

Tuberculosis Fact Sheet Alameda County 2017

OVERVIEW

During 2017, 124 tuberculosis (TB) cases were reported to Alameda County (excluding the City of Berkeley). The 2017 TB case rate in Alameda County was 8.1 cases per 100,000 residents, a 11% decrease from the 2016 rate. The 2017 rate ranks fourth among all jurisdictions in California and is 55.6% higher than the California state rate of 5.2 cases per 100,000 residents. Compared to other Bay Area jurisdictions, the Alameda County rate ranks lower than San Francisco (12.2 per 100,000) and Santa Clara (9.6 per 100,000), and higher than San Mateo (7.1 per 100,000), Solano (5.9 per 100,000), and Contra Costa (5.4 per 100,000) counties.

Figure 1. Tuberculosis Cases and Rate per 100,000 in Alameda County, 2008-2017

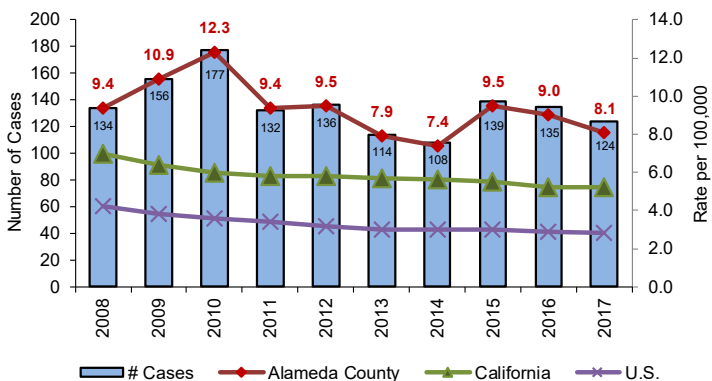


Figure 2: Incident TB Cases (2017) by Place of Birth, Alameda County

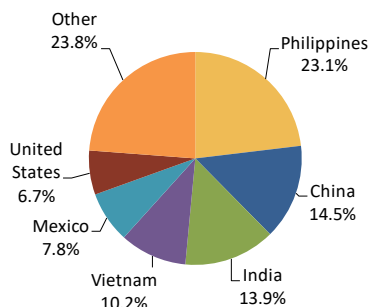


Table 1. Incident TB Cases (2017) and Annual Average Case Rates per 100,000 (2015-2017), Alameda County

		Number of Cases (N=124)	Percent	Average Case Rate per 100,000
Sex	Males	69	55.6%	10.2
	Females	55	44.4%	7.5
Age Group	0-4 yrs	1	0.8%	*
	5-14 yrs	1	0.8%	*
	15-24 yrs	11	8.9%	10.2
	25-44 yrs	30	24.2%	7.4
	45-64 yrs	38	30.6%	18.6
	65+ yrs	43	34.7%	23.6
Race / Ethnicity	Black / African American	10	8.1%	6.8
	Asian / Pacific Islander	96	77.4%	22.3
	Amer Ind / Native AK	0	0.0%	*
	Hispanic / Latino	13	10.5%	4.4
	White	5	4.0%	1.6
Birthplace	United States	18	14.5%	1.6
	Outside of United States	106	85.5%	22.5

* 2015-2017 rates for categories with <10 cases are unstable and not presented

PATIENT DEMOGRAPHICS

Similar to previous years, a majority of TB cases were male (55.6%), and the largest proportion of TB cases occurred among adults age 65 years and older (34.7%) (Table 1). During 2017, one child younger than age five was diagnosed with TB (Table 1).

The majority of 2017 TB cases (96.0%) occurred among non-White residents (Table 1). From 2015 to 2017, White residents in Alameda County had the lowest average annual case rate of 1.6 per 100,000; rates were 14 times higher among Asian/Pacific Islander (API) (22.3 per 100,000), four times higher among Black/African American (6.8 per 100,000), and nearly three times higher among Hispanic/Latino (4.4 per 100,000) residents.

During 2017, 85.5% of TB cases were born outside of the U.S. (Figure 2). The most frequent birthplaces remain Philippines, China, India, Vietnam, Mexico, and the U.S. The 2015-2017 average annual case rate for cases born outside of the U.S. was 22.5 per 100,000, 14 times the rate for cases born in the U.S. (1.6 per 100,000). For 2017 cases born outside of the U.S., 62.3% had resided in the U.S. for 10 years or more before being diagnosed with TB. A majority of 2017 cases occurred among API residents, regardless of birthplace (44.4% among cases born in the U.S. and 81.1% among cases born outside of the U.S.).

The largest proportion of 2017 TB cases occurred among residents of Oakland (28.2%), Fremont (21.8%) and Hayward (12.9%). Five-year average rates continue to be highest in Downtown, Uptown and East Oakland, and South Fremont (over twice the five-year county average of 8.5 per 100,000) (Figure 3).

CLINICAL CHARACTERISTICS

Of all 2017 TB cases, 77.4% had any pulmonary involvement and 22.6% were extrapulmonary only (Table 2). Of all pulmonary cases, a majority (57.3%) were acid fast bacilli (AFB) smear-negative and 70.8% did not have evidence of cavitory disease on chest radiography. Only 2.4% of 2017 TB cases were co-infected with HIV, the lowest proportion in the past five years. The most common comorbidity was diabetes (24.2%).

DRUG RESISTANCE

Fewer drug-resistant isolates were identified during 2017 compared to 2010-2016 (4.8% vs. 6.7-18.5%). During 2017, six TB cases were resistant to at least one first-line TB treatment drug (isoniazid, rifampin, ethambutol or pyrazinamide). Of those six, three were resistant to isoniazid only. Alameda County had one multi-drug resistant TB case (resistant to both isoniazid and rifampin) in 2017 compared to none in 2016.

DIAGNOSTIC TESTING

Among 2017 TB cases with any pulmonary disease, 61.5% received nucleic acid amplification (NAA) tests at diagnosis, a higher proportion than among 2016 cases (54.6%). During 2017, more cases with positive AFB smears received NAA tests compared to patients with negative AFB smears (97.2% and 38.2%, respectively), a higher percentage tested compared to 2016 (89.1% among smear-positive and 29.0% among smear-negative cases).

SUMMARY

TB remains an important public health problem in Alameda County. In recent years, CA and national TB reports have estimated that 80%-85% of cases occur due to latent TB infection (LTBI) reactivation. Alameda County cases may reflect this trend, as the highest rates of disease occur among residents who have the following indicators of LTBI reactivation: aged 65 years and older; birth place outside of the U.S.; and having resided in the U.S. for 10 years or more. Another important factor in TB control, aside from LTBI testing and treatment, is ensuring that TB cases are diagnosed early and started on TB treatment. Use of NAA tests for TB diagnosis has been shown to increase timeliness of TB treatment initiation. During 2017, more Alameda County providers used diagnostic NAA tests for both smear-positive and smear-negative cases compared to 2016; we continue to encourage this practice in order to facilitate earlier TB diagnosis and reduce transmission.

Figure 3: Average Annual TB Rates per 100,000 by Zip Code (2013-2017), Alameda County

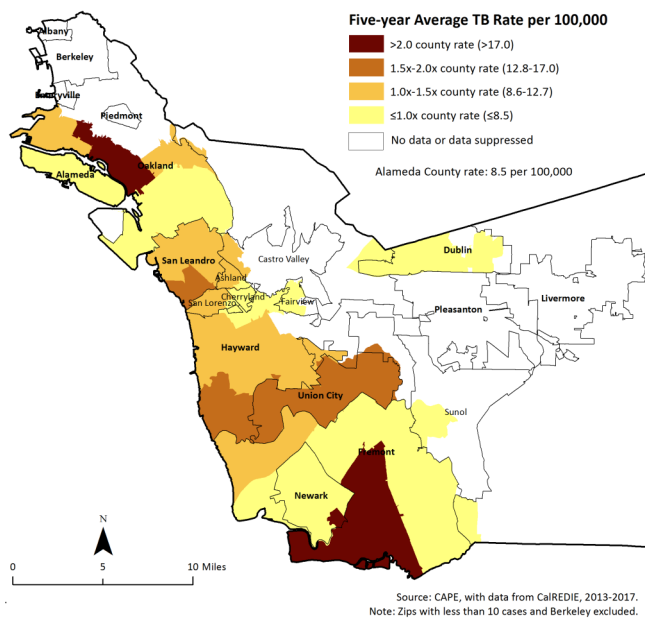


Table 2: Clinical & Laboratory Characteristics of TB Cases (2017) Alameda County

		Number	Percent	
Site of disease	Pulmonary only	80	64.5%	
	Extrapulmonary only	28	22.6%	
	Both	16	12.9%	
Among cases with any pulmonary disease (N=96)				
<i>Sputum smear</i>	<i>Positive</i>	36	37.5%	
	<i>Negative</i>	55	57.3%	
	<i>Not done</i>	5	5.2%	
<i>Cavitory disease</i>	<i>Present</i>	28	29.2%	
	<i>Absent</i>	68	70.8%	
Comorbidities	HIV/AIDS	3	2.4%	
	Diabetes	30	24.2%	
	End-stage renal disease	2	1.6%	
	Other immunosuppression*	6	4.8%	
Drug resistance	Any drug resistance	6	4.8%	
	INH resistance	5	4.0%	
	Resistance to INH only	3	2.2%	
	Multi-drug resistance	1	0.7%	
Nucleic Acid Amplification Testing (NAAT) practice at diagnosis	Among cases with any pulmonary disease and sputum smear performed (N=91)			
	Sputum smear positive (N=36)	NAAT performed	35	97.2%
		NAAT positive	35	100.0%
	Sputum smear negative (N=55)	NAAT performed	21	38.2%
NAAT positive		8	38.1%	

* Due to a medical condition, such as hematologic or reticuloendothelial malignancies or immunosuppressive therapy, such as prolonged use of high-dose adrenocorticosteroids.

For questions or additional information, contact:

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<http://www.acphd.org/tb.aspx>
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