7	.	.	.	.	.	.	1	100.0
Mexico	1922	11	0.6	.	.	.	.	2	18.2	9	81.8

. Indicates zero cases or zero percent

* Cases with resistance to at least isoniazid and rifampin

**People's Republic of China includes Hong Kong

California Department of Public Health, Tuberculosis Control Branch

Table 58. Tuberculosis Cases by Outcome of Therapy: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Cases Starting Therapy	Completed Treatment <= 12 months		Completed Treatment > 12 months		Died		Lost		Refused		Adverse Treatment Event		Other/Unknown		No Information	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2107	1621	76.9	185	8.8	166	7.9	15	0.7	13	0.6	13	0.6	74	3.5	20	0.9
Alameda	111	86	77.5	11	9.9	6	5.4	.	.	.	.	.	.	8	7.2	.	.
Alpine	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berkeley	5	5	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Butte	4	3	75.0	.	.	1	25.0	.	.	.	.	.	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	57	49	86.0	1	1.8	4	7.0	.	.	1	1.8	1	1.8	.	.	1	1.8
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fresno	38	27	71.1	4	10.5	3	7.9	2	5.3	.	.	2	5.3	.	.	.	.
Glenn	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Humboldt	2	1	50.0	.	.	.	.	.	.	.	.	.	.	.	.	1	50.0
Imperial	36	30	83.3	2	5.6	1	2.8	1	2.8	.	.	.	.	2	5.6	.	.
Inyo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kern	28	21	75.0	2	7.1	3	10.7	1	3.6	.	.	.	.	1	3.6	.	.
Kings	6	5	83.3	.	.	1	16.7	.	.	.	.	.	.	.	.	.	.
Lake	2	2	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	35	30	85.7	.	.	4	11.4	.	.	.	.	.	.	1	2.9	.	.
Los Angeles	639	511	80.0	40	6.3	62	9.7	2	0.3	1	0.2	1	0.2	17	2.7	5	0.8
Madera	5	5	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Marin	13	10	76.9	1	7.7	1	7.7	.	.	.	.	.	.	1	7.7	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Merced	12	7	58.3	1	8.3	4	33.3	.	.	.	.	.	.	.	.	.	.
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	17	14	82.4	2	11.8	.	.	.	.	.	.	.	.	1	5.9	.	.
Napa	3	2	66.7	1	33.3	.	.	.	.	.	.	.	.	.	.	.	.
Nevada	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Orange	184	135	73.4	24	13.0	8	4.3	2	1.1	1	0.5	6	3.3	4	2.2	4	2.2

Table 58. Tuberculosis Cases by Outcome of Therapy: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Cases Starting Therapy	Completed Treatment <= 12 months		Completed Treatment > 12 months		Died		Lost		Refused		Adverse Treatment Event		Other/Unknown		No Information	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasadena	5	3	60.0	.	.	2	40.0	.	.	.	.	.	.	.	.	.	.
Placer	6	3	50.0	3	50.0	.	.	.	.	.	.	.	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	52	45	86.5	1	1.9	2	3.8	1	1.9	1	1.9	.	.	.	.	2	3.8
Sacramento	80	61	76.3	7	8.8	6	7.5	.	.	2	2.5	1	1.3	2	2.5	1	1.3
San Benito	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	100.0
San Bernardino	58	49	84.5	2	3.4	3	5.2	.	.	2	3.4	.	.	2	3.4	.	.
San Diego	202	151	74.8	21	10.4	12	5.9	3	1.5	3	1.5	1	0.5	11	5.4	.	.
San Francisco	106	67	63.2	18	17.0	8	7.5	1	0.9	2	1.9	.	.	9	8.5	1	0.9
San Joaquin	39	31	79.5	3	7.7	4	10.3	.	.	.	.	.	.	.	.	1	2.6
San Luis Obispo	4	2	50.0	2	50.0	.	.	.	.	.	.	.	.	.	.	.	.
San Mateo	58	48	82.8	2	3.4	5	8.6	.	.	.	.	.	.	3	5.2	.	.
Santa Barbara	25	16	64.0	3	12.0	4	16.0	1	4.0	.	.	.	.	1	4.0	.	.
Santa Clara	177	125	70.6	29	16.4	10	5.7	.	.	.	.	1	0.6	11	6.2	1	0.6
Santa Cruz	5	5	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Shasta	3	2	66.7	.	.	1	33.3	.	.	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solano	12	9	75.0	.	.	3	25.0	.	.	.	.	.	.	.	.	.	.
Sonoma	7	6	85.7	1	14.3	.	.	.	.	.	.	.	.	.	.	.	.
Stanislaus	10	9	90.0	.	.	1	10.0	.	.	.	.	.	.	.	.	.	.
Sutter	3	3	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tulare	16	11	68.8	2	12.5	3	18.8	.	.	.	.	.	.	.	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	27	23	85.2	1	3.7	2	7.4	.	.	.	.	.	.	.	.	1	3.7
Yolo	6	5	83.3	.	.	.	.	1	16.7	.	.	.	.	.	.	.	.
Yuba	5	1	20.0	1	20.0	2	40.0	.	.	.	.	.	.	.	.	1	20.0

. Indicates zero cases or zero percent

California Department of Public Health, Tuberculosis Control Branch

Table 59. Outcome in Tuberculosis Cases for Whom One Year or Less of Therapy was Indicated*: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Cases Starting Therapy	Completed Treatment <= 12 months		Completed Treatment > 12 months		Died		Lost		Refused		Adverse Treatment Event		Other/Unknown		No Information	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2044	1612	78.9	150	7.3	157	7.7	15	0.7	10	0.5	13	0.6	69	3.4	18	0.9
Alameda	111	86	77.5	11	9.9	6	5.4	.	.	.	.	.	.	8	7.2	.	.
Alpine	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berkeley	5	5	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Butte	4	3	75.0	.	.	1	25.0	.	.	.	.	.	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	57	49	86.0	1	1.8	4	7.0	.	.	1	1.8	1	1.8	.	.	1	1.8
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fresno	36	26	72.2	3	8.3	3	8.3	2	5.6	.	.	2	5.6	.	.	.	.
Glenn	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Humboldt	2	1	50.0	.	.	.	.	.	.	.	.	.	.	.	.	1	50.0
Imperial	35	30	85.7	1	2.9	1	2.9	1	2.9	.	.	.	.	2	5.7	.	.
Inyo	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kern	26	20	76.9	1	3.8	3	11.5	1	3.8	.	.	.	.	1	3.8	.	.
Kings	6	5	83.3	.	.	1	16.7	.	.	.	.	.	.	.	.	.	.
Lake	2	2	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	35	30	85.7	.	.	4	11.4	.	.	.	.	.	.	1	2.9	.	.
Los Angeles	621	509	82.0	31	5.0	58	9.3	2	0.3	1	0.2	1	0.2	15	2.4	4	0.6
Madera	5	5	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Marin	13	10	76.9	1	7.7	1	7.7	.	.	.	.	.	.	1	7.7	.	.
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Merced	12	7	58.3	1	8.3	4	33.3	.	.	.	.	.	.	.	.	.	.
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	17	14	82.4	2	11.8	.	.	.	.	.	.	.	.	1	5.9	.	.
Napa	3	2	66.7	1	33.3	.	.	.	.	.	.	.	.	.	.	.	.
Nevada	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Orange	179	135	75.4	20	11.2	8	4.5	2	1.1	1	0.6	6	3.4	4	2.2	3	1.7

Table 59. Outcome in Tuberculosis Cases for Whom One Year or Less of Therapy was Indicated*: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Cases Starting Therapy	Completed Treatment <= 12 months		Completed Treatment > 12 months		Died		Lost		Refused		Adverse Treatment Event		Other/Unknown		No Information	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Pasadena	5	3	60.0	.	.	2	40.0	.	.	.	.	.	.	.	.	.	.
Placer	5	3	60.0	2	40.0	.	.	.	.	.	.	.	.	.	.	.	.
Plumas	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	51	45	88.2	.	.	2	3.9	1	2.0	1	2.0	.	.	.	.	2	3.9
Sacramento	76	61	80.3	4	5.3	6	7.9	.	.	1	1.3	1	1.3	2	2.6	1	1.3
San Benito	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	100.0
San Bernardino	58	49	84.5	2	3.4	3	5.2	.	.	2	3.4	.	.	2	3.4	.	.
San Diego	194	149	76.8	18	9.3	12	6.2	3	1.5	1	0.5	1	0.5	10	5.2	.	.
San Francisco	101	66	65.3	15	14.9	8	7.9	1	1.0	2	2.0	.	.	8	7.9	1	1.0
San Joaquin	37	31	83.8	2	5.4	3	8.1	.	.	.	.	.	.	.	.	1	2.7
San Luis Obispo	4	2	50.0	2	50.0	.	.	.	.	.	.	.	.	.	.	.	.
San Mateo	57	48	84.2	1	1.8	5	8.8	.	.	.	.	.	.	3	5.3	.	.
Santa Barbara	23	15	65.2	2	8.7	4	17.4	1	4.3	.	.	.	.	1	4.3	.	.
Santa Clara	170	124	72.9	24	14.1	10	5.9	.	.	.	.	1	0.6	10	5.9	1	0.6
Santa Cruz	5	5	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Shasta	3	2	66.7	.	.	1	33.3	.	.	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solano	12	9	75.0	.	.	3	25.0	.	.	.	.	.	.	.	.	.	.
Sonoma	7	6	85.7	1	14.3	.	.	.	.	.	.	.	.	.	.	.	.
Stanislaus	10	9	90.0	.	.	1	10.0	.	.	.	.	.	.	.	.	.	.
Sutter	3	3	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tulare	15	11	73.3	2	13.3	2	13.3	.	.	.	.	.	.	.	.	.	.
Tuolumne	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	25	23	92.0	1	4.0	.	.	.	.	.	.	.	.	.	.	1	4.0
Yolo	6	5	83.3	.	.	.	.	1	16.7	.	.	.	.	.	.	.	.
Yuba	4	1	25.0	1	25.0	1	25.0	.	.	.	.	.	.	.	.	1	25.0

. Indicates zero cases or zero percent

* Excludes cases with rifampin resistant disease, cases with meningeal disease, and cases less than 15 years of age with disseminated tuberculosis disease

California Department of Public Health, Tuberculosis Control Branch

Table 60. Completion of Therapy in Tuberculosis Cases for Whom One Year or Less of Therapy was Indicated (CDC Algorithm*): Reporting Jurisdictions in California, 2008-2013

Reporting Jurisdiction	2008			2009			2010			2011			2012			2013		
	Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
California	2263	1958	86.5	2025	1749	86.4	1899	1671	88.0	1878	1642	87.4	1772	1573	88.8	1762	1555	88.3
Alameda	115	103	89.6	135	123	91.1	150	134	89.3	107	99	92.5	118	101	85.6	98	85	86.7
Amador	.	.	.	.	.	.	1	1	100.0	.	.	.	1	1	100.0	.	.	.
Berkeley	3	3	100.0	3	2	66.7	6	5	83.3	.	.	.	5	5	100.0	4	4	100.0
Butte	3	3	100.0	2	2	100.0	1	1	100.0	.	.	.	3	3	100.0	3	3	100.0
Calaveras	.	.	.	2	.	.	.	.	.	1	1	100.0	.	.	.	.	.	.
Colusa	1	1	100.0	.	.	.	2	2	100.0	.	.	.	2	2	100.0	.	.	.
Contra Costa	68	65	95.6	41	37	90.2	28	22	78.6	52	50	96.2	49	46	93.9	51	47	92.2
El Dorado	3	3	100.0	1	1	100.0	1	1	100.0	2	2	100.0	1	1	100.0	1	1	100.0
Fresno	64	52	81.3	52	41	78.8	43	37	86.0	38	31	81.6	30	27	90.0	33	26	78.8
Glenn	1	.	.	.	.	.	.	.	.	.	.	.	3	3	100.0	1	1	100.0
Humboldt	.	.	.	2	2	100.0	1	1	100.0	.	.	.	4	3	75.0	2	1	50.0
Imperial	16	13	81.3	24	14	58.3	18	11	61.1	20	6	30.0	20	17	85.0	26	22	84.6
Kern	40	35	87.5	37	27	73.0	24	20	83.3	31	26	83.9	28	23	82.1	20	18	90.0
Kings	4	3	75.0	4	3	75.0	4	3	75.0	5	5	100.0	5	4	80.0	4	4	100.0
Lake	2	2	100.0	.	.	.	2	2	100.0	1	1	100.0	1	1	100.0	2	2	100.0
Lassen	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Long Beach	40	38	95.0	35	30	85.7	38	35	92.1	22	19	86.4	24	23	95.8	28	28	100.0
Los Angeles	650	556	85.5	557	485	87.1	560	494	88.2	545	489	89.7	489	454	92.8	532	488	91.7
Madera	19	18	94.7	8	6	75.0	3	3	100.0	11	11	100.0	8	7	87.5	5	5	100.0
Marin	5	3	60.0	12	10	83.3	7	5	71.4	10	9	90.0	11	9	81.8	12	10	83.3
Mendocino	4	4	100.0	2	2	100.0	.	.	.	2	2	100.0	2	2	100.0	1	1	100.0
Merced	5	5	100.0	9	8	88.9	2	1	50.0	6	4	66.7	18	15	83.3	8	7	87.5
Monterey	22	21	95.5	10	9	90.0	17	14	82.4	17	17	100.0	15	13	86.7	16	13	81.3
Napa	1	1	100.0	6	5	83.3	5	4	80.0	6	6	100.0	1	1	100.0	2	2	100.0
Nevada	3	3	100.0	.	.	.	.	.	.	1	1	100.0	1	.	.	.	.	.
Orange	168	140	83.3	164	131	79.9	177	152	85.9	167	143	85.6	153	138	90.2	158	130	82.3
Pasadena	4	2	50.0	3	3	100.0	4	4	100.0	5	3	60.0	7	5	71.4	3	3	100.0
Placer	2	2	100.0	7	5	71.4	3	3	100.0	4	3	75.0	4	3	75.0	5	3	60.0
Riverside	68	61	89.7	56	52	92.9	61	53	86.9	59	57	96.6	49	44	89.8	49	45	91.8
Sacramento	89	77	86.5	79	67	84.8	53	47	88.7	61	55	90.2	53	45	84.9	67	60	89.6
San Benito	1	1	100.0	.	.	.	1	.	.	3	3	100.0	.	.	.	1	.	.

Table 60. Completion of Therapy in Tuberculosis Cases for Whom One Year or Less of Therapy was Indicated (CDC Algorithm*): Reporting Jurisdictions in California, 2008-2013

Reporting Jurisdiction	2008			2009			2010			2011			2012			2013		
	Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months		Cases Starting Therapy	Completed Treatment <= 12 months	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
California	2263	1958	86.5	2025	1749	86.4	1899	1671	88.0	1878	1642	87.4	1772	1573	88.8	1762	1555	88.3
San Bernardino	66	59	89.4	69	62	89.9	53	48	90.6	43	40	93.0	42	39	92.9	50	47	94.0
San Diego	231	184	79.7	189	162	85.7	179	159	88.8	214	182	85.0	192	168	87.5	165	146	88.5
San Francisco	99	91	91.9	97	86	88.7	76	61	80.3	93	77	82.8	99	82	82.8	88	66	75.0
San Joaquin	54	48	88.9	59	59	100.0	35	31	88.6	32	29	90.6	33	29	87.9	34	31	91.2
San Luis Obispo	1	1	100.0	3	3	100.0	4	4	100.0	5	4	80.0	2	2	100.0	4	2	50.0
San Mateo	49	39	79.6	51	49	96.1	49	48	98.0	40	34	85.0	47	40	85.1	49	48	98.0
Santa Barbara	31	28	90.3	17	14	82.4	26	23	88.5	18	14	77.8	18	16	88.9	16	15	93.8
Santa Clara	161	143	88.8	163	141	86.5	156	141	90.4	151	130	86.1	145	125	86.2	147	121	82.3
Santa Cruz	9	9	100.0	3	3	100.0	9	8	88.9	8	7	87.5	6	6	100.0	5	5	100.0
Shasta	1	1	100.0	1	1	100.0	2	2	100.0	.	.	.	.	.	.	1	1	100.0
Solano	29	26	89.7	21	18	85.7	18	17	94.4	30	27	90.0	13	12	92.3	8	8	100.0
Sonoma	7	6	85.7	9	7	77.8	8	8	100.0	10	8	80.0	13	11	84.6	6	5	83.3
Stanislaus	19	16	84.2	15	13	86.7	12	9	75.0	7	4	57.1	6	4	66.7	9	9	100.0
Sutter	6	6	100.0	1	1	100.0	3	3	100.0	4	4	100.0	4	2	50.0	3	3	100.0
Tehama	1	.	.	2	2	100.0	.	.	.	1	1	100.0	.	.	.	.	.	.
Tulare	29	21	72.4	24	18	75.0	22	19	86.4	14	12	85.7	10	9	90.0	13	11	84.6
Tuolumne	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	58	54	93.1	40	36	90.0	28	28	100.0	29	23	79.3	33	29	87.9	24	22	91.7
Yolo	8	8	100.0	9	9	100.0	6	6	100.0	2	2	100.0	2	2	100.0	5	5	100.0
Yuba	3	3	100.0	.	.	.	1	1	100.0	1	1	100.0	1	1	100.0	3	1	33.3

. Indicates zero cases or zero percent

* Consistent with CDC's National Tuberculosis Indicators Project completion of therapy measure, excludes cases with rifampin resistant disease, cases with meningeal, bone and/or joint, or central nervous system disease, cases less than 15 years of age with disseminated tuberculosis disease, and cases that died or moved out of country less than one year after treatment initiation.

California Department of Public Health, Tuberculosis Control Branch

Table 61. Reason Tuberculosis Therapy Was Extended Beyond 12 Months*: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Cases Starting Therapy	Total Cases with Therapy Extended†	Rifampin Resistance		Adverse Treatment Event		Non-adherence		Treatment Failure		Clinically Indicated		Other	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2107	185	17	9.2	60	32.4	19	10.3	.	.	88	47.6	53	28.6
Alameda	111	11	.	.	2	18.2	2	18.2	.	.	5	45.5	3	27.3
Alpine	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Amador	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Berkeley	5	.	.	.	.	.	.	.	.	.	.	.	.	.
Butte	4	.	.	.	.	.	.	.	.	.	.	.	.	.
Calaveras	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Colusa	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	57	1	.	.	1	100.0	.	.	.	.	1	100.0	.	.
Del Norte	.	.	.	.	.	.	.	.	.	.	.	.	.	.
El Dorado	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Fresno	38	4	.	.	.	.	1	25.0	.	.	4	100.0	.	.
Glenn	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Humboldt	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Imperial	36	2	.	.	.	.	1	50.0	.	.	1	50.0	.	.
Inyo	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kern	28	2	.	.	.	.	.	.	.	.	1	50.0	1	50.0
Kings	6	.	.	.	.	.	.	.	.	.	.	.	.	.
Lake	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Lassen	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Long Beach	35	.	.	.	.	.	.	.	.	.	.	.	.	.
Los Angeles	639	40	3	7.5	11	27.5	4	10.0	.	.	12	30.0	20	50.0
Madera	5	.	.	.	.	.	.	.	.	.	.	.	.	.
Marin	13	1	.	.	.	.	.	.	.	.	.	.	1	100.0
Mariposa	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mendocino	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Merced	12	1	.	.	1	100.0	.	.	.	.	.	.	.	.
Modoc	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mono	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	17	2	.	.	.	.	.	.	.	.	2	100.0	1	50.0
Napa	3	1	.	.	.	.	.	.	.	.	1	100.0	.	.
Nevada	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Orange	184	24	1	4.2	10	41.7	1	4.2	.	.	8	33.3	6	25.0
Pasadena	5	.	.	.	.	.	.	.	.	.	.	.	.	.
Placer	6	3	1	33.3	1	33.3	.	.	.	.	1	33.3	1	33.3
Plumas	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Riverside	52	1	.	.	.	.	.	.	.	.	1	100.0	.	.
Sacramento	80	7	2	28.6	.	.	1	14.3	.	.	5	71.4	3	42.9
San Benito	1	.	.	.	.	.	.	.	.	.	.	.	.	.
San Bernardino	58	2	.	.	.	.	.	.	.	.	1	50.0	1	50.0
San Diego	202	21	2	9.5	11	52.4	4	19.0	.	.	13	61.9	.	.
San Francisco	106	18	2	11.1	9	50.0	1	5.6	.	.	14	77.8	1	5.6
San Joaquin	39	3	1	33.3	.	.	.	.	.	.	1	33.3	2	66.7
San Luis Obispo	4	2	.	.	1	50.0	.	.	.	.	.	.	1	50.0
San Mateo	58	2	.	.	.	.	.	.	.	.	1	50.0	1	50.0

Table 61. Reason Tuberculosis Therapy Was Extended Beyond 12 Months*: Reporting Jurisdictions in California, 2013

Reporting Jurisdiction	Cases Starting Therapy	Total Cases with Therapy Extended†	Rifampin Resistance		Adverse Treatment Event		Non-adherence		Treatment Failure		Clinically Indicated		Other	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Santa Barbara	25	3	.	.	.	.	.	.	.	.	2	66.7	2	66.7
Santa Clara	177	29	4	13.8	11	37.9	3	10.3	.	.	12	41.4	6	20.7
Santa Cruz	5	.	.	.	.	.	.	.	.	.	.	.	.	.
Shasta	3	.	.	.	.	.	.	.	.	.	.	.	.	.
Sierra	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solano	12	.	.	.	.	.	.	.	.	.	.	.	.	.
Sonoma	7	1	.	.	.	.	.	.	.	.	.	.	1	100.0
Stanislaus	10	.	.	.	.	.	.	.	.	.	.	.	.	.
Sutter	3	.	.	.	.	.	.	.	.	.	.	.	.	.
Tehama	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tulare	16	2	.	.	1	50.0	1	50.0	.	.	.	.	1	50.0
Tuolumne	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ventura	27	1	1	100.0	1	100.0	.	.	.	.	1	100.0	.	.
Yolo	6	.	.	.	.	.	.	.	.	.	.	.	.	.
Yuba	5	1	.	.	.	.	.	.	.	.	1	100.0	1	100.0

. Indicates zero cases or zero percent

* Among patients who were alive at diagnosis, started treatment and had a duration of treatment greater than 366 days

† Patient may have more than 1 reason therapy was extended beyond 12 months (sum of reasons therapy extended may be greater than total patients with therapy extended).

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Table 62. Tuberculosis Cases by Outcome of Therapy and Risk Factor for Tuberculosis: California, 2013

	Cases Starting Therapy	Completed Treatment <= 12 months		Completed Treatment > 12 months		Died		Lost		Refused		Adverse Treatment Event		Other/Unknown		No Information	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2107	1621	76.9	185	8.8	166	7.9	15	0.7	13	0.6	13	0.6	74	3.5	20	0.9
HIV/AIDS*																	
No	2033	1581	77.8	165	8.1	159	7.8	13	0.6	12	0.6	13	0.6	70	3.4	20	1.0
Yes	74	40	54.1	20	27.0	7	9.5	2	2.7	1	1.4	.	.	4	5.4	.	.
Diagnosed in Correctional Facility																	
No	2034	1573	77.3	178	8.8	165	8.1	11	0.5	12	0.6	13	0.6	64	3.1	18	0.9
Yes	73	48	65.8	7	9.6	1	1.4	4	5.5	1	1.4	.	.	10	13.7	2	2.7
Type of Correctional Facility																	
Federal Prison	16	11	68.8	2	12.5	.	.	.	.	.	.	.	.	3	18.8	.	.
State Prison	5	1	20.0	2	40.0	.	.	1	20.0	.	.	.	.	.	.	1	20.0
Local Jail	42	32	76.2	3	7.1	1	2.4	1	2.4	.	.	.	.	4	9.5	1	2.4
Juvenile Facility	2	2	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Other/Unknown	8	2	25.0	.	.	.	.	2	25.0	1	12.5	.	.	3	37.5	.	.
Diagnosed in Long-term Care Facility																	
No	2064	1603	77.7	178	8.6	152	7.4	14	0.7	13	0.6	13	0.6	71	3.4	20	1.0
Yes	43	18	41.9	7	16.3	14	32.6	1	2.3	.	.	.	.	3	7.0	.	.
Excess Alcohol Use																	
No	1926	1482	76.9	171	8.9	151	7.8	11	0.6	13	0.7	13	0.7	67	3.5	18	0.9
Yes	169	135	79.9	14	8.3	10	5.9	3	1.8	.	.	.	.	6	3.6	1	0.6
Unknown	12	4	33.3	.	.	5	41.7	1	8.3	.	.	.	.	1	8.3	1	8.3
Homeless																	
No	1979	1531	77.4	171	8.6	157	7.9	10	0.5	13	0.7	13	0.7	66	3.3	18	0.9
Yes	124	90	72.6	13	10.5	9	7.3	3	2.4	.	.	.	.	7	5.6	2	1.6
Unknown	4	.	.	1	25.0	.	.	2	50.0	.	.	.	.	1	25.0	.	.
Injecting Drug Use																	
No	2063	1597	77.4	179	8.7	157	7.6	14	0.7	12	0.6	13	0.6	72	3.5	19	0.9
Yes	30	20	66.7	5	16.7	3	10.0	.	.	1	3.3	.	.	1	3.3	.	.
Unknown	14	4	28.6	1	7.1	6	42.9	1	7.1	.	.	.	.	1	7.1	1	7.1
Non-injecting Drug Use																	
No	1950	1512	77.5	169	8.7	146	7.5	12	0.6	13	0.7	13	0.7	66	3.4	19	1.0
Yes	142	103	72.5	16	11.3	14	9.9	2	1.4	.	.	.	.	7	4.9	.	.
Unknown	15	6	40.0	.	.	6	40.0	1	6.7	.	.	.	.	1	6.7	1	6.7

. Indicates zero cases or zero percent

* Match found in HIV/AIDS Case Registry, California Office of AIDS or HIV-positive status reported on RVCT

Table 63. Outcome in Tuberculosis Cases for Whom One Year or Less of Therapy was Indicated*, by Risk Factor for Tuberculosis: Reporting Jurisdictions in California, 2013

	Cases Starting Therapy	Completed Treatment <= 12 months		Completed Treatment > 12 months		Died		Lost		Refused		Adverse Treatment Event		Other/Unknown		No Information	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
California	2044	1612	78.9	150	7.3	157	7.7	15	0.7	10	0.5	13	0.6	69	3.4	18	0.9
HIV/AIDS*																	
No	1975	1573	79.6	133	6.7	150	7.6	13	0.7	10	0.5	13	0.7	65	3.3	18	0.9
Yes	69	39	56.5	17	24.6	7	10.1	2	2.9	.	.	.	.	4	5.8	.	.
Diagnosed in Correctional Facility																	
No	1975	1564	79.2	145	7.3	156	7.9	11	0.6	10	0.5	13	0.7	60	3.0	16	0.8
Yes	69	48	69.6	5	7.2	1	1.4	4	5.8	.	.	.	.	9	13.0	2	2.9
Type of Correctional Facility																	
Federal Prison	16	11	68.8	2	12.5	.	.	.	.	.	.	.	.	3	18.8	.	.
State Prison	4	1	25.0	1	25.0	.	.	1	25.0	.	.	.	.	.	.	1	25.0
Local Jail	41	32	78.0	2	4.9	1	2.4	1	2.4	.	.	.	.	4	9.8	1	2.4
Juvenile Facility	2	2	100.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Other/Unknown	6	2	33.3	.	.	.	.	2	33.3	.	.	.	.	2	33.3	.	.
Diagnosed in Long-term Care Facility																	
No	2004	1594	79.5	146	7.3	143	7.1	14	0.7	10	0.5	13	0.6	66	3.3	18	0.9
Yes	40	18	45.0	4	10.0	14	35.0	1	2.5	.	.	.	.	3	7.5	.	.
Excess Alcohol Use																	
No	1864	1473	79.0	137	7.4	142	7.6	11	0.6	10	0.5	13	0.7	62	3.3	16	0.9
Yes	168	135	80.4	13	7.7	10	6.0	3	1.8	.	.	.	.	6	3.6	1	0.6
Unknown	12	4	33.3	.	.	5	41.7	1	8.3	.	.	.	.	1	8.3	1	8.3
Homeless																	
No	1917	1522	79.4	137	7.1	148	7.7	10	0.5	10	0.5	13	0.7	61	3.2	16	0.8
Yes	123	90	73.2	12	9.8	9	7.3	3	2.4	.	.	.	.	7	5.7	2	1.6
Unknown	4	.	.	1	25.0	.	.	2	50.0	.	.	.	.	1	25.0	.	.
Injecting Drug Use																	
No	2003	1588	79.3	146	7.3	148	7.4	14	0.7	10	0.5	13	0.6	67	3.3	17	0.8
Yes	27	20	74.1	3	11.1	3	11.1	.	.	.	.	.	.	1	3.7	.	.
Unknown	14	4	28.6	1	7.1	6	42.9	1	7.1	.	.	.	.	1	7.1	1	7.1
Non-injecting Drug Use																	
No	1890	1503	79.5	136	7.2	138	7.3	12	0.6	10	0.5	13	0.7	61	3.2	17	0.9
Yes	139	103	74.1	14	10.1	13	9.4	2	1.4	.	.	.	.	7	5.0	.	.
Unknown	15	6	40.0	.	.	6	40.0	1	6.7	.	.	.	.	1	6.7	1	6.7

. Indicates zero cases or zero percent

* Excludes cases with rifampin resistant disease, cases with meningeal disease, and cases less than 15 years of age with disseminated tuberculosis disease

* Match found in HIV/AIDS Case Registry, California Office of AIDS or HIV-positive status reported on RVCT

Table 64. Tuberculosis Genotyping Surveillance Coverage:* Reporting Jurisdictions in California, 2011-2015

Reporting Jurisdiction	2011			2012			2013			2014			2015		
	Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases	
	No.	No.	%	No.	No.	%	No.	No.	%	No.	No.	%	No.	No.	%
California	1855	1693	91.3	1749	1604	91.7	1759	1666	94.7	1726	1654	95.8	1762	1670	94.8
Alameda	93	85	91.4	100	86	86.0	87	81	93.1	80	75	93.8	100	91	91.0
Amador	.	.	.	1	1	100.0	.	.	.	.	.	.	.	.	.
Berkeley	1	1	100.0	6	3	50.0	5	2	40.0	2	2	100.0	3	3	100.0
Butte	.	.	.	2	2	100.0	4	3	75.0	4	4	100.0	3	3	100.0
Calaveras	.	.	.	.	.	.	.	.	.	1	1	100.0	.	.	.
Colusa	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Contra Costa	34	31	91.2	45	42	93.3	42	41	97.6	39	38	97.4	38	37	97.4
El Dorado	3	2	66.7	2	2	100.0	1	1	100.0	2	2	100.0	2	2	100.0
Fresno	37	35	94.6	29	26	89.7	34	33	97.1	47	45	95.7	32	30	93.8
Glenn	.	.	.	2	2	100.0	1	1	100.0	.	.	.	.	.	.
Humboldt	1	1	100.0	1	.	.	2	2	100.0	2	2	100.0	.	.	.
Imperial	26	24	92.3	28	23	82.1	31	28	90.3	27	25	92.6	26	22	84.6
Kern	32	29	90.6	26	23	88.5	23	23	100.0	33	29	87.9	23	21	91.3
Kings	5	5	100.0	5	4	80.0	5	4	80.0	3	3	100.0	5	5	100.0
Lake	1	1	100.0	.	.	.	1	1	100.0	.	.	.	.	.	.
Lassen	.	.	.	2	2	100.0	.	.	.	.	.	.	.	.	.
Long Beach	22	20	90.9	26	24	92.3	31	29	93.5	22	22	100.0	31	29	93.5
Los Angeles	544	487	89.5	509	473	92.9	534	507	94.9	474	465	98.1	519	509	98.1
Madera	9	7	77.8	3	2	66.7	5	4	80.0	8	8	100.0	4	4	100.0
Marin	10	9	90.0	9	7	77.8	8	6	75.0	5	5	100.0	5	4	80.0
Mendocino	2	2	100.0	.	.	.	1	1	100.0	1	1	100.0	.	.	.
Merced	6	4	66.7	16	13	81.3	12	8	66.7	4	2	50.0	12	7	58.3
Monterey	23	23	100.0	14	13	92.9	15	14	93.3	14	12	85.7	13	12	92.3
Napa	5	4	80.0	2	2	100.0	2	2	100.0	3	3	100.0	1	1	100.0
Nevada	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.
Orange	187	171	91.4	177	171	96.6	161	152	94.4	165	157	95.2	148	142	95.9
Pasadena	4	4	100.0	10	10	100.0	4	4	100.0	3	3	100.0	2	2	100.0
Placer	5	4	80.0	3	3	100.0	4	2	50.0	4	3	75.0	4	4	100.0
Riverside	55	48	87.3	53	44	83.0	50	47	94.0	57	51	89.5	46	35	76.1
Sacramento	54	53	98.1	49	46	93.9	72	68	94.4	58	56	96.6	57	54	94.7

Table 64. Tuberculosis Genotyping Surveillance Coverage:* Reporting Jurisdictions in California, 2011-2015

Reporting Jurisdiction	2011			2012			2013			2014			2015		
	Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases		Total Culture Positive Cases	Genotyped Cases	
	No.	No.	%	No.	No.	%	No.	No.	%	No.	No.	%	No.	No.	%
San Benito	3	3	100.0	.	.	.	1	1	100.0	1	1	100.0	.	.	.
San Bernardino	45	40	88.9	52	40	76.9	48	42	87.5	36	32	88.9	55	46	83.6
San Diego	216	212	98.1	184	177	96.2	169	167	98.8	187	185	98.9	204	203	99.5
San Francisco	75	72	96.0	84	81	96.4	74	73	98.6	93	92	98.9	67	64	95.5
San Joaquin	40	39	97.5	35	35	100.0	38	37	97.4	38	37	97.4	42	42	100.0
San Luis Obispo	3	2	66.7	3	2	66.7	4	4	100.0	2	2	100.0	2	2	100.0
San Mateo	46	43	93.5	41	40	97.6	46	46	100.0	57	53	93.0	45	40	88.9
Santa Barbara	18	16	88.9	21	20	95.2	24	23	95.8	26	24	92.3	18	17	94.4
Santa Clara	159	139	87.4	135	121	89.6	146	140	95.9	133	127	95.5	170	160	94.1
Santa Cruz	5	5	100.0	2	2	100.0	2	2	100.0	4	4	100.0	2	2	100.0
Shasta	.	.	.	1	1	100.0	3	2	66.7	2	1	50.0	4	4	100.0
Solano	18	15	83.3	14	8	57.1	10	10	100.0	20	18	90.0	17	17	100.0
Sonoma	11	10	90.9	8	8	100.0	7	6	85.7	10	8	80.0	7	6	85.7
Stanislaus	9	7	77.8	6	6	100.0	8	7	87.5	10	9	90.0	14	13	92.9
Sutter	4	1	25.0	4	2	50.0	4	4	100.0	1	1	100.0	1	1	100.0
Tehama	1	1	100.0	.	.	.	.	.	.	.	.	.	.	.	.
Trinity	.	.	.	.	.	.	.	.	.	.	.	.	1	1	100.0
Tulare	13	12	92.3	7	7	100.0	9	9	100.0	11	11	100.0	11	11	100.0
Ventura	25	22	88.0	27	26	96.3	22	20	90.9	28	26	92.9	18	16	88.9
Yolo	3	3	100.0	3	3	100.0	5	5	100.0	7	7	100.0	9	8	88.9
Yuba	1	1	100.0	1	1	100.0	4	4	100.0	2	2	100.0	.	.	.

* Genotype surveillance coverage is defined as the percentage of all culture positive tuberculosis (TB) cases for which there was a genotyped isolate.

. Indicates zero cases or zero percent

California Department of Public Health, Tuberculosis Control Branch

Table 65. Tuberculosis Cases and Genotype Clusters by Cluster Size: California, 2013-2015

Cluster size	Cluster*		Cases	
	No.	%	No.	%
Total genotyped cases	.	.	4990	.
Totals	379	.	1215	24.3
2 case cluster	242	63.9	484	9.7
3 case cluster	60	15.8	180	3.6
4 case cluster	32	8.4	128	2.6
5-10 case cluster	31	8.2	195	3.9
>11 case cluster	14	3.7	228	4.6
Cases with unique genotype	.	.	3775	75.7

*Clusters are two or more cases with matching spoligotype and 24-locus mycobacterial interspersed repetitive unit-variable number tandem repeat type (GENType) within a county during the specified 3-year time period. Cluster size ranged from 2 to 48 cases per cluster, with a median cluster size of 2.
California Department of Public Health, Tuberculosis Control Branch

Table 66. Characteristics of Tuberculosis Cases Identified with *Mycobacterium bovis* (*M. bovis*):

	Genotyped Cases	<i>M. bovis</i>	
	No.	No.	%*
Year			
2011	1693	66	3.9
2012	1604	65	4.1
2013	1666	53	3.2
2014	1654	53	3.2
2015	1670	52	3.1

	Genotyped Cases	<i>M. bovis</i>	
	No.	No.	%
Age Group			
< 1	26	0	0.0
1-4	56	10	17.9
5-14	56	11	19.6
15-24	745	38	5.1
25-44	2138	81	3.8
45-64	2667	91	3.4
65+	2599	58	2.2

	Genotyped Cases	<i>M. bovis</i>	
	No.	No.	%
Ethnicity			
Hispanic	2960	281	9.5
Not Hispanic	5322	8	0.2
Unknown	5	0	0.0

	Genotyped Cases	<i>M. bovis</i>	
	No.	No.	%
Place of Birth			
U.S.-born	1544	66	4.3
Foreign-born	6725	223	3.3
Unknown	18	0	0.0

	Genotyped Cases	<i>M. bovis</i>	
	No.	No.	%
U.S.-born cases			
Cases <15 yrs w/ Foreign-born Parent	105	19	18.1

	Genotyped Cases	<i>M. bovis</i>	
	No.	No.	%
Form of Disease			
Pulmonary only	51	1	2.0
Extrapulmonary only	28	16	57.1
Both pulmonary and Extrapulmonary	26	2	7.7

* For percent *M. bovis* cases by year,
 For all other categories, denominator is total number of *M. bovis* cases (n=289).
 . Indicates zero cases or zero percent
 California Department of Public Health, Tuberculosis Control Branch

Table 67. Estimated Persons with Latent Tuberculosis Infection (LTBI): Selected Counties in California, 2015

Reporting Jurisdiction	Total Persons with LTBI	Foreign-born		U.S.-born	
		No.	%*	No.	%*
California	2,342,205	1,789,312	17.0	552,892	1.9
Alameda	111,797	89,624	18.9	22,173	2.2
Butte	5,017	2,694	15.9	2,323	1.1
Contra Costa	62,533	47,164	17.1	15,369	1.8
El Dorado	4,581	2,954	15.2	1,628	1.0
Fresno	52,154	35,571	16.7	16,583	2.2
Humboldt	2,418	1,106	16.3	1,312	1.0
Imperial	12,591	9,485	15.7	3,106	2.5
Kern	42,969	28,531	16.4	14,438	2.0
Kings	7,140	4,554	16.0	2,586	2.1
Los Angeles	701,294	554,972	16.5	146,322	2.4
Madera	7,560	5,113	15.6	2,447	2.0
Marin	9,469	7,014	14.9	2,455	1.1
Merced	15,622	11,390	16.4	4,231	2.1
Napa	6,903	5,344	16.4	1,559	1.4
Orange	203,982	167,698	17.5	36,284	1.6
Placer	9,936	6,165	16.6	3,771	1.1
Riverside	120,013	83,150	16.1	36,863	2.0
Sacramento	75,430	52,743	17.3	22,687	1.9
San Bernardino	114,032	76,075	16.4	37,958	2.3
San Diego	169,735	125,811	16.6	43,924	1.7
San Francisco	65,254	55,531	18.8	9,722	1.7
San Joaquin	42,464	30,871	17.9	11,593	2.1
San Luis Obispo	8,173	5,212	15.7	2,961	1.2
San Mateo	55,730	47,644	17.7	8,086	1.6
Santa Barbara	21,251	15,512	15.6	5,739	1.7
Santa Clara	157,062	135,298	18.8	21,764	1.8
Santa Cruz	10,645	7,589	15.3	3,056	1.4
Shasta	2,604	819	14.4	1,786	1.0
Solano	23,329	15,963	18.4	7,367	2.1
Sonoma	17,610	12,247	15.6	5,363	1.3
Stanislaus	25,449	17,937	16.0	7,512	1.8
Tulare	23,095	15,385	15.9	7,710	2.1
Ventura	41,721	30,937	16.1	10,784	1.6
Yolo	10,063	7,364	16.8	2,699	1.6

*Percent of foreign-born and U.S.-born persons, respectively, in each county, with LTBI.

Estimates of LTBI calculated by using estimates from NHANES 2011-2012 for race/ethnicity and nativity strata applied to California population estimates. See Technical Notes for additional information.

California Department of Public Health, Tuberculosis Control Branch

Figure 1. Number of Tuberculosis Cases: California, 1930–2015

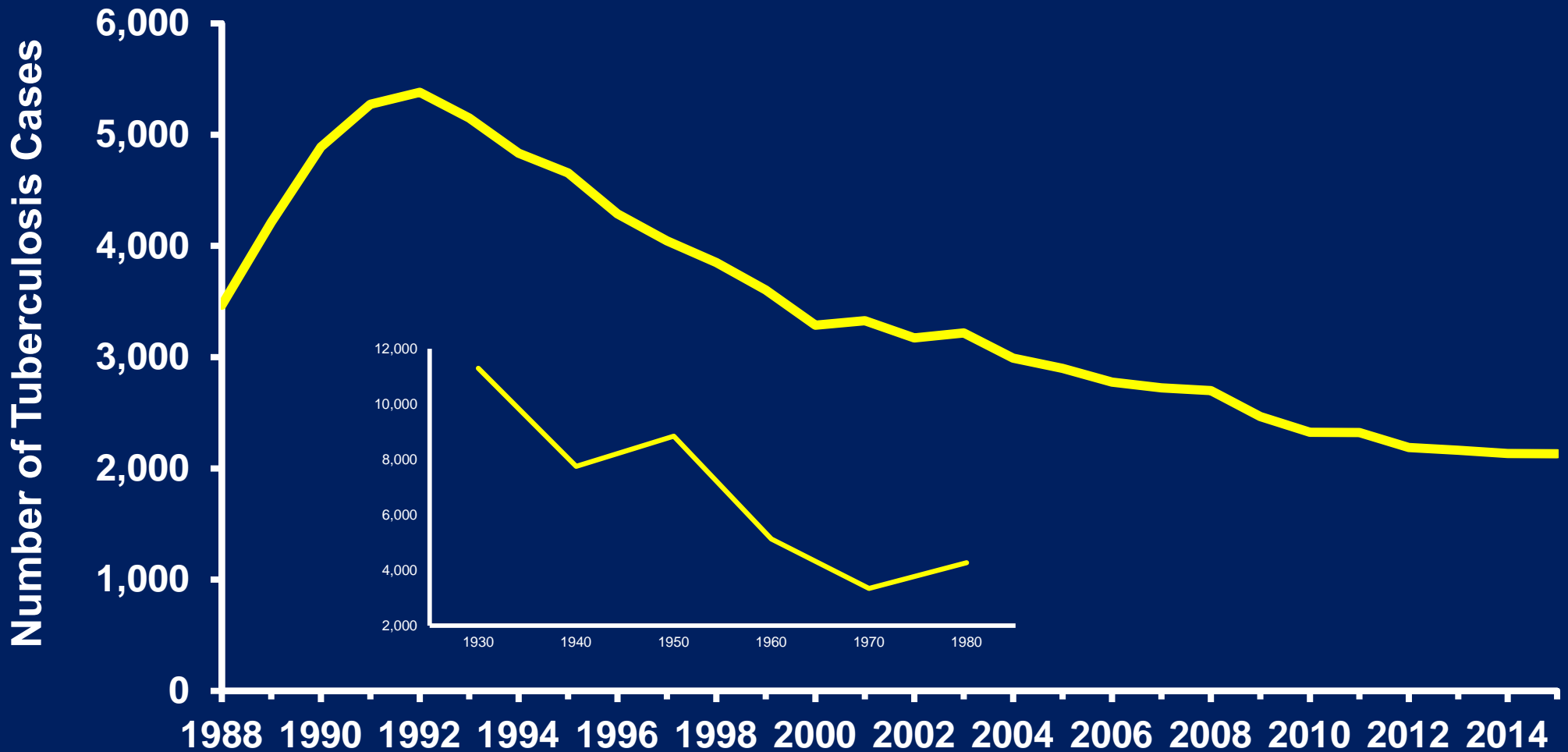


Figure 2. Number of Tuberculosis Cases and Case Rates: California, 2006–2015

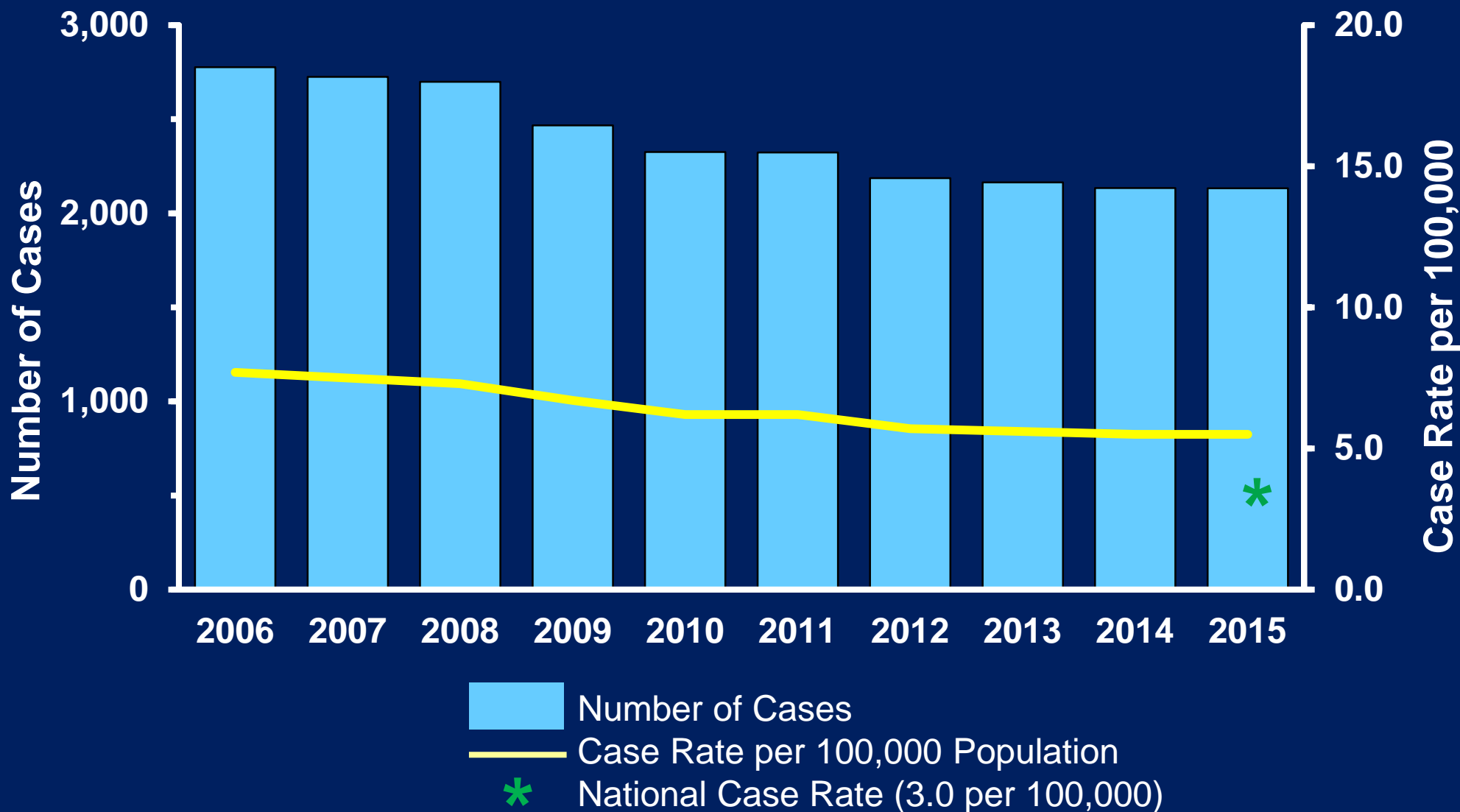
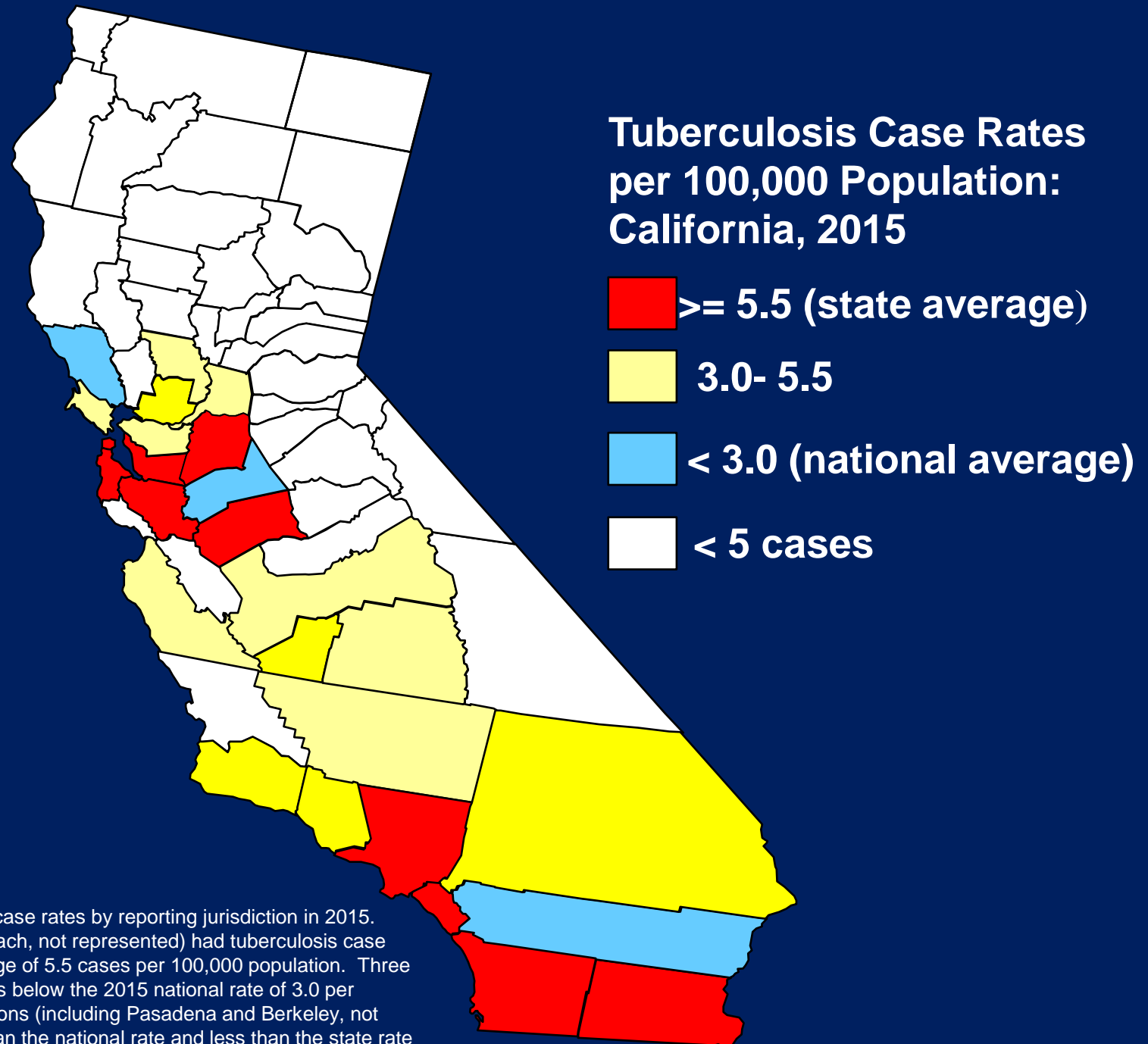


Figure 3. Tuberculosis in California, 2015



Note: The map illustrates tuberculosis case rates by reporting jurisdiction in 2015. Eleven jurisdictions (including Long Beach, not represented) had tuberculosis case rates equal to or above the state average of 5.5 cases per 100,000 population. Three jurisdictions had tuberculosis case rates below the 2015 national rate of 3.0 per 100,000 population. Fourteen jurisdictions (including Pasadena and Berkeley, not represented) had case rates greater than the national rate and less than the state rate (3.0 to 5.5 cases per 100,000 population). Case rates were not calculated for 33 jurisdictions because there were fewer than five cases in these areas.

Figure 4. Tuberculosis Cases by Race/Ethnicity: California, 2015

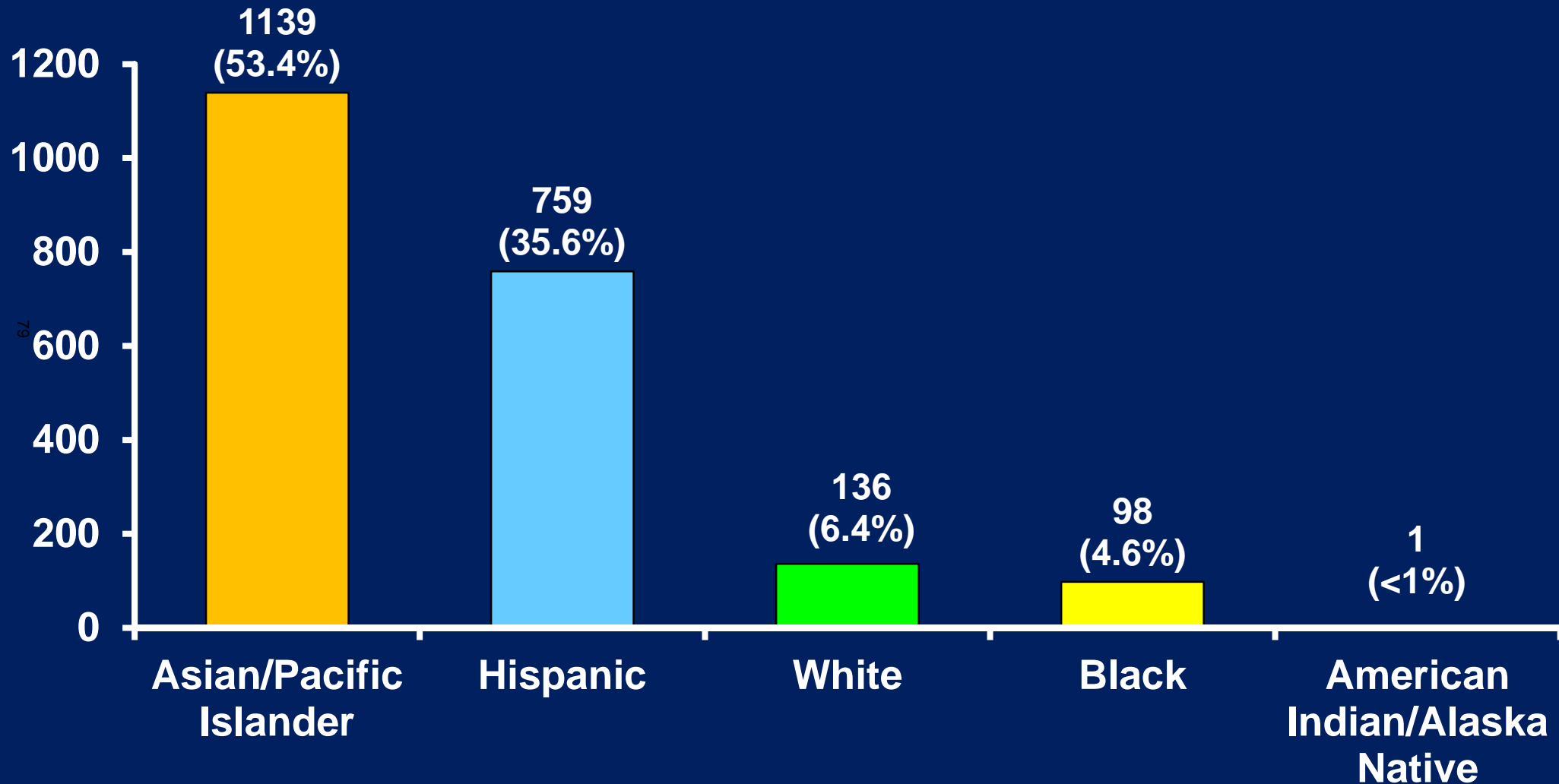


Figure 5. Tuberculosis Case Rates by Race/Ethnicity: California, 2006–2015

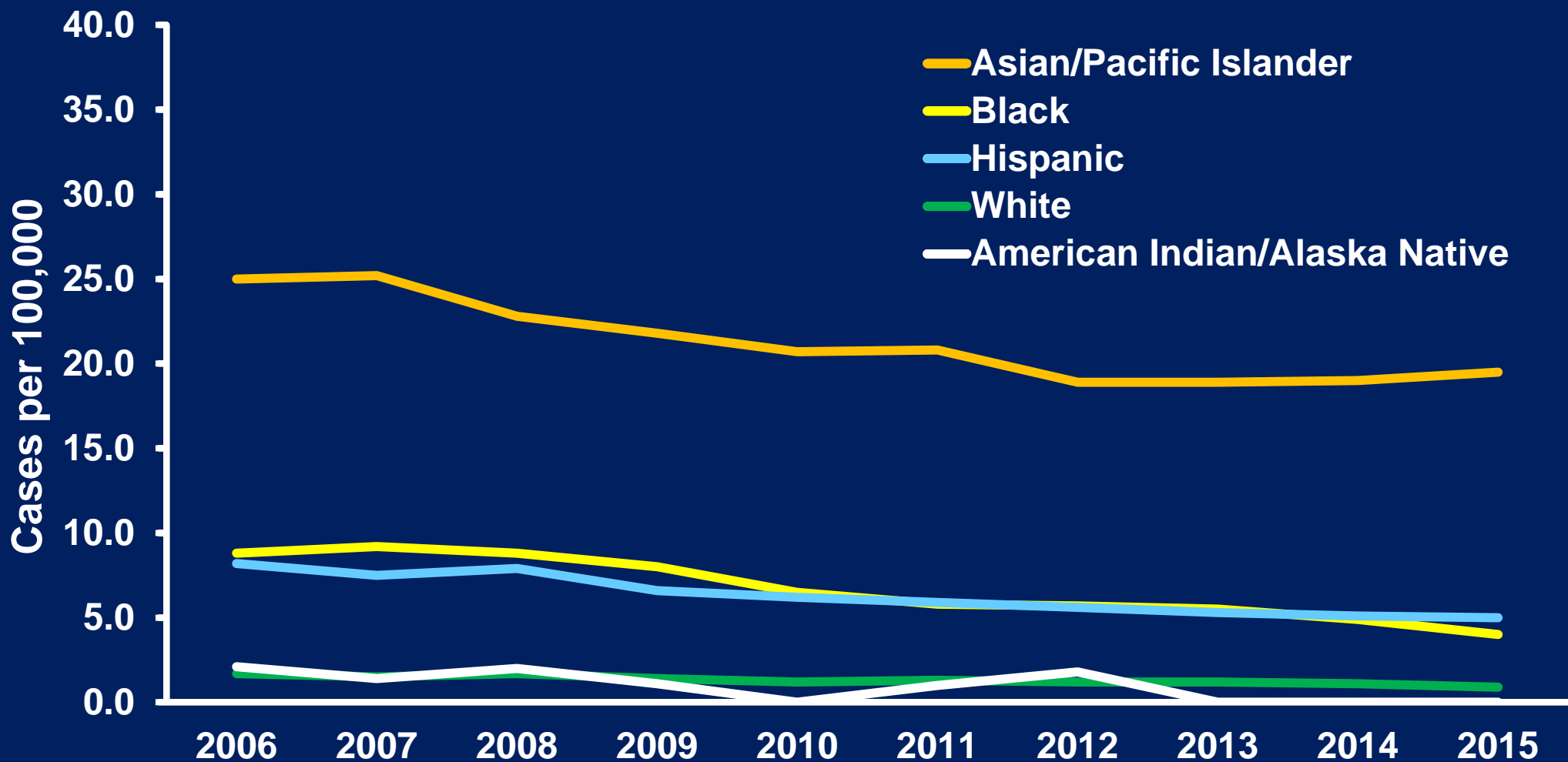


Figure 6. Tuberculosis Cases in Foreign-born and U.S.-born Persons: California, 2006–2015

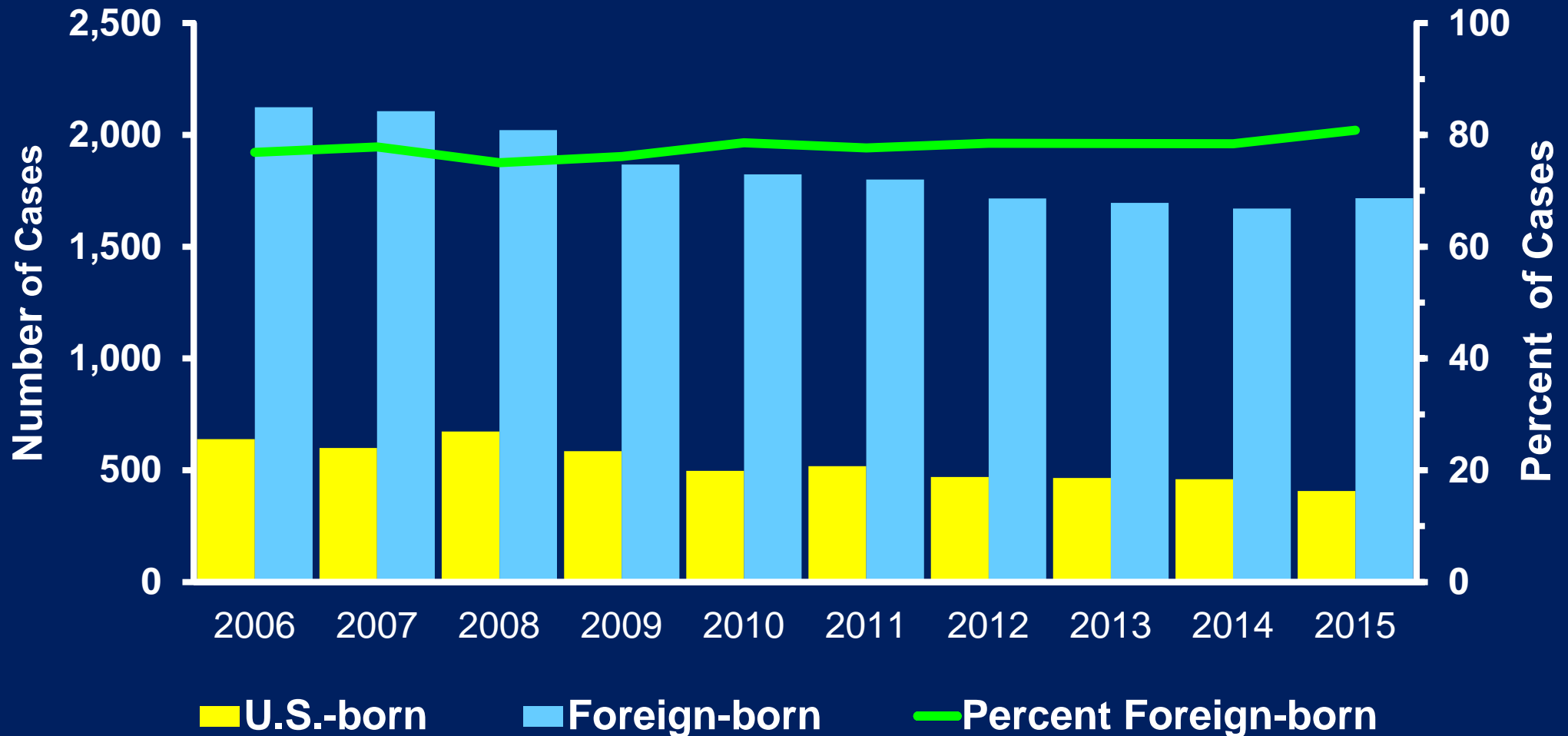


Figure 7. Tuberculosis Cases by Country of Origin: California, 2015

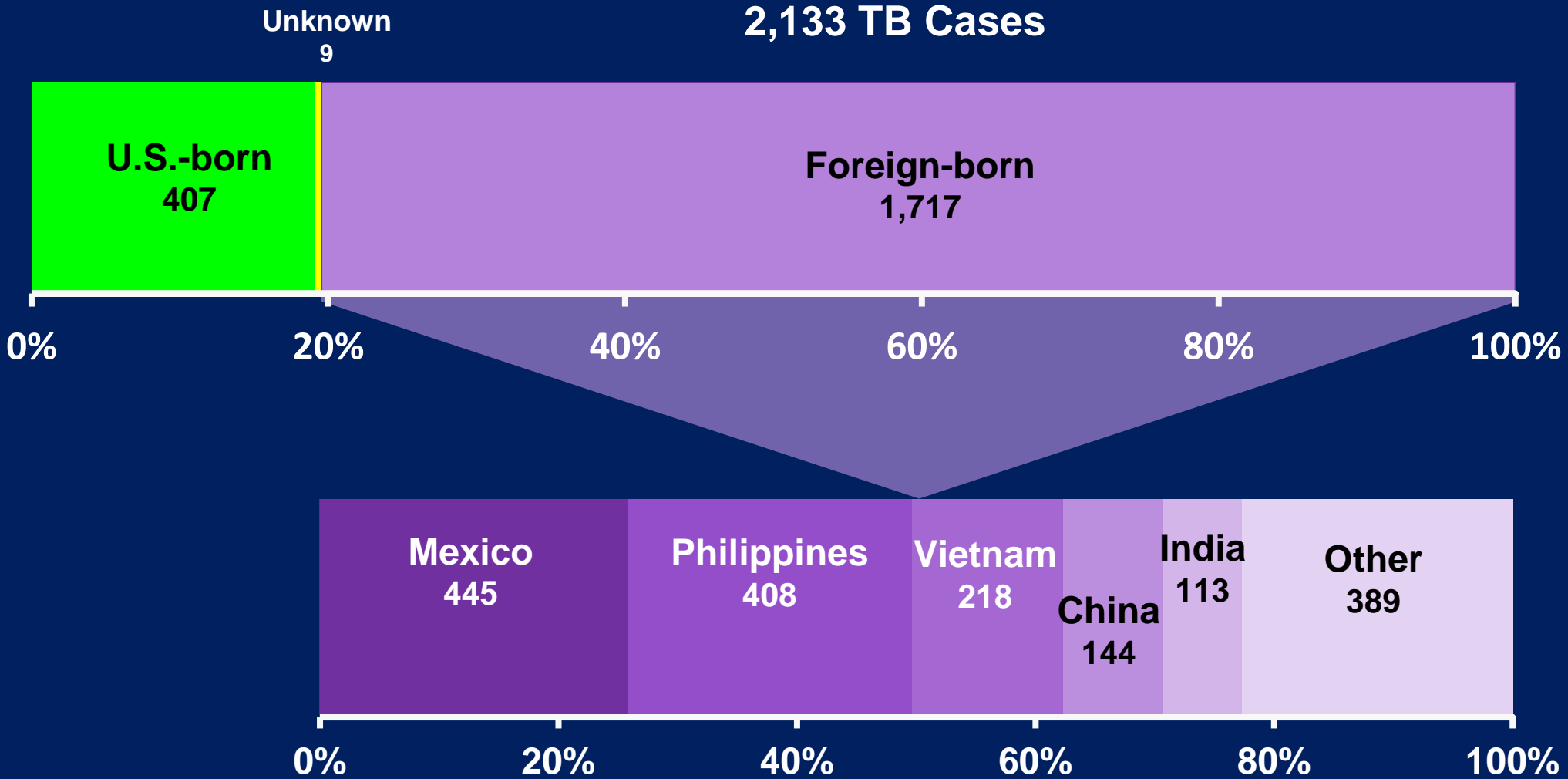
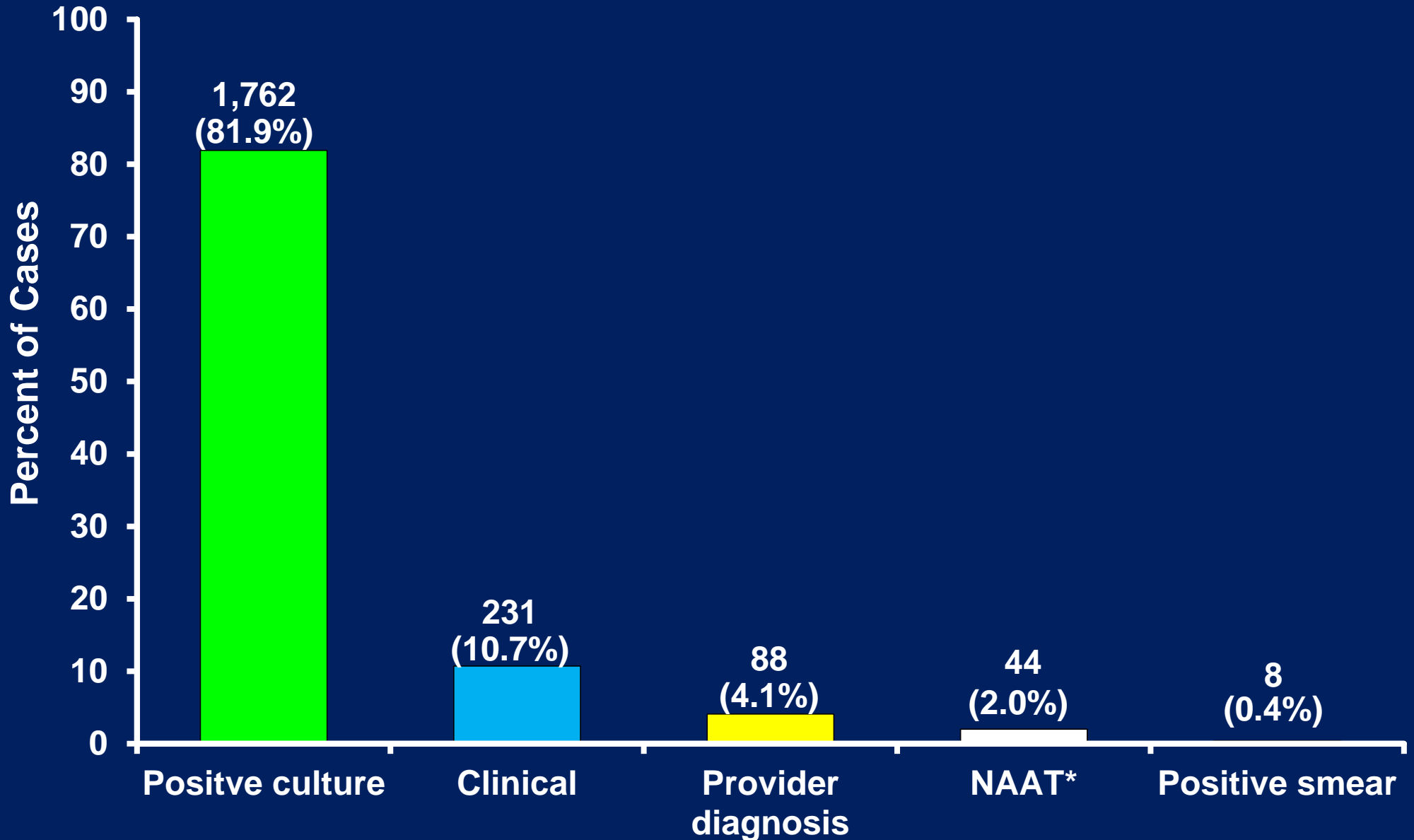


Figure 8. Tuberculosis Cases in Persons 0-4 Years of Age: California, 2006–2015



Figure 9. Tuberculosis Cases by Verification Criteria: California, 2015



*NAAT= Nucleic Acid Amplification Test

Figure 10. Deaths in Persons with Tuberculosis: California, 2004–2013

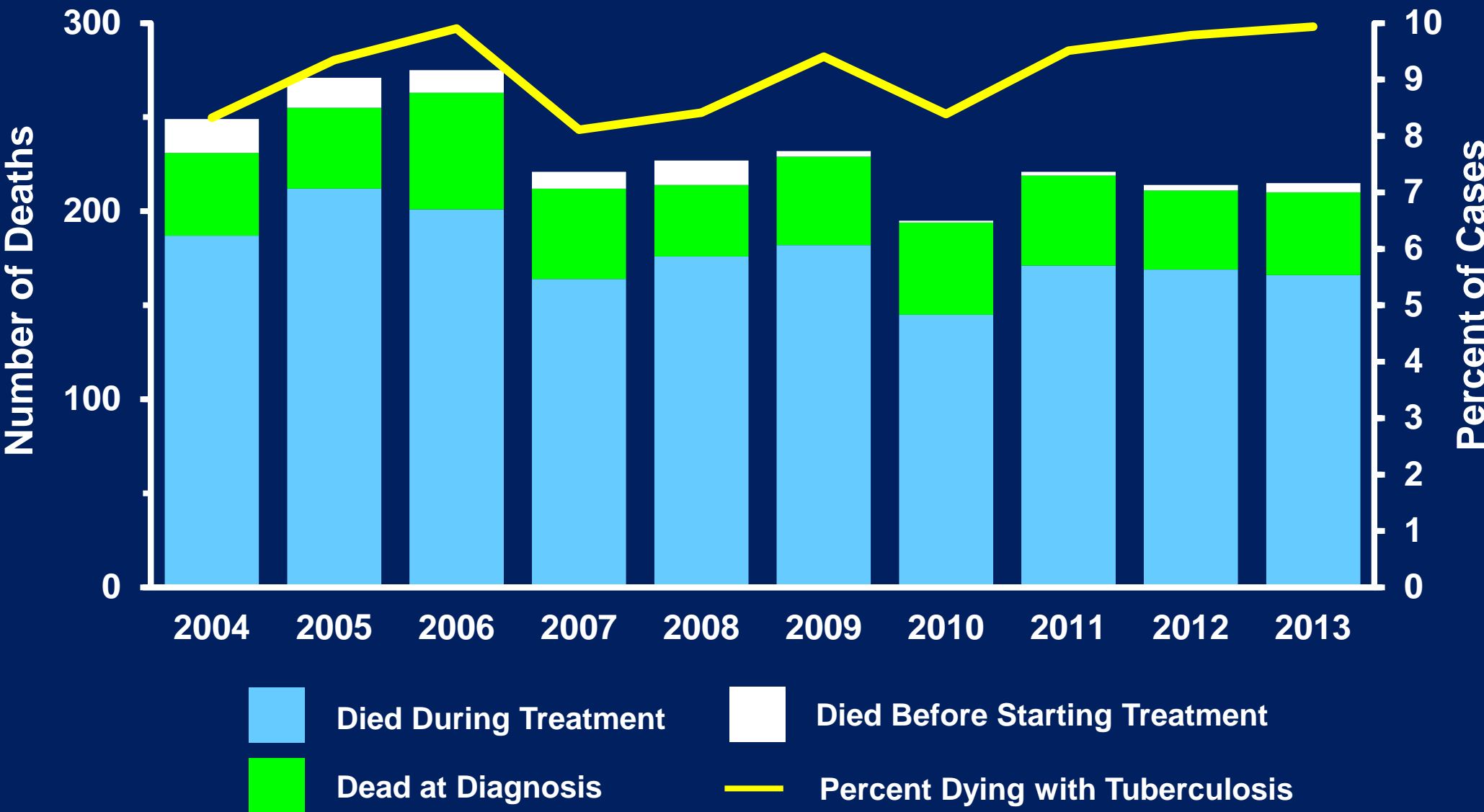
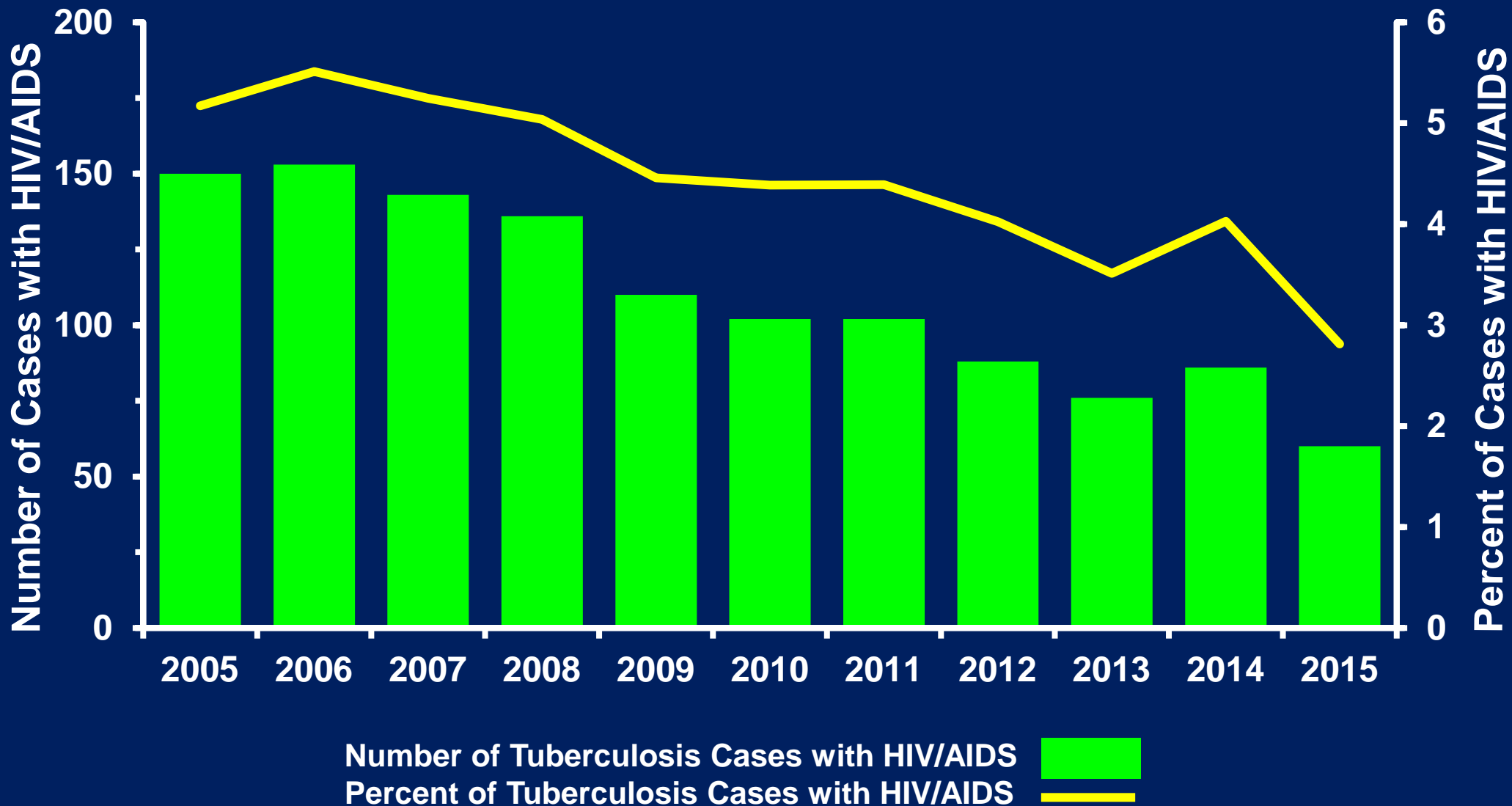
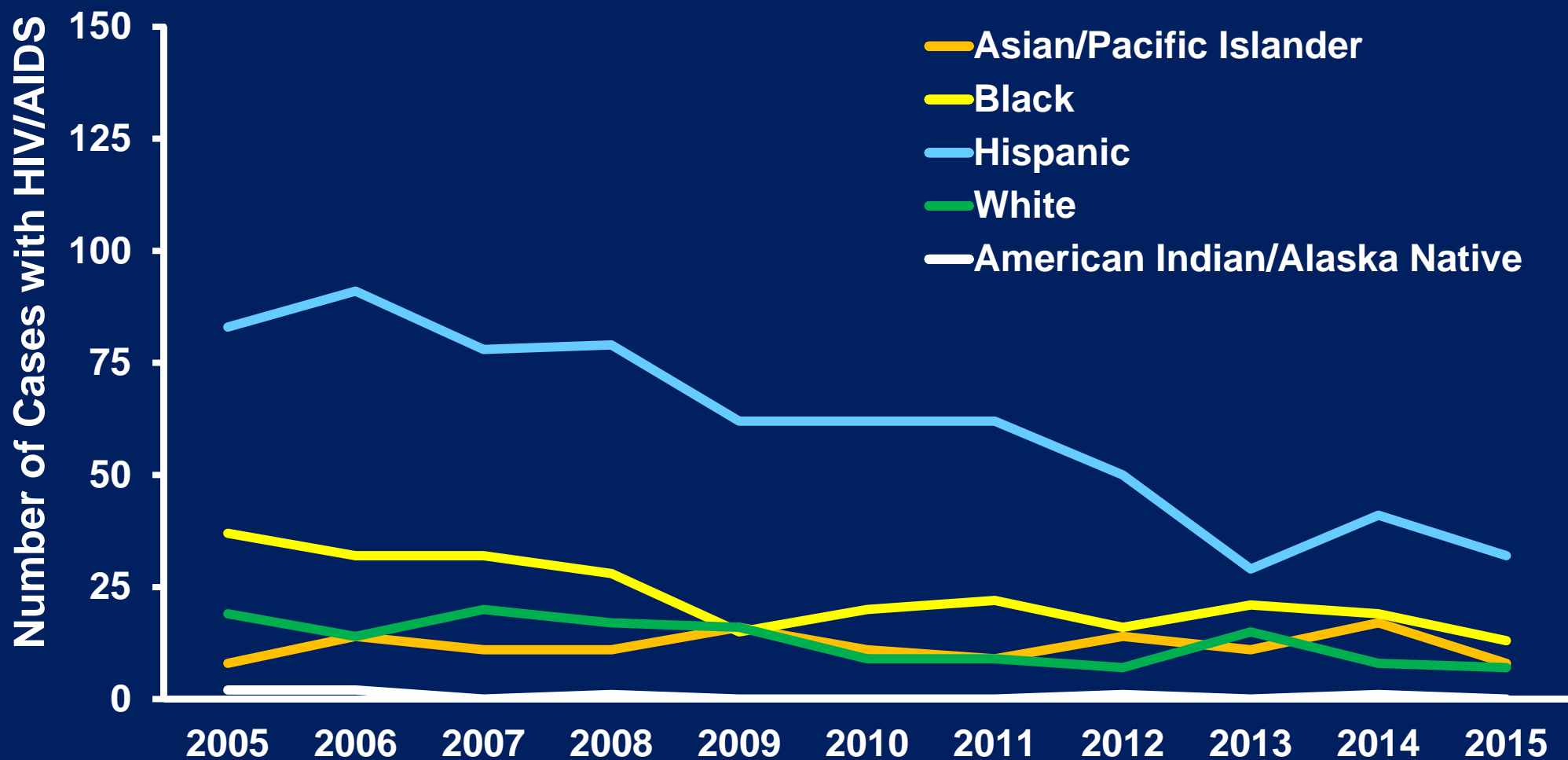


Figure 11. Tuberculosis Cases with HIV/AIDS Diagnosis*: California, 2005–2015



* Match found in HIV/AIDS Case Registry, California Office of AIDS or HIV-positive status reported on RVCT

Figure 12. HIV/AIDS-associated Tuberculosis* by Race/Ethnicity: California, 2005–2015



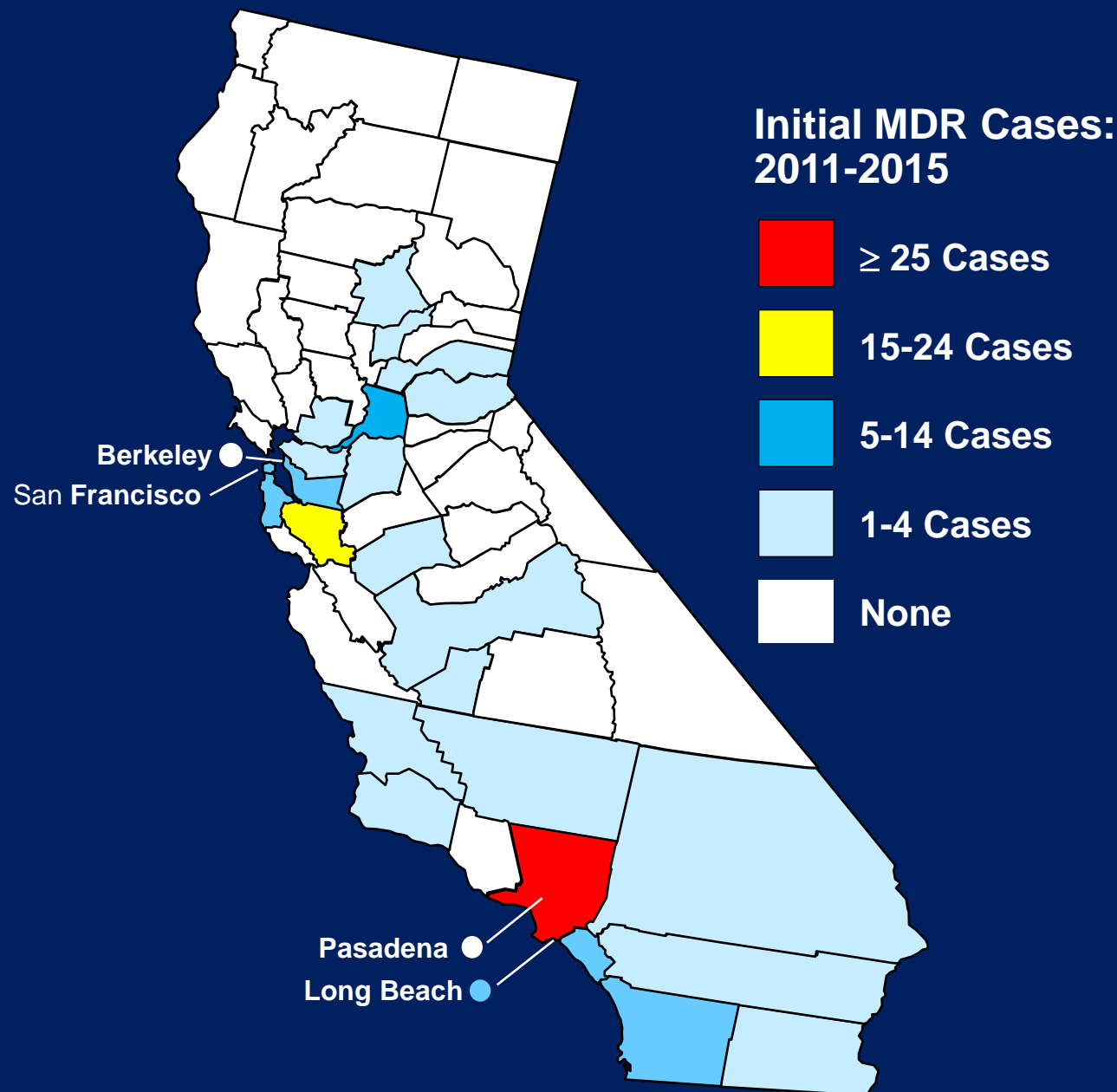
* Match found in HIV/AIDS Case Registry, California Office of AIDS or HIV-positive status reported on RVCT

Figure 13. Tuberculosis Cases with Multidrug Resistance (MDR)*: California, 2004–2013



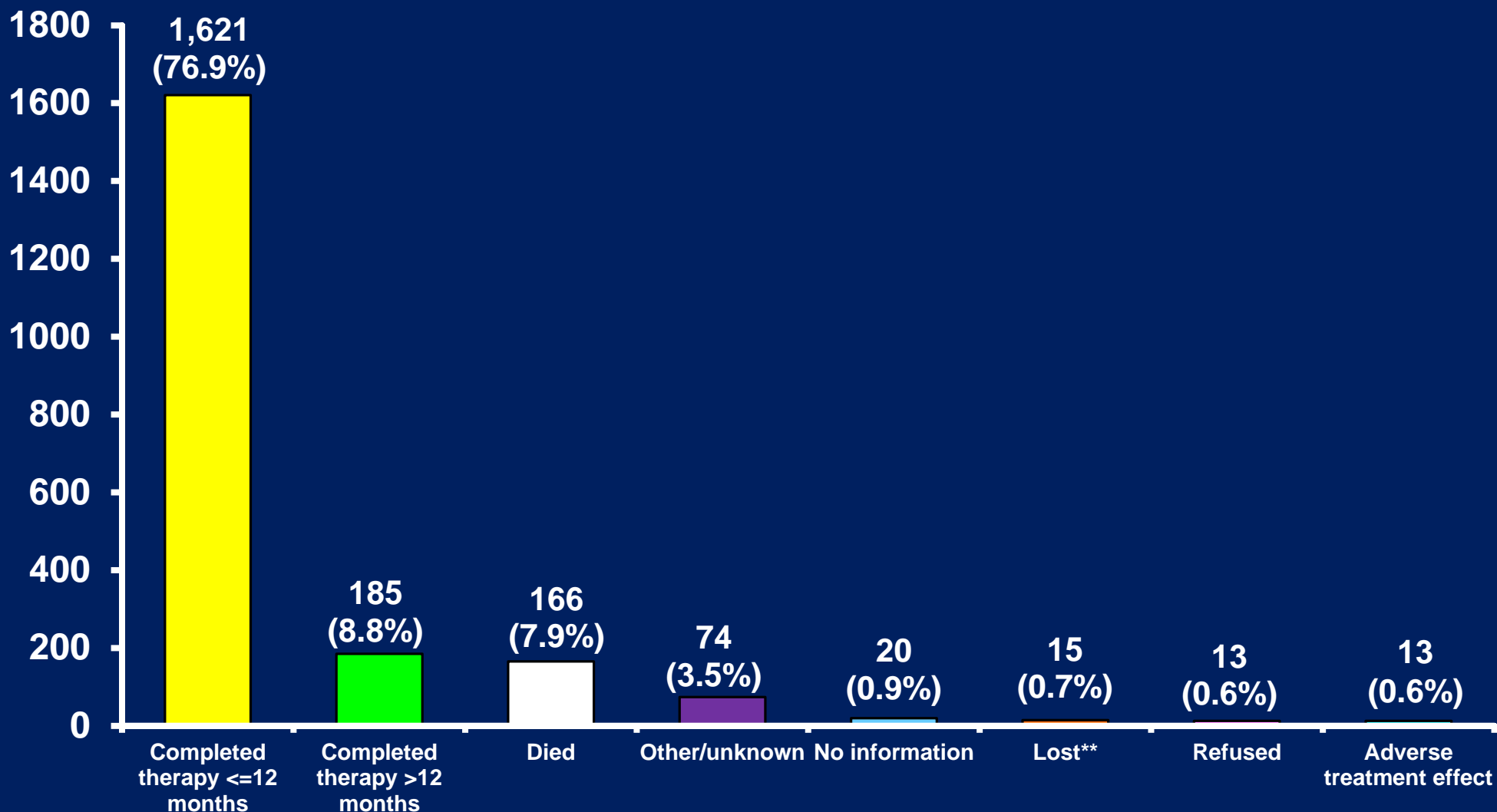
*Cases with resistance to at least isoniazid and rifampin reported on the Initial Drug Susceptibility Report (Follow-up 1) or on the Case Completion Report (Follow-up 2)

Figure 14. Tuberculosis Cases with Initial Multidrug Resistance (MDR)*: California, 2011–2015



*Cases with initial drug resistance to at least isoniazid and rifampin

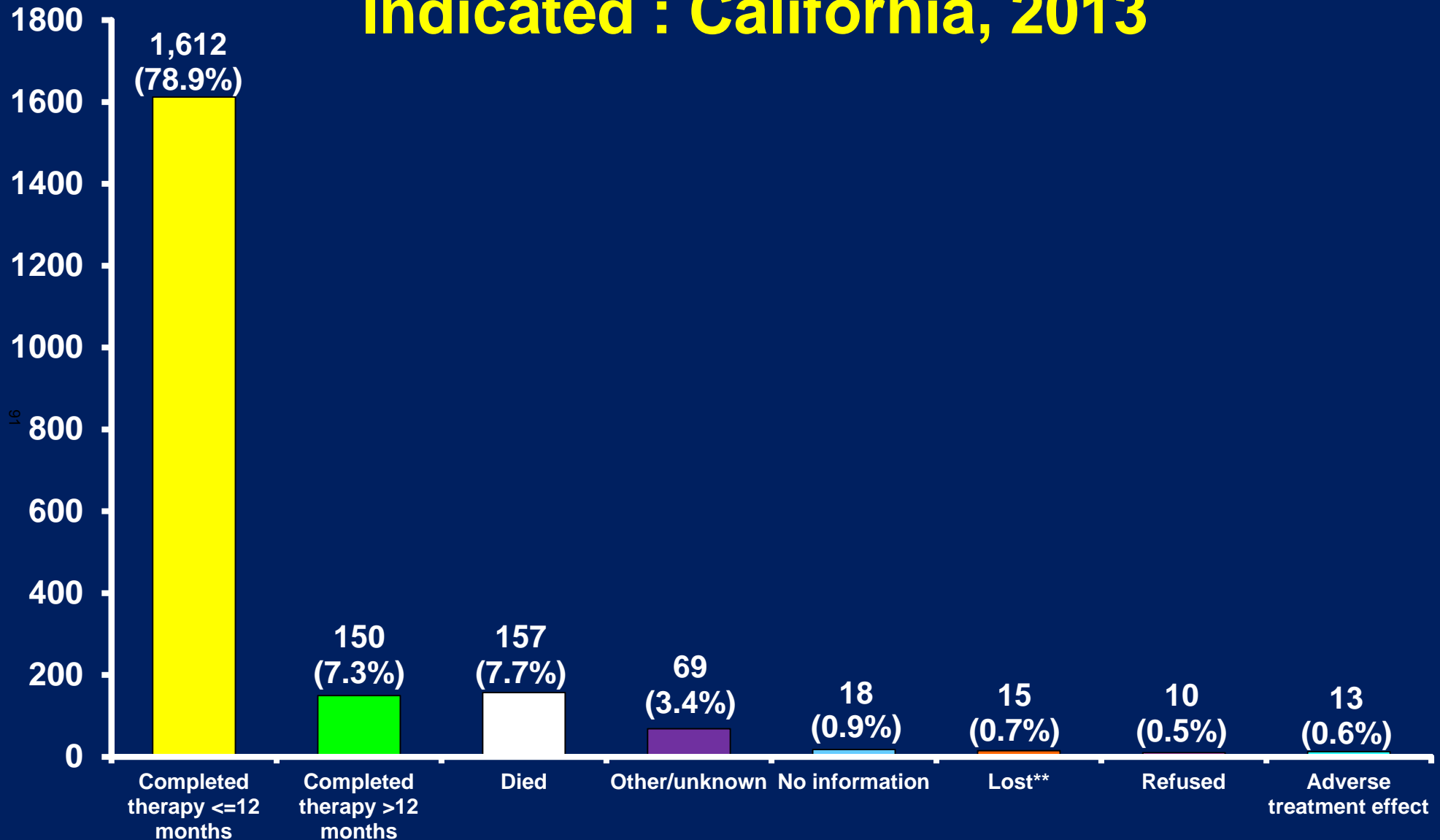
Figure 15. Tuberculosis Cases* by Outcome of Therapy: California, 2013



* Patient was alive at diagnosis and started on an initial drug regimen of two or more drugs.

** Patient could not be located prior to the completion of treatment.

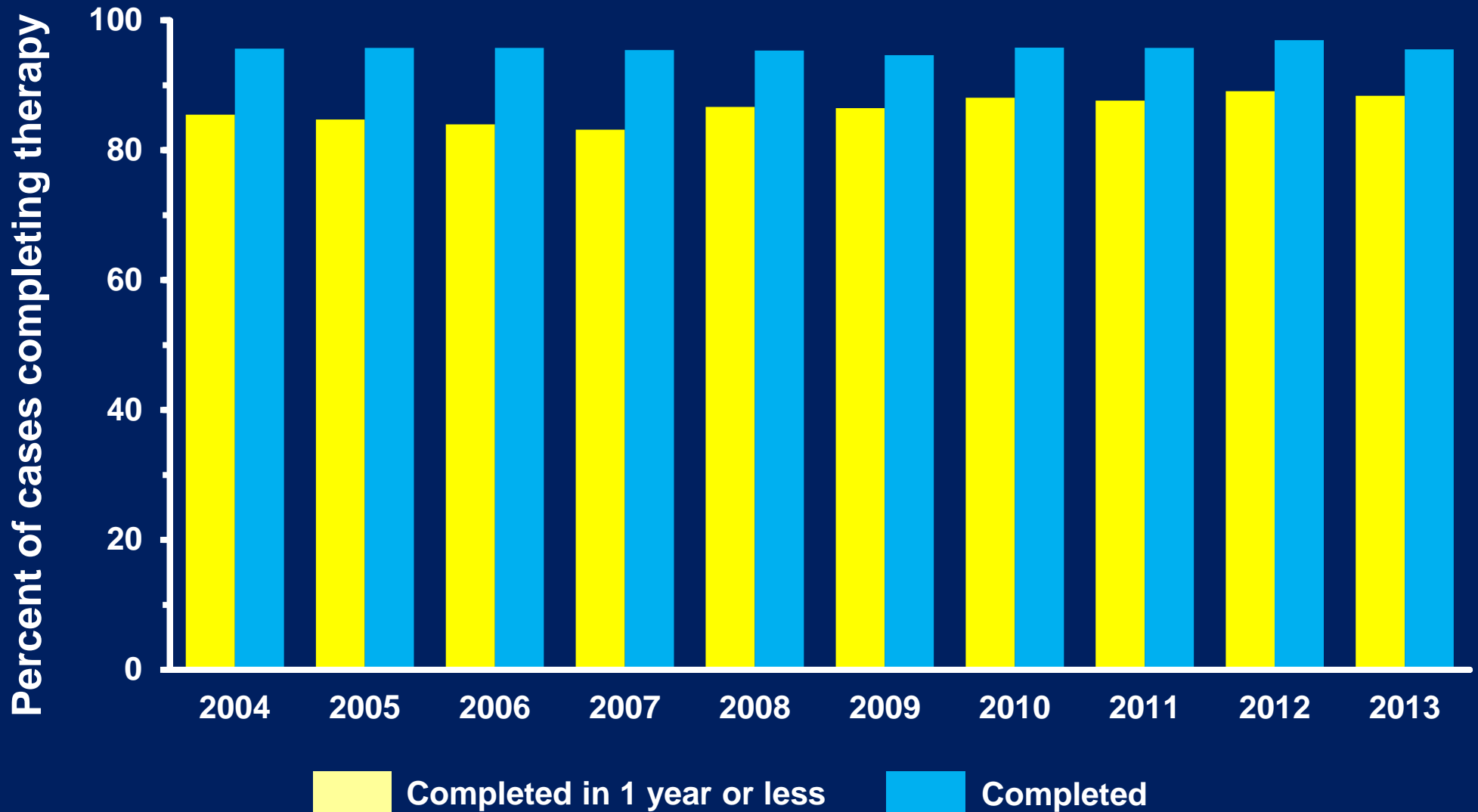
Figure 16. Outcome in Tuberculosis Cases for Whom One Year or Less of Treatment was Indicated*: California, 2013



* Excludes cases with rifampin resistant disease, cases with meningeal disease, and cases less than 15 years of age with disseminated tuberculosis disease.

** Patient could not be located prior to the completion of treatment.

Figure 17. Completion of Tuberculosis Therapy: California, 2004–2013



Note: Consistent with CDC's National Tuberculosis Indicators Project completion of therapy measure, excludes cases with rifampin resistant disease, cases with meningeal, bone and/or joint, or central nervous system disease, cases less than 15 years of age with disseminated tuberculosis disease, and cases that died or moved out of country less than one year after treatment initiation.

Technical Notes

Reporting Jurisdictions

California has 61 jurisdictions that report TB morbidity. There are 58 counties and the cities of Berkeley, Long Beach, and Pasadena. Reports from Alameda County exclude TB cases from the city of Berkeley, and reports from Los Angeles County exclude cases from the cities of Long Beach and Pasadena. Since 1993, local health jurisdictions have used the Report of Verified Case of Tuberculosis (RVCT) form to report TB cases; an expanded and updated version of this form was implemented in California in 2010. California cleans, compiles and analyzes these data for state and local use, and also reports these data to the Centers for Disease Control and Prevention (CDC).

TB Cases

A TB case submitted to the TBCB Registry by January 15, 2016 was included as a 2015 case in this report if the case was confirmed as active TB between January 1 and December 31, 2015. After reporting the case, a jurisdiction may subsequently decide that a reported case did not have TB. Also, a few cases may be reported after the submission deadline. These changes will be reflected in future reports. Therefore, the total number of TB cases counted in a given year may change, usually by a small number of cases. This small change in case numbers may also be reflected in the two sets of TB numbers released each year, a provisional case count used in early reports and materials generated in March for World TB Day, and a final case count which is used in this report.

Population Data

Population data were derived primarily from the following sources at the State of California, Department of Finance.

State and local health jurisdiction totals are from the following sources:

- *E-2 California County Population Estimates and Components of Change by Year, July 1, 2010-2015*, December 2015
- *E-4 Historical Population Estimates for Cities, Counties, and the State 2011-2015 with 2010 Census Benchmark*.

Proportions of population subgroups (sex, age, race and ethnicity) for California are from the following sources:

- *Race/Ethnic Population with Age and Sex Detail, 1970-1989*, December 1998
- *Race/Ethnic Population with Age and Sex Detail, 1990-1999*, Revised May 2009
- *Race/Hispanics Population with Age and Gender Detail: 2000-2010*, Revised March 2013
- *P-3 State and County Population Projections by Race/Ethnicity, Sex, and Age, 2010-2060*, December 2014

State and county population totals are from the estimate series. Populations for the cities of Berkeley, Long Beach and Pasadena were estimated by obtaining the ratio of city to county population totals from the E-4 report, and applying the ratio to the E-2 county population totals. Population totals for the jurisdiction of Alameda were then calculated by subtracting Berkeley calculated population from Alameda County total; population total for the jurisdiction of Los Angeles was calculated by subtracting Long Beach and Pasadena calculated populations from Los Angeles County total.

Demographic populations were estimated by applying the population proportion of each demographic subgroup to the state total (estimate series).

For calculation of rates by racial/ethnic group, the multi-race category in the 2006–2015 population data was reallocated to a single racial/ethnic group according to the allocation table in this source: State of California, Department of Finance, *Suggested Allocations of the Multi-race Category for Use with Projections by Race/Ethnicity for California and Its Counties, 2000-2050*, Sacramento, California, June 2004.

Populations of foreign-born and U.S.-born persons were calculated by applying the proportion of each group from the United States Census Bureau's *American Community Survey* available at <http://factfinder2.census.gov>, to the California total population for 2015 from California Department of Finance, *E-2 California County Population Estimates and Components of Change by Year, July 1, 2010-2015*. At the time of preparation of this report, U.S. Census data for the current year were not available, therefore the proportion of foreign-born and U.S.-born persons from 2014 were also used for 2015. These rates will be updated in future reports.

Small Case Numbers

We have chosen not to report rates when the total number of TB cases is less than five. Rates of zero, based on no TB cases, are also not reported. Where the rate is not reported, changes in rate over time are also not reported.

In tables that report demographics of, and risk factors for, TB cases by reporting jurisdictions (Tables 16–22, 36–46), data from jurisdictions with less than five cases of TB are aggregated to reduce the likelihood that individual TB cases in a given jurisdiction can be identified.

The following 14 jurisdictions had between one and four cases of TB in 2015: Butte, El Dorado, Glenn, Madera, Napa, Nevada, Pasadena, Placer, San Benito, San Luis Obispo, Santa Cruz, Shasta, Sutter and Trinity. The following 19 jurisdictions had no TB cases in 2015: Alpine, Amador, Calaveras, Colusa, Del Norte, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Plumas, Sierra, Siskiyou, Tehama, Tuolumne and Yuba.

Ranking of Jurisdictions

For Table 13, jurisdictions are ranked in order of decreasing 2015 case rates with the highest rank first. Those jurisdictions with one to four cases are not given a rate and are given the same rank; they are listed according to decreasing number of cases. Jurisdictions with no cases of TB are given the same rank and are listed in alphabetical order.

TB Case Definition and Verification Criteria

For surveillance purposes, a case of TB is defined by laboratory and clinical evidence of disease caused by *Mycobacterium tuberculosis (Mtb)* complex. TB cases with culture or nucleic acid amplification evidence of *Mtb*, or acid fast bacilli in a smear from a clinical specimen (when a culture cannot be obtained, or positive results are negative or contaminated) are classified as laboratory-confirmed. In the absence of laboratory confirmation, persons with a positive tuberculin skin test (TST) or positive interferon gamma release assay (IGRA) for *Mtb*, abnormal chest imaging (in those with pulmonary disease), and treatment with two or more anti-TB medications will be classified as clinically-confirmed TB. Reported cases not meeting one or more of the clinical criteria for TB are classified as provider-diagnosed cases because the health

care provider has determined there is sufficient evidence of active TB disease to report the case.

The following hierarchy is applied in determining the verification criteria for TB disease (Table 25):

1. Positive culture for *Mtb*
2. Positive nucleic acid amplification test
3. Positive acid-fast bacilli test
4. Clinical case confirmation
5. Provider diagnosis

Race and Ethnicity

The RVCT has one variable for race and one for ethnicity. If a case is classified as “Hispanic” on the RVCT, then the case is reported as “Hispanic” in this report, regardless of race.

Beginning in 2003, the federal Office of Management and Budget (OMB) mandated separate reporting of Asian and Pacific Islander/Native Hawaiian races, as well as the opportunity for persons to identify themselves by one or more racial groups. Individuals reporting more than one race are presented in Table 19. In all other tables presenting race/ethnicity, cases were reassigned to a single racial/ethnic group based on the “Smallest Group” method, in which responses that include white and any another group were assigned to the other group, and responses with two or more racial groups other than white were assigned to the group with the fewest number of individuals identifying that group as a single race.

In 2015, there were two non-Hispanic persons reported with more than one race. In tables where data on race/ethnicity are presented (except Table 19) one person reported as Asian and white was included in the Asian and Pacific Islander group, and one person reported as black and white are reported in the black, non-Hispanic group. In addition to the 1 multi-race Asian person, 1128 persons were reported as only Asian, and 10 were reported as only Native Hawaiian or Pacific Islander.

HIV/AIDS Status

In 2011, California implemented reporting of HIV status of TB cases on the RVCT (Tables 36, 37). Since 1993, TB cases co-infected with HIV, and reported with HIV or AIDS are also identified by matching TBCB Registry data with the HIV/AIDS case registry in the California Department of Public Health Office of AIDS. A positive result from either source was considered to be indicative of co-infection with HIV/AIDS in Tables 12, 36, 62, 63, Figures 11, 12. Table 37 (HIV Status at the Time of TB Diagnosis) and Table 38 (Medical Risk Factors for Tuberculosis) report only the HIV testing status variable from the RVCT.

Primary Reason for TB Evaluation

The primary reason for a patient’s initial evaluation for TB was added to the TB case report form in 2010. Because multiple factors may be present at the time of a person’s initial TB evaluation (e.g., a person with TB symptoms evaluated during the course of a contact investigation of a

family member), and only the primary reason may be reported, the following definitions and hierarchies are applied.

TB symptoms: the person sought evaluation because of signs or symptoms of TB disease (e.g., persistent cough, fever, lymphadenopathy, night sweats, weight loss or symptoms of extra-pulmonary disease).

Abnormal chest image: the initial chest radiograph was consistent with TB disease, and was performed for a reason other than suspicion of TB disease. If the radiograph was performed following a positive TST or IGRA result obtained during targeted testing, “Targeted Testing” is considered to be the primary reason the patient was evaluated for TB.

Contact investigation: the person’s TB was identified during the course of a contact investigation or source case finding, regardless of whether the person was symptomatic at the time.

Targeted testing: a positive TST or IGRA result was obtained during a screening performed specifically because the person was considered to be at high risk for TB. However, health care worker or employment/administrative testing, contact investigation, and immigration medical exam supersede targeted testing as the primary reason a patient was evaluated, when one of those situations is applicable.

Health care worker: a positive TST or IGRA result was obtained during the course of routine screening of health care workers. Health care worker supersedes targeted testing and employment/administrative testing. However, evaluation of health care workers for other reasons (e.g., TB symptoms or contact investigation) supersedes health care worker.

Employment/administrative testing: persons whose TB testing was performed before or periodically during employment to meet administrative requirements. If employment was health-care, “health care worker” is considered the primary reason the patient was evaluated.

Immigration medical exam: TB disease was found during a medical examination that was part of the immigration requirement process that is mandatory for certain categories of U.S. entrants (e.g., immigrant, refugee, asylee).

Incidental lab result: the clinical evaluation was for something other than TB. Specimens were collected and submitted for evaluation of TB and other diseases for diagnostic completeness, but TB was not expected.

Risk Factors for TB

In 2010, reporting of certain additional medical and epidemiologic risk factors began. Persons with medical co-morbidities such as diabetes mellitus, end-stage renal disease, organ transplantation, tumor necrosis factor (TNF) alpha antagonist therapy, or other immunosuppressive medications that suppress a patient’s immune response have a higher risk of TB; these new data will provide a better understanding of these high-risk groups (Table 38).

Non-medical epidemiologic risks for TB (Table 39) include contact to an MDR TB case, or to an infectious TB patient. If the patient was a contact to an MDR case, he/she should be reported as “contact of MDR case,” rather than “contact of infectious case.” The association with the MDR case must be within the last two years. A case should be reported as a missed contact if the current case was identified as a contact of a known TB patient (within 2 years of current diagnosis), but was not identified or evaluated at that time. Incomplete LTBI treatment includes

patients who started treatment for a previous diagnosis of LTBI, but did not complete the regimen.

Immigration Status at First Entry to the United States

Information on the immigration status of cases born outside the United States was added to the TB case report form in 2010. TB patients are asked to provide their immigration status at the time they first entered the US. Persons entering the United States with no official immigration status (e.g., “undocumented” persons) are included in the “other” immigration status category, as are persons with visa types other than those specified in Table 22, and persons not required to obtain visas (such as short-term visitors from countries such as Canada that are part of the U.S. visa waiver program). In addition, some local health jurisdictions have policies in place that prohibit them from inquiring about the immigration status of patients; these cases are included in the “unknown” category.

For more detailed information on the reporting of the variables “Primary reason evaluated for TB,” “Additional risk factors for TB” and “Immigration status at first entry to the United States” see <http://www.cdc.gov/tb/programs/rvct/InstructionManual.pdf>.

Drug Susceptibility Reports

Tables 47–54 present the results of initial drug susceptibility testing for the most recent year (2015). Because the Initial Drug Susceptibility Report (Follow-up 1) may be submitted several months after the initial case report, all results may not have been available at the time this report was prepared. At the time of report preparation, drug susceptibility testing was approximately 94 percent complete for culture-positive TB cases. As additional Follow-up 1 reports are submitted, overall proportions of drug resistance may change slightly. These updated results will be available in future reports, in tables presenting trends in drug resistance (Tables 55, 56, Figure 13).

Figure 13 presents MDR TB cases (defined as cases with an isolate resistant to at least isoniazid and rifampin reported on the Initial Drug Susceptibility Report [Follow-up 1] or the Case Completion Report [Follow-up 2]).

Case Completion Reports

Because the Case Completion Report (Follow-up 2) is not submitted until many months after a TB case is initially reported, data reported on cases counted in 2013 are the most recent available and are presented in this report. These data include health care provider type (Table 34), directly observed therapy (Table 35) and treatment outcomes (Tables 58–64, Figures 13, 15–17). Data in these tables are from the final Follow-up 2 submitted and, therefore represent the overall treatment completion rate for cases beginning therapy for TB disease in California. Treatment completion may have occurred in the jurisdiction reporting the case, in another California jurisdiction, or another state. In addition, for the first time, we are including treatment outcomes (completion of therapy, or death during treatment) for patients who were referred to Mexico or Central America through CureTB, as results become available.

Treatment Outcomes

Categories for completion of therapy (Tables 58–60, 62–63, Figures 15–17) are: completed therapy in 12 months or less (includes patients whose treatment was completed in 366 days or less); and completed therapy in more than 12 months (treatment completed in more than 366 days, or treatment completed in an undetermined amount of time). If the day of the month is

missing from the treatment start or stop date (but the month and year are available), the missing day is set to the first of the month. Because the day of the month is much more likely to be missing from the stop date than the start date, the bias in calculating the duration of therapy is toward shorter duration of therapy.

Cases known to have started treatment, but for whom no Follow-up 2 is available are included in the “No Information” category. All other outcome categories reflect the “Reason Therapy Stopped” variable of the Follow-up 2.

Tables 59 and 63, and Figure 16 present outcomes of TB treatment for cases expected to complete TB therapy in one year or less. Thus, cases with rifampin-resistant disease (including MDR TB), those with meningeal disease, and children less than 15 years of age with disseminated TB disease are excluded. Table 60 and Figure 17 present completion of TB therapy using methodology used by CDC. Patients with rifampin-resistant disease, patients with meningeal, bone or joint disease, patients under 15 years of age with disseminated disease, and patients who died or moved out of the country less than one year after initiation of treatment are excluded. The percentage of patients who completed therapy in one year or less is presented, as well as the percentage of patients who completed therapy, regardless of duration.

TB Genotypes

TB genotyping is a laboratory-based approach used to analyze the genetic material (e.g., DNA) of *Mtb*. TB genotyping results, combined with epidemiologic data, can help identify persons with TB disease involved in the same chain of recent transmission, and is a valuable tool in contact investigations. It can also be used to help to distinguish recent infection from activation of an old infection. Genotyping is recommended for isolates from sputum and other clinical specimens that are positive for *Mtb*.

Table 64 presents the percentage of cases with isolates positive for *Mycobacterium tuberculosis* (*Mtb*) whose specimens were submitted for genotyping for 2011-2015. Table 65 presents the number of cases with genotyped isolates that were clustered (matched) with a genotyped isolate from one or more other case in the same jurisdiction within a three year time period, and the number of clusters by cluster size. A cluster is defined as two or more cases with matching spoligotype and 24-locus mycobacterial interspersed repetitive unit-variable number tandem repeat type (GENType) within a county during the specified 3-year time period. Characteristics of the cases with genotyped isolates identified as the *Mycobacterium bovis* strain of *Mtb* are shown in Table 66.

Latent TB Infection (LTBI)

Estimates of LTBI prevalence is an important tool to understanding the potential pool of persons who may one day progress to active TB in the future, and for whom testing and treatment of the infection can decrease TB morbidity in the future. To estimate populations by nativity, the proportions of foreign-born and U.S.-born persons for California and selected LHDs from the U.S. Census Bureau’s American Community Survey (ACS) were applied to population totals from the California Department of Finance estimates series (see Population Data above). The prevalence of latent TB infection (LTBI) presented in Table 67 was then estimated by applying the proportions of U.S.-born persons with a positive TST and proportions of foreign-born persons with a positive IGRA from the National Health and Nutrition Examination Survey (<http://www.cdc.gov/nchs/nhanes/index.htm>), and reported in Miramontes (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4633161>) to the U.S.- and foreign-born

populations. Due to ACS sampling methods, estimates of LTBI are not available for all LHDs in California.