

TUBERCULOSIS IN SONOMA COUNTY

2008 Annual Report

March, 2009

Rates and Demographics

In 2008, the rate of new cases remained constant at 1.8 cases per 100,000 persons (N=9). Over the past few years, the rate of TB disease in Sonoma County has decreased slightly (Figure 1).

With the 2008 rate of 1.8 cases per 100,000 persons, Sonoma County meets the national definition for a low-incidence jurisdiction (<3.5 cases per 100,000 persons).⁶ However, the rate of TB infection in Sonoma County is consistently higher than Healthy People 2010 goal of 1.0 case per 100,000 population.⁷

Age

Because the absolute number of cases is small, it is difficult to evaluate changing trends in age groups. In 2008, the group most affected by

TB infection was persons aged 45-65. Since 2000, persons aged 25-44 have had the highest age-specific rates of TB, ranging from 3.0 to 8.8 cases per 100,000 persons.

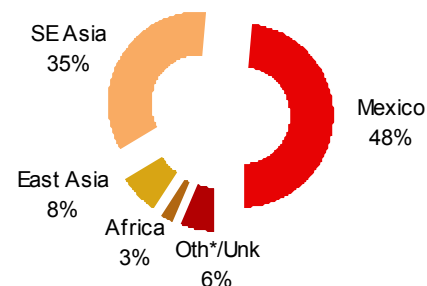
Race/Ethnicity

Persons who are Asian or report Hispanic ethnicity have a much higher rate of disease (18 and 3 cases per 100,000 persons, respectively). In 2008, 33% of TB cases reported Hispanic ethnicity and 44% reported Asian race. Compared to the 2008 Sonoma County population, 19% Hispanic and 4% Asian, these two groups are disproportionately affected by TB.

The rate of TB among Asians has remained consistently

Figure 2 – Country/Region of Origin of Foreign-born TB cases (N=80)

Sonoma County 2000-2008



*Oth/Unk includes two cases from India and one case each from Haiti, UK and one not specified.

Source: State of California, Department of Health Services, TB Control Branch

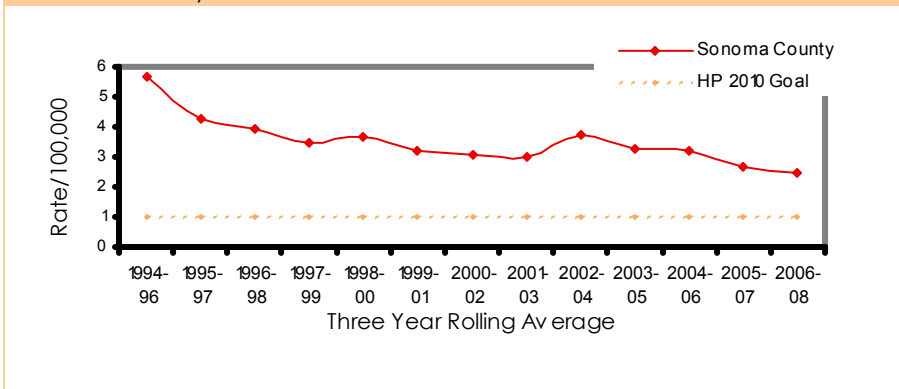
high in the past five years (2004-2008 average of 28 cases per 100,000 persons). Similarly, the rate in persons reporting Hispanic ethnicity remains higher than non-Hispanics at 5.1 cases per 100,000 persons during the same time period

Birth Country

Over the past ten years, an average of 72% of Sonoma County's TB cases occurred in foreign-born individuals (range 50-91%). In 2008, 78% of cases reported a non-US birth country (N=7; 2 Mexico, 3 Southeast Asia, 2 Other).

Figure 1 – Rate of TB Diagnosis, Three Year Rolling Average

Sonoma County 1994 – 2008 and HP 2010 Goal



*Rates per 100,000 population

Source: State of California, Department of Health Services, TB Control Branch

In California in 2007, 77% of all reported tuberculosis cases occurred in persons born outside of the United States, compared to 58.5% of cases nationally.^{8,9} As shown in Figure 2, between 2001 and 2008, the most common country of origin reported for Sonoma County TB cases was Mexico, (N=39, 48%), followed by countries in South-east Asia (N=28, 35%) and East Asia (N=6, 8%).

Clinical Characteristics

Of the TB cases reported in 2008, one was diagnosed in a child. Forty-four percent of 2008 cases of TB were extra-pulmonary (Table 2). The majority of all cases were culture positive (88%) and pan-susceptible (75%). The one resistant case was pyrazinamide resistant alone. The most recent cases resistant to both isoniazid and rifampin (MDR-TB) occurred in 2003 (1) and 2006 (2). There has never been a reported case of XDR-TB in Sonoma County.

Table 1 – Selected Clinical Characteristics of TB Cases

Sonoma County 2004-2008				
Clinical	2008		2004-08	
	N	%	N	%
Total Cases	9	--	68	--
Deaths				
Diagnosed at death	0	0	1	1
Died while on treatment	0	0	1	1
Site of Disease				
Pulmonary	4	44	46	68
Extra-pulmonary	4	44	19	28
Both	1	11	3	4
Sputum Smear (pulmonary only)				
Positive	3	60	18	37
Negative	2	40	27	55
Not done	0	0	4	8
Culture Result (any source)				
Positive	8	88	57	84
Negative	1	12	9	13
Not done	0	0	2	3
Drug Sensitivity (culture positive)				
Susceptible	6	75	48	84
Resistant				
INH only	0	0	3	5
INH and Other	0	0	1	2
MDR (INH & RIF)	0	0	2	4
Other	1	13	2	4
Not Done	1	13	1	2

REFERENCES

1. CDC. Reported Tuberculosis in the United States, 2006. Atlanta, GA: U.S. Department of Health and Human Services, CDC, September 2007.
2. California Department of Health Services. *Report on Tuberculosis in California, 2006*. August 2007.
3. All Sonoma County Tuberculosis data was provided by the State of California, Department of Health Services, Tuberculosis Control Branch.
4. All population data for the years 2000-2005 taken from: State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000-2005*. Sacramento, CA, May 2004.
5. All population data for the years 1993-1999 taken from: State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1993-1999*. Sacramento, CA, May 2004.
6. Centers for Disease Control and Prevention. A strategic plan for the elimination of tuberculosis in the United States. *MMWR* 1989;38(No. S-3).
7. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
8. California Department of Health Services. *Tuberculosis cases by Race/Ethnicity, Age Group, Sex, and Birthplace: California 1998-2007*. <http://www.cdph.ca.gov/data/statistics/Pages/TuberculosisDiseaseData.aspx>, accessed May 23, 2008.
9. Centers for Disease Control and Prevention. *Trends in Tuberculosis—United States, 2007*. *MMWR* 2008/57(11);281-285.