

San Joaquin County Annual Tuberculosis Report—2015

OVERVIEW

- In 2015, San Joaquin County (SJC) reported 58 cases of tuberculosis (TB) disease compared to 54 cases in 2014, a 7.4% increase (Figure 1).
- SJC had the 6th highest rate of all California (CA) counties (data not shown).
- SJC rate (8.0 cases per 100,000 population) was 1.5 times higher than the CA rate (5.5) (Figure 1).
- From 2006 – 2015, 59 cases (11%) died with TB in SJC (data not shown).

GENDER & AGE GROUP

- As in previous years, most of the cases were male (64%) (Table 1).
- SJC has a high rate of pediatric TB—a devastating real life marker of recent TB transmission. In 2015, three cases of TB were reported in children under 5 years of age (Table 1).
- Adults 65 years and older continue to have the highest burden of disease. From 2013-2015, the case rate was 21.9 per 100,000 population compared to less than 8.0 for all other age groups (Table 1).

RACE & ETHNICITY

- Non-Hispanic Asian/Pacific Islanders had the highest average case rate (27.1 per 100,000 population) which is five times higher than Hispanic/Latinos (5.2), almost seven times higher than non-Hispanic Blacks (4.0) and almost nine times higher than non-Hispanic Whites (3.1) (Table 1).
- While Hispanic/Latinos had the second highest percentage of cases (38%), the case rate (5.2 per 100,000 population) was not much higher than non-Hispanic Blacks (4.0) or non-Hispanic Whites (3.1) (Table 1).

Figure 1. Annual TB Disease Cases in San Joaquin County (SJC) & Rates for SJC, California, & U.S., 2006—2015

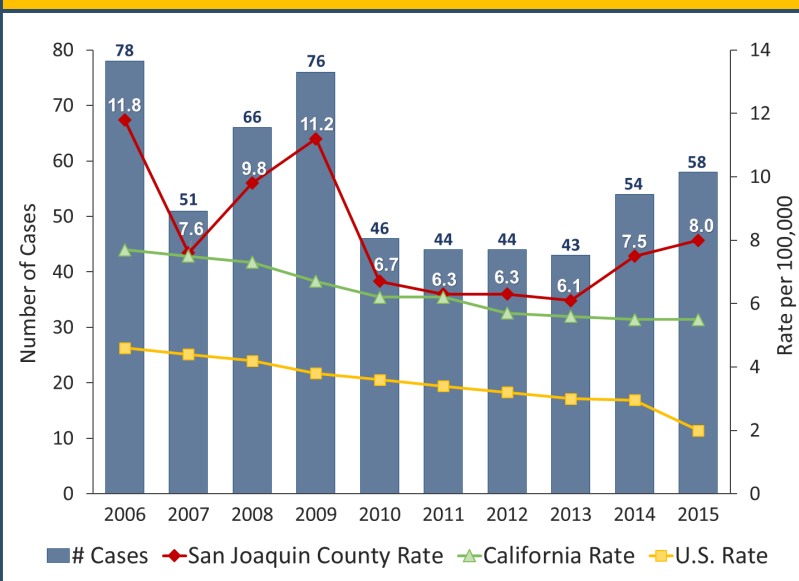


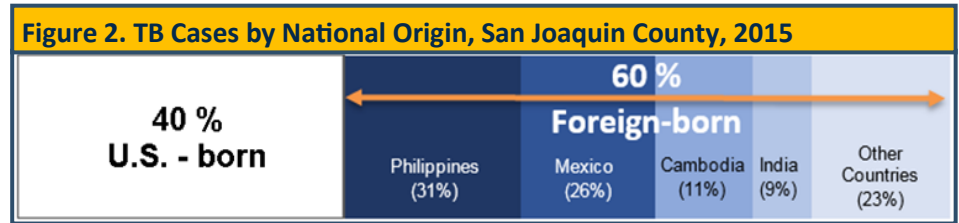
Table 1. TB Cases (2015) & Average Case Rates (2013-2015), San Joaquin County

		#	%	Average Case Rate per 100,000
Gender	Female	21	36%	6.0
	Male	37	64%	8.4
Age Group	0-4 yrs	3	5%	7.8
	5-14 yrs	1	2%	0.6
	15-24 yrs	5	9%	3.2
	24-44 yrs	17	29%	6.9
	45-64 yrs	18	31%	7.4
	65+ yrs	14	24%	21.9
Race & Ethnicity	Asian/Pacific Islander*	29	50%	27.1
	Black*	2	3%	4.0
	Hispanic/Latino	22	38%	5.2
	White*	5	9%	3.1

* all races non-Hispanic

PLACE OF BIRTH

- In 2015, 35 cases (60%) were born outside the U.S.; mostly from the Philippines, Mexico, Cambodia, and India (Figure 2).
- Of the foreign-born, the median length of residence in the U.S. prior to TB diagnosis was 19 years (data not shown).



COMORBIDITIES & RISK FACTORS

Diabetes is a major risk factor for TB and for poor outcomes:

- Diabetes triples the risk of developing TB.¹
- Rates of diabetes are higher in people with TB (29%) (Table 2) than in the general population (10%)².

Table 2. TB Cases* by Select Comorbidities and Risk Factors, San Joaquin County, 2014-2015

Comorbidities and Risk Factors	2014		2015	
	#	%	#	%
Diabetes Mellitus	14	26%	17	29%
Healthcare Worker	7	13%	1	2%
Homelessness	6	11%	4	7%
Injection Drug Use within Past Year	1	2%	1	2%
Non-injection Drug Use within Past Year	9	17%	8	14%

*54 cases in 2014; 58 cases in 2015

TB TESTING & DRUG SUSCEPTIBILITY

A negative TB test doesn't rule out TB (Table 3):

- In 2015, three (10%) TST's were negative.
- Three (8%) IGRA tests were negative.

All culture-positive cases were screened for drug susceptibility (Table 4):

- In 2015, 90% of culture-positive cases were sensitive to all first-line drugs used to treat TB (i.e., isoniazid (INH), rifampin, ethambutol and pyrazinamide).
- Two (5%) cases were resistant to INH.
- All pyrazinamide-resistant TB cases were caused by *Mycobacterium bovis* (data not shown).

Table 3. Interferon Gamma Release Assay (IGRA) and Tuberculin Skin Test (TST) at Diagnosis*, San Joaquin County, 2015

Test	Test Done		Positive Result	
	#	%	#	%
Interferon Gamma Release Assay (IGRA)	38	66%	35	92%
Tuberculin Skin Test (TST)	30	52%	27	90%

*58 cases

Table 4. Culture Positive TB Cases* by Initial Drug Susceptibility, San Joaquin County, 2015

	#	%
Test Performed	42	100%
Sensitive to all 1 st line drugs [†]	38	90%
Resistant to ≥1 drug [‡]	4	10%
Isoniazid (INH)	2	5%
Pyrazinamide (PZA)	3	7%

*42 cases were culture positive; [†]isoniazid, rifampin, ethambutol, pyrazinamide
[‡]One case is resistant to both INH and PZA

1. World Health Organization. Tuberculosis & Diabetes. http://www.who.int/tb/publications/diabetes_tb.pdf

2. Robert Wood Johnson Foundation. County Health Rankings 2016. Diabetes Prevalence. <http://www.countyhealthrankings.org/app/california/2016/downloads>

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