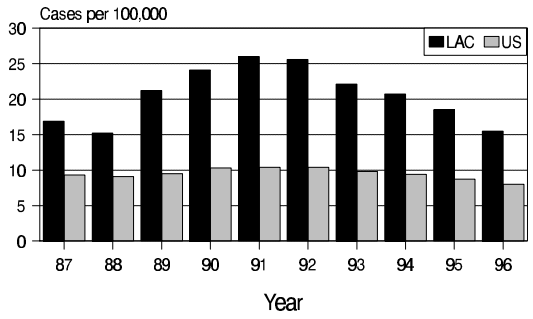
TUBERCULOSIS

CRUDE DATA	
Number of Cases	1,375
Annual Incidence[a]	
LA County	15.5
California	13.5
United States	8.0
Age at Diagnosis	
Mean	46.2
Median	44.2
Range	< 1-97 yrs
Case Fatality	
LA County	N/A
United States[b]	0.5

Figure 1

Tuberculosis
Incidence Rates by Year
LAC and US, 1987-1996



[a] Cases per 100,000 population.

[b] Provisional data based on the NCHS 80-90% samples of 1995 data.

ETIOLOGY

Mycobacterium tuberculosis or *Mycobacterium bovis*.

DISEASE ABSTRACT

After four years of increasing case reports (1989-1992), the number of TB cases reported in LAC for the past four years (1993-1996) has progressively decreased. The sex, age and race distribution of 1996 cases was similar to the distribution seen in previous years with the exception of an increasing proportion of cases aged 65 and older. Tuberculosis continued to impact foreign-born, homeless, and HIV-infected individuals in the County disproportionately.

STRATIFIED DATA

Trends: In 1996, 1,375 TB cases were reported in LAC, representing a 15% decrease in incidence compared to 1995. In 1996, LAC reported 6.4% of the United States TB cases (21,337 cases) (Table 1), while comprising only 3% of the nation's population. The LAC TB rate was twice the US rate (Figure 1). LAC reported 32% of all TB cases in California (4,313 cases) (Table 1).

Seasonality: None.

Age: Age-specific rates are shown in Figure 2. The age distribution of TB cases in LAC resembles the pattern seen in developing countries more than cases from the rest of the US. The largest proportion of cases in LAC continue to be among 15- to 34-year-olds (25%) (Table 2), whereas the largest number of cases reported nationwide historically has been among the elderly. However, since 1992, in LAC the proportion of TB cases among 15-to 34-year-olds has been decreasing while the proportion of TB cases among 65-year-olds and older has been increasing. From 1992 through 1996, the age-specific incidence rates have increased with each age group beginning with the 15- to 34-year-old age group (range: 13.1-33.3 cases per 100,000 population) (Table 3).

In 1996, 51 cases of TB were reported among children under five years of age. This represents a 36% decrease over 1995 (80 cases) and the lowest number of children reported with TB in this age category since 1988.

Figure 2

Tuberculosis
Incidence Rates by Age Group
Los Angeles County, 1991-1996

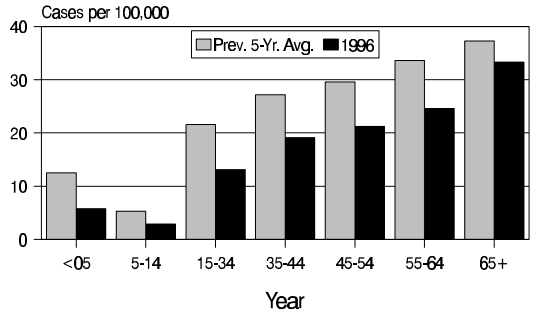
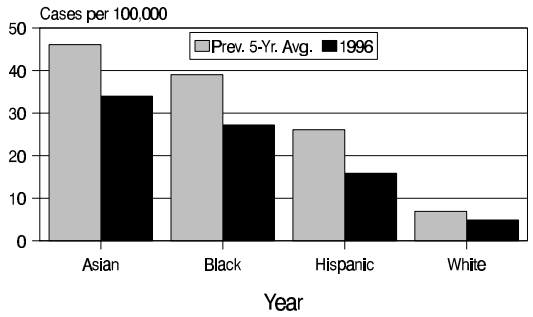


Figure 3

Tuberculosis
Incidence Rates by Race/Ethnicity
Los Angeles County, 1991-1996



Sex: Of the 1,375 TB cases in 1996, 66% were male and 34% were female (Table 2). The TB incidence rate was 20.4 per 100,000 population for males and 10.6 for females; the male-to-female rate ratio was 1.9:1 (Table 3).

Race/Ethnicity: The largest proportion of TB cases was among Hispanics (45%), followed by Asians/Others (28%), Blacks (17%), and Whites (11%) (Table 2). The annual race-specific incidence rate was highest among Asians/Others (34.0 per 100,000 population) (Figure 3, Table 3).

Anatomical Site: The majority of the 1,375 cases were diagnosed with pulmonary tuberculosis as the primary site of disease (79.4%). Table 4 presents all major disease sites reported in 1996.

Foreign-born cases: Two thirds (67%) of LAC TB cases reported in 1996 were born outside the US. Mexico was the most frequently identified country of birth, comprising 38% of all foreign-born TB cases, followed by the Republic of the Philippines with 16%.

Homeless cases: About 9% (127) of TB cases were reported as homeless. Blacks had the highest proportion (50%, 63 cases) of homeless TB cases in 1996, followed by Hispanics (33%, 42 cases).

HIV-infected cases: Of the 1,375 TB cases, 825 (60%) had HIV test results reported. Of the 1,375 TB cases, 137 cases (10%) were identified as co-infected with HIV either through reported HIV test results or matching with the LAC DHS AIDS registry. Of the 127 homeless TB cases, 108 (85%) had HIV test results reported; of the 127 homeless TB cases, 22 (17%) were reported as co-infected with HIV.

Location: The 1996 incidence rate in the Central Health District (58.2 cases per 100,000) was the highest among LAC health districts. The highest numbers of TB cases reporting homelessness, HIV infection, injection/non-injection drug use and excessive alcohol use were also reported from Central Health District.

COMMENTS

Bacteriologic confirmation of disease was obtained in 81% (1,076 cases) of all cases tested (1,326 cases). Where bacteriological testing was not performed or was negative, case confirmation was made on the basis of clinical improvement and/or x-ray changes following therapy with appropriate anti-tuberculosis drugs.

The decrease in overall TB cases in LAC in 1996 compared to 1995 (15%) was greater than the expected average annual decrease observed over the previous three years (10%). All or part of the additional decrease may be attributed to the reorganization of the LAC Health Services in October 1995. At that time, 23 of 34 public health centers treating TB patients were closed to TB services throughout the County. During the first four months of 1996, the number of TB cases reported in Los Angeles County was 44% less than the number of cases reported over the same period of the previous year. However, throughout the remainder of the year, case reports increased and the caseload returned to a more typical level.

Table1. Tuberculosis Cases and Rates,[a] Los Angeles County, California and the United States, 1980-1996

	Los Angeles County		California		United States	
Year	Cases	Rate	Cases	Rate	Cases	Rate
1980	1,438	19.2	4,279	18.1	27,749	12.3
1981	1,816	24.7	4,520	18.7	27,373	11.9
1982	1,422	18.6	3,606	14.5	25,520	11.0
1983	1,428	18.3	3,469	13.8	23,846	10.2
1984	1,293	16.5	3,306	12.9	22,255	9.4
1985	1,495	19.9	3,492	13.2	22,201	9.3
1986	1,362	17.9	3,442	12.7	22,768	9.4
1987	1,302	16.9	3,719	13.4	22,517	9.3
1988	1,190	15.2	3,468	12.2	22,436	9.1
1989	1,681	21.2	4,212	14.5	23,495	9.5
1990	1,936	24.1	4,889	16.3	25,701	10.3
1991	2,121	26.0	5,273	17.2	26,283	10.4
1992	2,198	25.6	5,382	17.2	26,673	10.5
1993	1,940	22.1	5,173	16.2	25,287	9.8
1994	1,794	20.7	4,860	14.9	24,361	9.4
1995	1,622	18.5	4,677	14.8	22,860	8.7
1996	1,375	15.5	4,313	13.5	21,337	8.0

[a]Cases per 100,000 population.

Table 2. Annual Tuberculosis Cases by Sex, Age, and Race/Ethnicity Los Angeles County, 1987-1996

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Sex										
Male	879	778	1,094	1,224	1,351	1,420	1,260	1,143	1,049	905
Female	423	412	587	712	770	778	680	651	572	470
Age										
< 5	43	43	78	97	123	118	92	75	80	51
5-14	34	31	53	74	78	79	74	57	34	42
15-34	452	402	574	635	724	748	615	540	451	343
35-44	218	189	299	371	419	418	359	357	300	270
45-54	188	143	193	220	257	281	266	258	250	208
55-64	143	167	184	222	206	228	225	193	195	154
65 +	223	215	300	316	314	326	309	314	312	307
Unknown	1	0	0	1	0	0	0	0	0	0
Race										
White	183	171	239	227	237	266	220	184	195	148
Black	229	225	267	325	385	383	374	333	272	227
Hispanic	563	501	712	859	1,004	991	906	786	701	619
Asian/Other	327	290	460	523	494	555	439	488	453	380
Unknown	0	3	3	2	1	3	1	3	1	1
Total	**1,302**	**1,190**	**1,681**	**1,936**	**2,121**	**2,198**	**1,940**	**1,794**	**1,622**	**1,375**

Table 3. Annual Tuberculosis Incidence Rates[a] by Sex, Age and Race/Ethnicity[b] Los Angeles County, 1987-1996

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Sex										
Male	23.3	20.4	28.3	31.2	33.9	33.0	28.6	26.4	24.0	20.4
Female	10.7	10.3	14.5	17.4	18.5	18.1	15.5	15.0	13.0	10.6
Age										
< 5	6.9	6.8	12.2	15.1	18.9	14.6	10.7	8.5	9.9	5.8
5-14	3.1	2.8	4.7	6.5	6.8	6.5	6.0	4.7	2.7	2.9
15-34	16.9	14.9	21.2	23.3	26.4	25.2	20.6	19.1	16.5	13.1
35-44	20.1	17.0	26.3	31.9	35.4	31.6	26.2	25.3	19.9	19.1
45-54	24.9	18.5	24.5	27.3	31.1	32.6	29.6	28.2	26.5	21.2
55-64	20.9	24.3	26.6	32.0	29.3	37.6	37.1	32.1	32.0	24.6
65 +	28.1	26.5	36.1	37.1	36.2	39.4	37.0	39.1	34.8	33.3
Race										
White	5.3	5.0	7.1	6.8	7.2	8.0	6.7	6.3	6.3	4.9
Black	25.4	24.9	29.4	35.7	42.1	41.7	40.3	40.0	30.9	27.2
Hispanic	22.4	19.3	26.5	31.0	35.2	29.8	26.1	20.4	18.9	15.9
Asian/Other	38.0	31.9	48.0	52.0	46.7	53.3	40.0	47.2	43.5	34.0
Incidence Rate	**16.9**	**15.2**	**21.2**	**24.1**	**26.0**	**26.0**	**22.1**	**20.7**	**18.5**	**15.5**

[a] Cases per 100,000 population.

[b] Rates for 1990 and 1991 were calculated using population estimations based on the 1980 Census; 1992-1996 rates were calculated using population estimation based on 1990 census.

Table 4. Tuberculosis Incidence by Major Site of Disease, Los Angeles County, 1996

Disease Site	Number of Cases	Percent
Pulmonary	1,092	79.4
Lymph Node	101	7.3
Pleural	51	3.7
Miliary/Disseminated	25	1.8
Meningeal	15	1.1
Peritoneal	14	1.0
Bone/Joint	37	2.7
Genitourinary	24	1.7
Other	16	1.2
Total	**1,375**	**100.0**

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