



Center for Health Statistics



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DATA
SUMMARY
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This Data Summary is one of a series of leading cause of death reports.

Highlights

- **CLRD is the fourth leading cause of death in California.**
- **About 95 percent of all CLRD deaths occurred among people aged 55 and older.**
- **Crude death rate for CLRD declined from 38.7 in 1999 to 36.8 in 2000.**
- **Age-adjusted death rate for CLRD declined from 1999 to 43.1 in 2000.**
- **The Healthy People 2010 National Objective for CLRD was met for all race/ethnic and gender groups.**
- **Yuba County had the highest age-adjusted death rate and Imperial County the lowest for CLRD.**

CHRONIC LOWER RESPIRATORY DISEASE DEATHS CALIFORNIA 1999-2000

By Fred Richards

Overview

Chronic lower respiratory disease (CLRD) is the fourth leading cause of death in California and nationally. Prior to 1999, CLRD was called chronic obstructive pulmonary disease (COPD). A majority of deaths from CLRD nationally are caused by cigarette smoking and predominantly occur among those over the age of 55.¹ Cigarette smoking is a leading cause of preventable disease and death in the United States. Due to the prevalence of smoking-related morbidity and mortality in our nation, the United States Public Health Service has established a number of health objectives as part of the Healthy People 2010 initiative. The Healthy People 2010 National Objective 24-9 refers to COPD rather than CLRD and calls for a reduction in COPD deaths to 60 per 100,000 by 2010.¹ Federal data surveillance and the baseline of 1999 data reflect the change to the International Classification of Diseases, Tenth Revision (ICD-10). The issue of the classification change from COPD to CLRD and any revision to the objective will be considered in the midcourse review process in 2004. This report will address California's progress towards meeting the Healthy People 2010 National Objective 24-9 because it remains a useful measure for gauging the relative level of CLRD mortality in the State.

The recent ICD-10 disease classifications (1999) slightly altered the grouping of respiratory diseases included in CLRD from the previous COPD grouping. For trend analysis, this new grouping cannot generally be compared directly with the International Classification of Diseases, Ninth Revision (ICD-9) for COPD used in previous years. However, the National Center for Health Statistics (NCHS) has developed comparability ratios based on one year (1996) of deaths nationally, classified both by the ICD-9 and ICD-10 systems. The NCHS study obtained a comparability ratio of 1.0478, thus approximately 5 percent more deaths were classified as CLRD under ICD-10 than as COPD under ICD-9.²

This report presents data on CLRD for 1999 and 2000 with analysis of crude and age-adjusted death rates for California residents by sex, age, race/ethnicity and county. The definition of CLRD used in this report is based on the ICD-10 codes J40-J47 as currently presented in NCHS reports.

¹U.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.

²Anderson RN, et al. Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates. National Vital Statistics Reports; Vol. 49 No. 2. Hyattsville, Maryland: National Center for Health Statistics. 2001.

CLRD Deaths

A brief overview of [data limitations and qualifications](#) is provided at the end of this report.

Table 2 (page 9) displays California's CLRD death data by race/ethnicity, age group, and sex for 2000. In 2000, males and females had almost equal proportions of the total CLRD deaths in California. Approximately 96 percent of all CLRD deaths occurred among California residents, aged 55 and older.

Figure 1 shows Whites had the highest percentage of CLRD deaths with 84.8 percent, followed by Hispanics with 5.3 percent, Asian/Other with 5.0 percent, and Blacks with 4.9 percent in 2000.

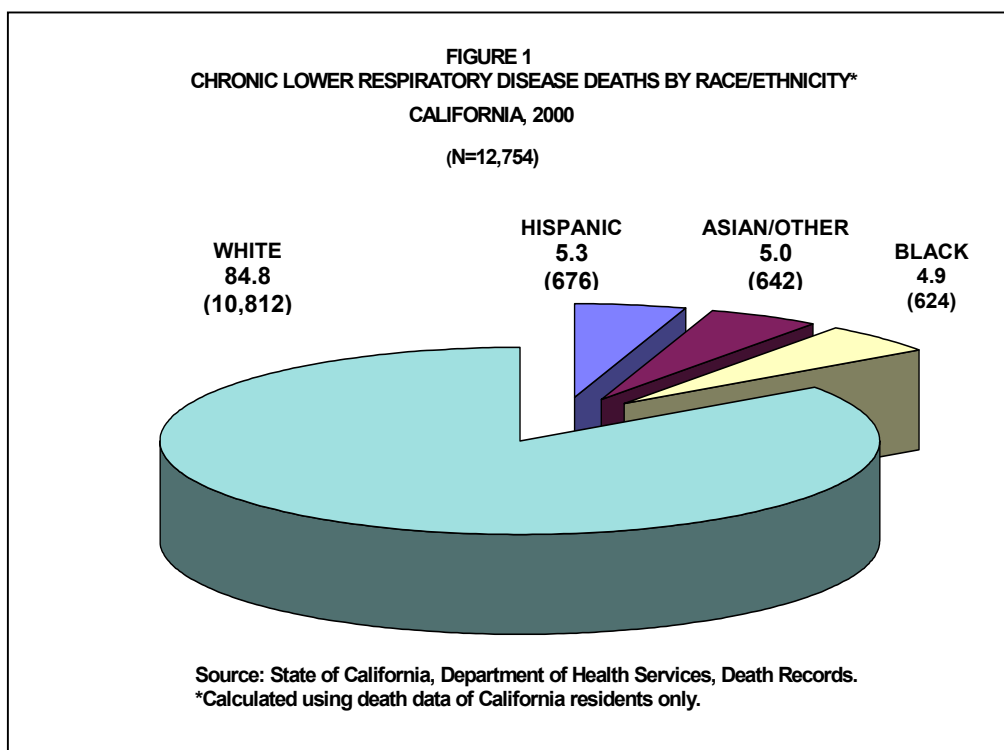


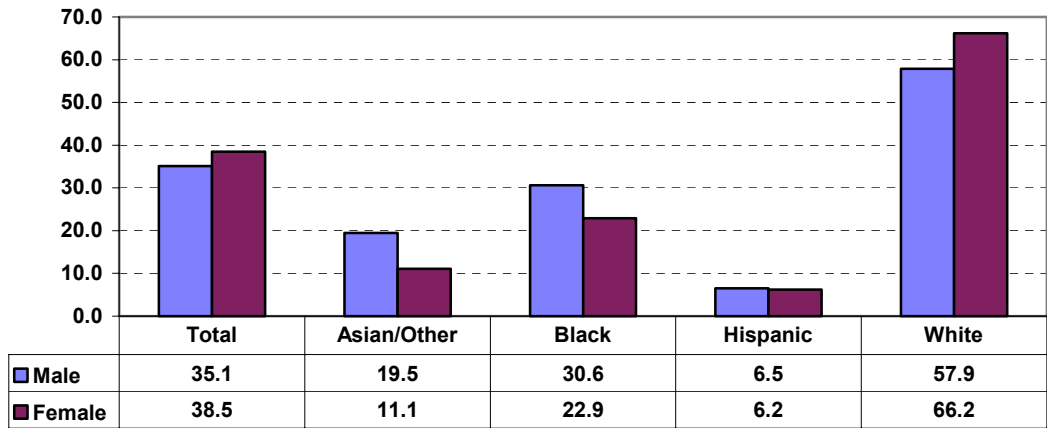
Table 1 (page 8) displays California's CLRD death data by race/ethnicity, age group, and sex for 1999. A comparison of **Table 1** and **Table 2** shows that the total CLRD deaths declined from 1999 to 2000 for all race/ethnic groups except for the Asian/Other group, which increased.

CLRD Crude Death Rates

Since 1999 is the first year of data for the new CLRD classification (or the baseline), no comparison to previous years will be made. California's CLRD crude death rate for 1999 was 38.7 (**Table 1**, page 8) and the total number of deaths due to CLRD was 13,187. The year 2000 had a significant reduction to a crude rate of 36.8 and 12,754 total deaths (**Table 2**, page 9). More females than males died from CLRD and the female crude death rate (38.5) was higher than the male rate (35.1) in 2000 (**Figure 2**, page 3). Whites had significantly higher crude CLRD death rates and Hispanics had significantly lower crude CLRD death rates of the four major race/ethnic groups in 1999 and 2000. Crude CLRD rates for total population and all of the race/ethnic groups declined slightly in 2000 compared with 1999, except for the Asian/Other group that increased slightly. Females had significantly higher crude CLRD death rates than males for Whites. Males had significantly higher rates than females for Blacks and Asian/Other in both years. Hispanic males also had higher crude CLRD death rates than females, but the difference was not statistically significant in either year.

See the [Methodological Approach](#) section later in this report for an explanation of crude and age-adjusted death rates.

FIGURE 2
CHRONIC LOWER RESPIRATORY DISEASE
CRUDE DEATH RATES BY RACE/ETHNICITY*
CALIFORNIA, 2000

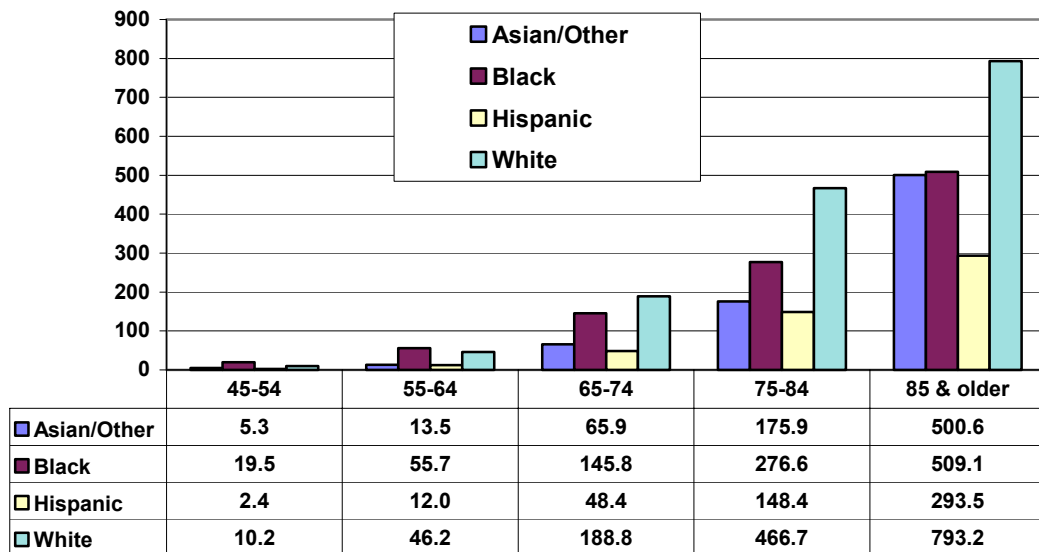


Source: State of California, Department of Health Services, Death Records.
 *Calculated using death data of California residents only.

CLRD Age-Specific Death Rates

Table 2 (page 9) displays age-specific death rates for all groups combined and the four major race/ethnic groups. The incidence of CLRD deaths increases with age regardless of race/ethnicity. For the total population males had the highest age-specific CLRD death rates in the 45-64 age groups and females had higher rates in the older age groups.

FIGURE 3
CHRONIC LOWER RESPIRATORY DISEASE
AGE-SPECIFIC DEATH RATES BY RACE/ETHNICITY AND AGE*
CALIFORNIA, 2000



Source: State of California, Department of Health Services, Death Records.
 *Calculated using death data of California residents only.

See the Vital Statistics Query System (VSQ) at our Website www.dhs.ca.gov/hisp/Applications/vsq/vsq.cfm to create your own vital statistics tables.

Figure 3 (page 3) displays the age-specific CLRD death rates by age and race/ethnicity for age groups 45 years and older. Age-specific death rates for CLRD vary among race/ethnic groups (**Figure 3**). Blacks had the highest death rates in the 45-64 age groups, closely followed by Whites who had higher rates in the over 65 and older age groups. Hispanics had the lowest CLRD rates followed by Asian/Other.

CLRD Age-Adjusted Death Rates

Table 1 (page 8) shows the CLRD age-adjusted death rate for California in 1999 was 45.8 per 100,000 population (the United States rate for 1999 was 45.5). The rate decreased to 43.1 in 2000 (**Table 2**, page 9).³ **Figure 4** shows males had the higher age-adjusted rate at 51.3 and females had a rate of 38.1 in 2000, a statistically significant difference. The Healthy People 2010 National Objective for COPD is 60 deaths per 100,000 population. Although this objective has not yet formally changed to reflect the new CLRD grouping in the ICD-10 classification, the objective remains a valid measurement for relative progress for this disease and as previously covered, a comparability ratio between these groups indicates a five percent difference would normally be experienced. The California rate for 2000 at 43.1 is well below the target rate of 60.0.

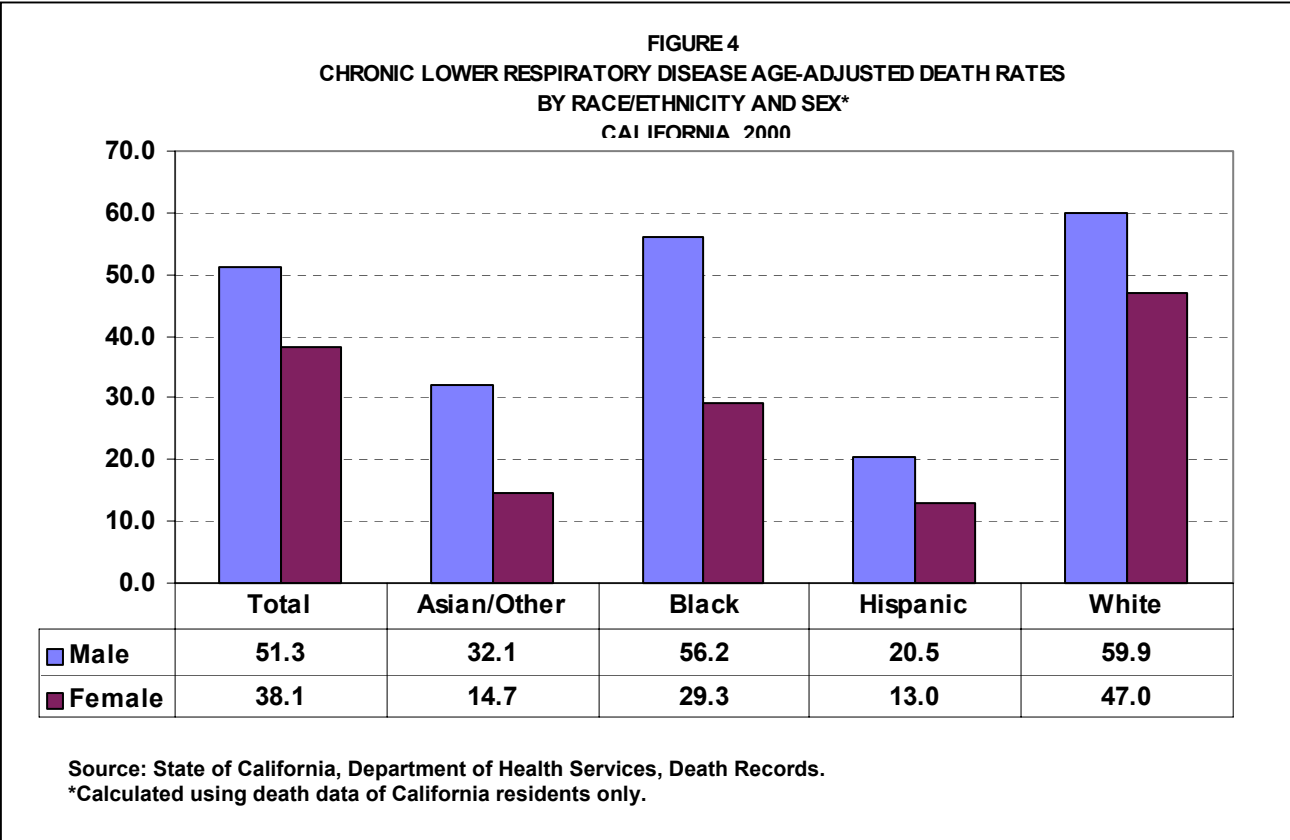


Table 2 (page 9) shows comparisons among race/ethnic groups for 2000. Gender differences between age-adjusted CLRD rates among the four race/ethnic groups were statistically significant. **Figure 4** shows males had the higher rates among the four groups. White males had the highest rate at 59.9, followed by Black males at 56.2, Asian/Other males at 32.1, and Hispanic males at 20.5. Female rates followed the same

³ Anderson RN. Deaths: Leading causes for 1999. National Vital Statistics Reports; Vol. 49 No. 11. Hyattsville, Maryland. National Center for Health Statistics, 2001.

For more data, see DHS Center for Health Statistics, Home Page at

www.dhs.ca.gov/org/hisp/chs/chsindex.htm

pattern. White females were highest at 47.0, followed by Black females at 29.3, Asian/Other females at 14.7, and Hispanic females at 13.0. The highest difference between males and females in the four race/ethnic groups was among Blacks and the lowest difference was among Hispanics. All of the rates were significantly different between males and also between females of the four race/ethnic groups.

CLRD Death Data for California Counties

Table 3 (page 10) displays the 1999-2000 average numbers of deaths, crude death rates, and age-adjusted death rates for California and its 58 counties. The highest and lowest reliable crude death rates due to CLRD were in Plumas County (96.6 per 100,000 population) and Imperial County (24.6 per 100,000 population).

Of the counties with reliable age-adjusted death rates due to CLRD, Yuba County had the highest rate (82.5 per 100,000 population) while Imperial County had the lowest rate (32.6 per 100,000 population). California and 50 of its counties (38 with reliable rates) met the Healthy People 2010 National Objective.

CLRD Death Data for City Health Departments

Table 4 shows the 1999-2000 average number of CLRD deaths and the crude death rates for California's three city health departments. Berkeley had 19 deaths due to CLRD with a crude death rate of 18.3 per 100,000 population and Long Beach had 212 deaths with a crude rate of 46.1, the highest rate of the three cities. Pasadena had 58 deaths and a crude rate of 43.1 per 100,000 population.

Age-adjusted death rates were not calculated for the city health jurisdictions because city population estimates by age were not available.

**TABLE 4
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE
AMONG THE LOCAL HEALTH JURISDICTIONS*
CALIFORNIA, 1999-2000**

LOCAL HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	1999 POPULATION	CRUDE DEATH RATE	95% CONFIDENCE LIMITS	
				LOWER	UPPER
BERKELEY	19.0	103,600	18.3	10.1	26.6
LONG BEACH	212.0	460,100	46.1	39.9	52.3
PASADENA	58.0	134,500	43.1	32.0	54.2

Note: Rates are per 100,000 population; ICD-10 codes J40-J47.

*Calculated using death data of California residents only.

Source: State of California, Department of Finance, Report E-4, 1999 Historical Estimates of California Cities and Counties, September 2001.

State of California, Department of Health Services, Death Records.

You can read more about crude and age-adjusted death rates on the National Center for Health Statistics Website at www.cdc.gov/nchs

Methodological Approach

The methods used to analyze vital statistics data are important. Analyzing only the number of deaths has its disadvantages and can be misleading because the population at risk is not taken into consideration. Crude death rates show the actual rate of dying in a given population, but because of the differing age compositions of various populations, crude rates do not provide a statistically valid method for comparing geographic areas and/or multiple reporting periods. Age-specific death rates are the number of deaths per 100,000 population in a specific age group and are used along with standard population proportions to develop a weighted average rate. This rate is referred to as an age-adjusted death rate and removes the effect of different age structures of the populations whose rates are being compared. Age-adjusted death rates therefore provide the preferred method for comparing different race/ethnic groups, sexes, and geographic areas, and for measuring death rates over time. The 2000 population standard is used as the basis for age-adjustments in this report.

Data Limitations and Qualifications

The CLRD disease death data presented in this report are based on vital statistics records with ICD-10 codes J40-J47 as defined by the NCHS.⁴ Place of residence means that the data include only those deaths occurring among residents of California and its counties, regardless of the place of death.

The term “significant” within the text indicates statistically significant based on the difference between two independent rates ($p < .05$).

As with any vital statistics data, caution needs to be exercised when analyzing small numbers, including the rates derived from them. Death rates calculated from a small number of deaths and/or population tend to be unreliable and subject to significant variation from one year to the next. To assist the reader, 95 percent confidence intervals are provided in the data tables as a tool for measuring the reliability of the death rates. Rates with a relative standard error (coefficient of variation) greater than or equal to 23 percent are indicated with an asterisk (*).

Beginning in 1999, cause of death is reported using ICD-10.⁵ Depending on the specific cause of death, the number of deaths and death rate are not comparable between ICD-9 and ICD-10. Therefore, our analyses do not combine both ICD-9 and ICD-10 data.

The variability of the rates has increased in **Tables 2** and **3** because of the unavailability of earlier years of data. Three-year average numbers using ICD-10 coding for cause of death will reduce this problem when the data are available in 2002.

The four race/ethnic groups presented in the tables are mutually exclusive. White, Black, and Asian/Other exclude Hispanic ethnicity, while Hispanic includes any race/ethnic group. In order to remain consistent with the population data obtained from the California

⁴National Center for Health Statistics, Deaths: Preliminary Data for 1999, *National Vital Statistics Reports*, DHHS Pub. No. (PHS) 2001-1120, PRS 01-0358, June 2001; Volume 49, Number 3.

⁵World Health Organization. International Statistical Classification of diseases and Related Health Problems. Tenth Revision. Geneva: World Health Organization. 1992.

Department of Finance, the “White race/ethnic group” includes: White, Other (specified), Not Stated, and Unknown; and the “Asian/Other race/ethnic group” includes: Aleut, American Indian, Asian Indian, Asian (specified/unspecified), Cambodian, Chinese, Eskimo, Filipino, Guamanian, Hawaiian, Japanese, Korean, Laotian, Other Pacific Islander, Samoan, Thai, and Vietnamese. In addition, caution should be exercised in the interpretation of mortality data by race/ethnicity. Misclassification of race/ethnicity on the death certificate may contribute to underestimates of Hispanics and Asian/Other death rates.⁶

Beginning in 2000, federal race/ethnicity reporting guidelines changed to allow the reporting of up to three races on death certificates. The race/ethnic groups in this report were tabulated based on the first listed race on those certificates for which more than one race was listed. Race groups for 2000 are therefore not strictly compatible with prior years and trends should be viewed with caution.

Effective with 1999 mortality data, the standard population for calculating age-adjustments was changed from the 1940 population standard to the 2000 population standard in accordance with new statistical policy implemented by the National Center for Health Statistics. The new population standard affects measurement of mortality trends and group comparisons. Of particular note are the effects on race comparison of mortality.⁷ Age-adjusted rates presented in this report are not comparable to rates calculated with different population standards.

In addition, the population data used to calculate the crude rates in **Table 4** (page 5) differ from the population data used to calculate the crude rates in **Table 3** (page 10). Consequently, caution should be exercised when comparing the crude rates among the three local health jurisdictions with the rates among the 58 California counties. Age-adjusted rates for local city health jurisdictions were not calculated.

For a more complete explanation of the age-adjusting methodology used in this report see the “Healthy People 2000 Statistical Notes” publication.⁸ Detailed information on data quality and limitations is presented in the appendix of the annual report, “Vital Statistics of California.”⁹ Formulas used to calculate death rates are included in the technical notes of the “County Health Status Profiles” report.¹⁰

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⁶Rosenberg HM, et al. Quality of Death Rates by Race and Hispanic Origin: A Summary of Current Research, 1999. Vital and Health Statistics, Series 2 No.128, National Center for Health Statistics, DHHS Pub. No. (PHS) 99-1328, September 1999.

⁷Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National Vital Statistics reports; Vol. 47 No. 3, Hyattsville, Maryland: National Center for Health Statistics.

⁸Curtin LR, Klein RJ. Direct Standardization (Age-Adjusted Death Rates), Healthy People 2000 Statistical Notes, Number 6 – Revised, National Center for Health Statistics, DHHS Pub. No. (PHS) 95-1237, March 1995.

⁹Riedmiller K, Bindra K. Vital Statistics of California, 1998. Center for Health Statistics, California Department of Health Services, April 2002.

¹⁰Schmidt C. County Health Status Profiles 2002. Center for Health Statistics, California Department of Health Services, April 2002.

TABLE 1
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 1999
(By Place of Residence)

AGE GROUPS	DEATHS			POPULATION			AGE-SPECIFIC DEATH RATE			95% CONFIDENCE LIMITS					
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL		MALE		FEMALE	
										LOWER	UPPER	LOWER	UPPER	LOWER	UPPER
TOTAL															
Under 1	6	2	4	553,480	283,033	270,447	1.1*	0.7*	1.5*	0.2	2.0	0.0	1.7	0.0	2.9
1 to 4	7	4	3	2,218,731	1,134,840	1,083,891	0.3*	0.4*	0.3*	0.1	0.5	0.0	0.7	0.0	0.6
5 to 14	9	6	3	5,438,254	2,785,041	2,653,213	0.2*	0.2*	0.1*	0.1	0.3	0.0	0.4	0.0	0.2
15 to 24	24	13	11	4,490,994	2,331,075	2,159,919	0.5	0.6*	0.5*	0.3	0.7	0.3	0.9	0.2	0.8
25 to 34	35	23	12	5,088,372	2,693,838	2,394,534	0.7	0.9	0.5*	0.5	0.9	0.5	1.2	0.2	0.8
35 to 44	99	40	59	5,703,159	2,911,607	2,791,552	1.7	1.4	2.1	1.4	2.1	0.9	1.8	1.6	2.7
45 to 54	344	169	175	4,284,494	2,127,558	2,156,936	8.0	7.9	8.1	7.2	8.9	6.7	9.1	6.9	9.3
55 to 64	1,118	570	548	2,647,776	1,289,251	1,358,525	42.2	44.2	40.3	39.7	44.7	40.6	47.8	37.0	43.7
65 to 74	3,237	1,632	1,605	1,945,679	889,827	1,055,852	166.4	183.4	152.0	160.6	172.1	174.5	192.3	144.6	159.4
75 to 84	5,210	2,510	2,700	1,272,523	519,523	753,000	409.4	483.1	358.6	398.3	420.5	464.2	502.0	345.0	372.1
85 & Older	3,097	1,316	1,781	429,016	134,219	294,797	721.9	980.5	604.1	696.5	747.3	927.5	1,033.5	576.1	632.2
Unknown	1	1	0												
Total	13,187	6,286	6,901	34,072,478	17,099,812	16,972,666	38.7	36.8	40.7	38.0	39.4	35.9	37.7	39.7	41.6
Age-Adjusted							45.8	54.4	40.6	45.0	46.6	53.0	55.7	39.7	41.6
ASIAN/OTHER															
Under 1	1	0	1	65,732	33,636	32,096	1.5*	0.0+	3.1*	0.0	4.5	-	-	0.0	9.2
1 to 4	3	2	1	260,730	133,774	126,956	1.2*	1.5*	0.8*	0.0	2.5	0.0	3.6	1.0	2.3
5 to 14	0	0	0	637,566	327,540	310,026	0.0+	0.0+	0.0+	-	-	-	-	0.0	-
15 to 24	1	1	0	584,065	299,316	284,749	0.2*	0.3*	0.0+	0.0	0.5	0.0	1.0	0.0	-
25 to 34	4	3	1	635,628	321,836	313,792	0.6*	0.9*	0.3*	0.0	1.2	0.0	2.0	0.0	0.9
35 to 44	3	2	1	685,240	331,715	353,525	0.4*	0.6*	0.3*	0.0	0.9	0.0	1.4	0.0	0.8
45 to 54	17	10	7	528,902	250,278	278,624	3.2*	4.0*	2.5*	1.7	4.7	1.5	6.5	0.0	4.4
55 to 64	42	24	18	300,304	142,774	157,530	14.0	16.8	11.4*	9.8	18.2	10.1	23.5	6.1	16.7
65 to 74	161	101	60	209,410	91,786	117,624	76.9	110.0	51.0	65.0	88.8	88.6	131.5	38.1	63.9
75 to 84	240	165	75	116,337	50,337	66,000	206.3	327.8	113.6	180.2	232.4	277.8	377.8	87.9	139.4
85 & Older	143	83	60	35,195	15,278	19,917	406.3	543.3	301.3	339.7	472.9	426.4	660.1	225.0	377.5
Unknown	0	0	0												
Total	615	391	224	4,059,109	1,998,270	2,060,839	15.2	19.6	10.9	14.0	16.3	17.6	21.5	9.4	12.3
Age-Adjusted							22.5	32.7	14.6	20.8	24.3	29.5	36.0	12.7	16.6
BLACK															
Under 1	2	0	2	37,436	19,147	18,289	5.3*	0.0+	10.9*	0.0	12.7	-	-	0.0	26.1
1 to 4	1	1	0	150,150	76,493	73,657	0.7*	1.3*	0.0+	0.0	2.0	0.0	3.9	-	-
5 to 14	3	3	0	412,399	208,881	203,518	0.7*	1.4*	0.0+	0.0	1.6	0.0	3.1	0.0	-
15 to 24	8	6	2	352,398	186,295	166,103	2.3*	3.2*	1.2*	0.7	3.8	0.6	5.8	0.0	2.9
25 to 34	11	9	2	361,723	189,557	172,166	3.0*	4.7*	1.2*	1.2	4.8	1.6	7.8	0.0	2.8
35 to 44	23	8	15	387,780	188,667	199,113	5.9	4.2*	7.5*	3.5	8.4	1.3	7.2	3.7	11.3
45 to 54	54	30	24	274,298	129,075	145,223	19.7	23.2	16.5	14.4	24.9	14.9	31.6	9.9	23.1
55 to 64	97	54	43	164,532	76,514	88,018	59.0	70.6	48.9	47.2	70.7	51.8	89.4	34.3	63.5
65 to 74	192	105	87	103,767	44,942	58,825	185.0	233.6	147.9	158.9	211.2	188.9	278.3	116.8	179.0
75 to 84	250	151	99	58,756	22,082	36,674	425.5	683.8	269.9	372.7	478.2	574.7	792.9	216.8	323.1
85 & Older	87	39	48	17,677	5,158	12,519	492.2	756.1	383.4	388.7	595.6	518.8	993.4	274.9	491.9
Unknown	1	1	0												
Total	729	407	322	2,320,916	1,146,811	1,174,105	31.4	35.5	27.4	29.1	33.7	32.0	38.9	24.4	30.4
Age-Adjusted							48.6	69.2	36.0	45.1	52.2	62.5	75.9	32.1	39.9
HISPANIC															
Under 1	3	2	1	263,940	134,897	129,043	1.1*	1.5*	0.8*	0.0	2.4	0.0	3.5	0.0	2.3
1 to 4	1	0	1	1,043,348	532,534	510,814	0.1*	0.0+	0.2*	0.0	0.3	0.0	-	0.0	0.6
5 to 14	3	2	1	2,187,045	1,117,326	1,069,719	0.1*	0.2*	0.1*	0.0	0.3	0.0	0.4	0.0	0.3
15 to 24	4	3	1	1,555,795	803,837	751,958	0.3*	0.4*	0.1*	0.0	0.5	0.0	0.8	0.0	0.4
25 to 34	5	3	2	1,812,547	1,014,469	798,078	0.3*	0.3*	0.3*	0.0	0.5	0.0	0.6	0.0	0.6
35 to 44	15	7	8	1,581,171	842,312	738,859	0.9*	0.8*	1.1*	0.5	1.4	0.2	1.4	0.3	1.8
45 to 54	30	13	17	912,180	462,923	449,257	3.3	2.8*	3.8*	2.1	4.5	1.3	4.3	2.0	5.6
55 to 64	62	34	28	481,158	233,374	247,784	12.9	14.6	11.3	9.7	16.1	9.7	19.5	7.1	15.5
65 to 74	172	92	80	309,686	140,820	168,866	55.5	65.3	47.4	47.2	63.8	52.0	78.7	37.0	57.8
75 to 84	248	133	115	152,091	62,846	89,245	163.1	211.6	128.9	142.8	183.4	175.7	247.6	105.3	152.4
85 & Older	189	102	87	53,802	18,170	35,632	351.3	561.4	244.2	301.2	401.4	452.4	670.3	192.9	295.5
Unknown	0	0	0												
Total	732	391	341	10,352,763	5,363,508	4,989,255	7.1	7.3	6.8	6.6	7.6	6.6	8.0	6.1	7.6
Age-Adjusted							18.3	24.4	14.5	16.9	19.6	22.0	26.9	12.9	16.0
WHITE															
Under 1	0	0	0	186,372	95,353	91,019	0.0+	0.0+	0.0+	0.0	-	0.0	-	-	-
1 to 4	2	1	1	764,503	392,039	372,464	0.3*	0.3*	0.3*	0.0	0.6	0.0	0.8	0.0	0.8
5 to 14	3	1	2	2,201,244	1,131,294	1,069,950	0.1*	0.1*	0.2*	0.0	0.3	0.0	0.3	0.0	0.4
15 to 24	11	3	8	1,998,736	1,041,627	957,109	0.6*	0.3*	0.8*	0.2	0.9	0.0	0.6	0.3	1.4
25 to 34	15	8	7	2,278,474	1,167,976	1,110,498	0.7*	0.7*	0.6*	0.3	1.0	0.2	1.2	0.2	1.1
35 to 44	58	23	35	3,048,968	1,548,913	1,500,055	1.9	1.5	2.3	1.4	2.4	0.9	2.1	1.6	3.1
45 to 54	243	116	127	2,569,114	1,285,282	1,283,832	9.5	9.0	9.9	8.3	10.6	7.4	10.7	8.2	11.6
55 to 64	917	458	459	1,701,782	836,589	865,193	53.9	54.7	53.1	50.4	57.4	49.7	59.8	48.2	57.9
65 to 74	2,712	1,334	1,378	1,322,816	612,279	710,537	205.0	217.9	193.9	197.3	212.7	206.2	229.6	183.7	204.2
75 to 84	4,472	2,061	2,411	945,339	384,258	561,081	473.1	536.4	429.7	459.2	486.9	513.2	559.5	412.6	446.9
85 & Older	2,678	1,092	1,586	322,342	95,613	226,729	830.8	1,142.1	699.5	799.3	862.3	1,074.4	1,209.8	665.1	733.9
Unknown	0	0	0												
Total	11,111	5,097	6,014	17,339,690	8,591,223	8,748,467	64.1	59.3	68.7	62.9	65.3	57.7	61.0	67.0	70.5
Age-Adjusted							54.1	62.5	49.5	53.1	55.1	60.8	64.3	48.3	50.8

Note: Rates are per 100,000 population. ICD-10 codes J40-J47.
 The race/ethnic groups on this table were tabulated using the first listed race when certificates include more than one race. White, Black, and Asian/Other exclude Hispanic ethnicity. Hispanic includes any race category.
 * Death rate unreliable, relative standard error is greater than or equal to 23 percent.
 + Standard error indeterminate, death rate based on no (zero) deaths.
 - Confidence limit is not calculated for no (zero) deaths.

Source: State of California, Department of Health Services, Death Records.
 State of California, Department of Finance, 1999 Population Projections by Age, Race/Ethnicity and Sex, December 1998.

TABLE 2
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2000
(By Place of Residence)

AGE GROUPS	DEATHS			POPULATION			AGE-SPECIFIC DEATH RATE			95% CONFIDENCE LIMITS					
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL		MALE		FEMALE	
										LOWER	UPPER	LOWER	UPPER	LOWER	UPPER
TOTAL															
Under 1	7	4	3	556,635	284,653	271,982	1.3*	1.4*	1.1*	0.3	2.2	0.0	2.8	0.0	2.4
1 to 4	7	3	4	2,225,385	1,138,537	1,086,848	0.3*	0.3*	0.4*	0.1	0.5	0.0	0.6	0.0	0.7
5 to 14	21	14	7	5,567,090	2,851,540	2,715,550	0.4	0.5*	0.3*	0.2	0.5	0.2	0.7	0.1	0.4
15 to 24	14	6	8	4,615,641	2,395,832	2,219,809	0.3*	0.3*	0.4*	0.1	0.5	0.1	0.5	0.1	0.6
25 to 34	32	19	13	4,998,216	2,643,192	2,355,024	0.6	0.7*	0.6*	0.4	0.9	0.4	1.0	0.3	0.9
35 to 44	120	61	59	5,751,694	2,942,371	2,809,323	2.1	2.1	2.1	1.7	2.5	1.6	2.6	1.6	2.6
45 to 54	378	206	172	4,469,059	2,221,466	2,247,593	8.5	9.3	7.7	7.6	9.3	8.0	10.5	6.5	8.8
55 to 64	1013	499	514	2,756,954	1,343,573	1,413,381	36.7	37.1	36.4	34.5	39.0	33.9	40.4	33.2	39.5
65 to 74	2933	1516	1417	1,957,505	901,472	1,056,033	149.8	168.2	134.2	144.4	155.3	159.7	176.6	127.2	141.2
75 to 84	5103	2446	2657	1,305,454	533,995	771,459	390.9	458.1	344.4	380.2	401.6	439.9	476.2	331.3	357.5
85 & Older	3123	1336	1787	449,762	142,364	307,398	694.4	938.4	581.3	670.0	718.7	888.1	988.8	554.4	608.3
Unknown	3	2	1												
Total	12,754	6,112	6,642	34,653,395	17,398,995	17,254,400	36.8	35.1	38.5	36.2	37.4	34.2	36.0	37.6	39.4
Age-Adjusted							43.1	51.3	38.1	42.3	43.8	50.0	52.5	37.1	39.0
ASIAN/OTHER															
Under 1	1	0	1	67,434	34,501	32,933	1.5*	0.0+	3.0*	0.0	4.4	-	-	0.0	9.0
1 to 4	0	0	0	266,651	136,640	130,011	0.0+	0.0+	0.0+	-	-	-	-	-	-
5 to 14	3	2	1	660,070	339,469	320,601	0.5*	0.6*	0.3*	0.0	1.0	0.0	1.4	0.0	0.9
15 to 24	0	0	0	604,654	309,566	295,088	0.0+	0.0+	0.0+	-	-	-	-	-	-
25 to 34	3	2	1	649,462	328,916	320,546	0.5*	0.6*	0.3*	0.0	1.0	0.0	1.5	0.0	0.9
35 to 44	10	5	5	698,724	339,157	359,567	1.4*	1.5*	1.4*	0.5	2.3	0.2	2.8	0.2	2.6
45 to 54	30	23	7	561,189	265,710	295,479	5.3	8.7	2.4*	3.4	7.3	5.1	12.2	0.6	4.1
55 to 64	43	26	17	317,872	151,006	166,866	13.5	17.2	10.0	9.5	17.6	10.6	23.8	5.3	15.0
65 to 74	143	88	55	217,081	95,695	121,386	65.9	92.0	45.3	55.1	76.7	72.7	111.2	33.3	57.3
75 to 84	218	145	73	123,907	53,227	70,680	175.9	272.4	103.3	152.6	199.3	228.1	316.8	79.6	127.0
85 & Older	191	113	78	38,153	16,296	21,857	500.6	693.4	356.9	429.6	571.6	565.6	821.3	277.7	436.1
Unknown	0	0	0												
Total	642	404	238	4,205,197	2,070,183	2,135,014	15.3	19.5	11.1	14.1	16.4	17.6	21.4	9.7	12.6
Age-Adjusted							22.3	32.1	14.7	20.6	24.0	29.0	35.3	12.9	16.6
BLACK															
Under 1	1	1	0	37,159	19,020	18,139	2.7*	5.3*	0.0+	0.0	8.0	0.0	15.6	-	-
1 to 4	2	1	1	147,839	75,557	72,282	1.4*	1.3*	1.4*	0.0	3.2	0.0	3.9	0.0	4.1
5 to 14	6	5	1	414,580	210,046	204,534	1.4*	2.4*	0.5*	0.3	2.6	0.3	4.5	0.0	1.4
15 to 24	4	3	1	356,933	188,930	168,003	1.1*	1.6*	0.6*	0.0	2.2	0.0	3.4	0.0	1.8
25 to 34	7	6	1	352,200	185,909	166,291	2.0*	3.2*	0.6*	0.5	3.5	0.6	5.8	0.0	1.8
35 to 44	39	20	19	388,391	189,399	198,992	10.0	10.6	9.5*	6.9	13.2	5.9	15.2	5.3	13.8
45 to 54	56	31	25	287,837	135,895	151,942	19.5	22.8	16.5	14.4	24.6	14.8	30.8	10.0	22.9
55 to 64	94	51	43	168,721	78,536	90,185	55.7	64.9	47.7	44.5	67.0	47.1	82.8	33.4	61.9
65 to 74	154	103	51	105,627	46,350	59,277	145.8	222.2	86.0	122.8	168.8	179.3	265.1	62.4	109.6
75 to 84	167	86	81	60,380	23,176	37,204	276.6	371.1	217.7	234.6	318.5	292.6	449.5	170.3	265.1
85 & Older	93	47	46	18,268	5,491	12,777	509.1	855.9	360.0	405.6	612.6	611.2	1,100.7	256.0	464.1
Unknown	1	0	1												
Total	624	354	270	2,337,935	1,158,309	1,179,626	26.7	30.6	22.9	24.6	28.8	27.4	33.7	20.2	25.6
Age-Adjusted							39.8	56.2	29.3	36.7	42.9	50.3	62.1	25.8	32.8
HISPANIC															
Under 1	4	2	2	267,741	136,840	130,901	1.5*	1.5*	1.5*	0.0	3.0	0.0	3.5	0.0	3.6
1 to 4	3	1	2	1,055,221	539,226	515,995	0.3*	0.2*	0.4*	0.0	0.6	0.0	0.5	0.0	0.9
5 to 14	5	3	2	2,296,937	1,173,481	1,123,456	0.2*	0.3*	0.2*	0.0	0.4	0.0	0.5	0.0	0.4
15 to 24	4	3	1	1,609,062	832,517	776,545	0.2*	0.4*	0.1*	0.0	0.5	0.0	0.8	0.0	0.4
25 to 34	4	3	1	1,793,492	998,691	794,801	0.2*	0.3*	0.1*	0.0	0.4	0.0	0.6	0.0	0.4
35 to 44	12	6	6	1,643,440	880,073	763,367	0.7*	0.7*	0.8*	0.3	1.1	0.1	1.2	0.2	1.4
45 to 54	23	13	10	978,139	498,051	480,088	2.4	2.6*	2.1*	1.4	3.3	1.2	4.0	0.8	3.4
55 to 64	61	34	27	506,398	246,133	260,265	12.0	13.8	10.4	9.0	15.1	9.2	18.5	6.5	14.3
65 to 74	155	95	60	320,415	146,540	173,875	48.4	64.8	34.5	40.8	56.0	51.8	77.9	25.8	43.2
75 to 84	240	124	116	161,694	67,052	94,642	148.4	184.9	122.6	129.6	167.2	152.4	217.5	100.3	144.9
85 & Older	165	74	91	56,213	18,817	37,396	293.5	393.3	243.3	248.7	338.3	303.7	482.9	193.3	293.3
Unknown	0	0	0												
Total	676	358	318	10,688,752	5,537,421	5,151,331	6.3	6.5	6.2	5.8	6.8	5.8	7.1	5.5	6.9
Age-Adjusted							16.0	20.5	13.0	14.8	17.2	18.4	22.6	11.5	14.4
WHITE															
Under 1	1	1	0	184,301	94,292	90,009	0.5*	1.1*	0.0+	0.0	1.6	0.0	3.1	-	-
1 to 4	2	1	1	755,674	387,114	368,560	0.3*	0.3*	0.3*	0.0	0.6	0.0	0.8	0.0	0.8
5 to 14	7	4	3	2,195,503	1,128,544	1,066,959	0.3*	0.4*	0.3*	0.1	0.6	0.0	0.7	0.0	0.6
15 to 24	6	0	6	2,044,992	1,064,819	980,173	0.3*	0.0+	0.6*	0.1	0.5	-	-	0.1	1.1
25 to 34	18	8	10	2,203,062	1,129,676	1,073,386	0.8*	0.7*	0.9*	0.4	1.2	0.2	1.2	0.4	1.5
35 to 44	59	30	29	3,021,139	1,533,742	1,487,397	2.0	2.0	1.9	1.5	2.5	1.3	2.7	1.2	2.7
45 to 54	269	139	130	2,641,894	1,321,810	1,320,084	10.2	10.5	9.8	9.0	11.4	8.8	12.3	8.2	11.5
55 to 64	815	388	427	1,763,963	867,898	896,065	46.2	44.7	47.7	43.0	49.4	40.3	49.2	43.1	52.2
65 to 74	2481	1230	1251	1,314,382	612,887	701,495	188.8	200.7	178.3	181.3	196.2	189.5	211.9	168.5	188.2
75 to 84	4478	2091	2387	959,473	390,540	568,933	466.7	535.4	419.6	453.0	480.4	512.5	558.4	402.7	436.4
85 & Older	2674	1102	1572	337,128	101,760	235,368	793.2	1,082.9	667.9	763.1	823.2	1,019.0	1,146.9	634.9	700.9
Unknown	2	2	0												
Total	10,812	4,996	5,816	17,421,511	8,633,082	8,788,429	62.1	57.9	66.2	60.9	63.2	56.3	59.5	64.5	67.9
Age-Adjusted							51.6	59.9	47.0	50.7	52.6	58.2	61.5	45.8	48.2

Note : Rates are per 100,000 population. ICD-10 codes J40-J47.
 *Death rate unreliable, relative standard error is greater than or equal to 23 percent.
 †Standard error indeterminate, death rate based on no (zero) deaths.
 ‡Confidence limit is not calculated for no (zero) deaths.

Source: State of California, Department of Health Services, Death Records.
 State of California, Department of Finance, 2000 Population Projections by Age, Race/Ethnicity and Sex, December 1998.

TABLE 3
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE BY COUNTY
CALIFORNIA, 1999-2000
(By Place of Residence)

COUNTY	1999-2000 DEATHS (Average)	PERCENT	1999 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	1,2970.5	100.0	34,072,478	38.1	45.1	44.7	45.5
ALAMEDA	473.5	3.7	1,448,643	32.7	39.0	37.1	40.9
ALPINE	0.5	a	1,226	40.8*	42.3*	0.0	128.4
AMADOR	23.0	0.2	34,410	66.8	42.3	33.3	51.4
BUTTE	151.0	1.2	204,216	73.9	52.4	47.2	57.7
CALAVERAS	27.0	0.2	40,597	66.5	46.8	38.5	55.2
COLUSA	8.5	0.1	20,091	42.3*	41.4*	26.0	56.7
CONTRA COSTA	366.0	2.8	921,662	39.7	42.9	40.7	45.2
DEL NORTE	14.5	0.1	30,358	47.8*	43.8*	28.4	59.1
EL DORADO	59.0	0.5	156,996	37.6	38.0	32.8	43.1
FRESNO	296.0	2.3	800,121	37.0	45.6	42.7	48.5
GLENN	12.5	0.1	28,438	44.0*	40.4*	28.1	52.8
HUMBOLDT	74.5	0.6	127,658	58.4	59.2	51.2	67.2
IMPERIAL	37.0	0.3	150,381	24.6	32.6	26.9	38.4
INYO	13.0	0.1	18,348	70.9*	45.9*	31.8	60.0
KERN	330.5	2.5	662,472	49.9	60.9	57.1	64.8
KINGS	42.0	0.3	123,683	34.0	55.0	46.8	63.3
LAKE	43.0	0.3	58,335	73.7	44.3	35.6	53.0
LASSEN	17.0	0.1	35,208	48.3*	55.5*	39.8	71.1
LOS ANGELES	2,946.0	22.7	9,727,841	30.3	39.8	39.1	40.6
MADERA	53.0	0.4	121,779	43.5	46.6	39.4	53.9
MARIN	93.0	0.7	247,073	37.6	36.5	32.8	40.2
MARIPOSA	11.0	0.1	16,339	67.3*	44.2*	30.9	57.4
MENDOCINO	51.5	0.4	88,978	57.9	53.8	45.3	62.2
MERCED	94.0	0.7	210,707	44.6	60.8	53.7	67.9
MODOC	8.5	0.1	10,384	81.9*	59.2*	36.4	82.1
MONO	2.0	0.0	10,730	18.6*	28.6*	10.6	46.5
MONTEREY	139.0	1.1	395,133	35.2	45.2	41.4	49.0
NAPA	77.0	0.6	125,123	61.5	47.3	41.6	52.9
NEVADA	70.5	0.5	94,014	75.0	50.2	44.3	56.2
ORANGE	926.5	7.1	2,787,593	33.2	45.9	44.5	47.3
PLACER	128.5	1.0	233,836	55.0	57.7	52.6	62.8
PLUMAS	20.0	0.2	20,714	96.6	66.2	47.4	85.0
RIVERSIDE	826.0	6.4	1,519,469	54.4	52.8	50.7	54.9
SACRAMENTO	554.5	4.3	1,189,056	46.6	54.5	52.1	57.0
SAN BENITO	18.0	0.1	50,087	35.9*	42.6*	33.3	52.0
SAN BERNARDINO	796.0	6.1	1,688,984	47.1	69.3	66.7	71.9
SAN DIEGO	1,113.5	8.6	2,884,572	38.6	44.8	43.4	46.3
SAN FRANCISCO	313.0	2.4	788,975	39.7	32.9	30.8	35.1
SAN JOAQUIN	273.5	2.1	566,793	48.3	53.4	49.8	57.1
SAN LUIS OBISPO	118.5	0.9	247,880	47.8	40.7	36.6	44.9
SAN MATEO	262.5	2.0	735,381	35.7	35.9	33.7	38.0
SANTA BARBARA	147.0	1.1	408,292	36.0	36.5	33.4	39.6
SANTA CLARA	456.5	3.5	1,732,034	26.4	36.7	35.1	38.3
SANTA CRUZ	111.0	0.9	255,825	43.4	47.4	42.9	52.0
SHASTA	140.0	1.1	171,211	81.8	70.9	64.6	77.2
SIERRA	0.5	a	3,427	14.6*	7.0*	3.5	10.4
SISKIYOU	27.5	0.2	44,847	61.3	47.5	35.9	59.0
SOLANO	135.5	1.0	392,201	34.5	49.8	45.5	54.2
SONOMA	215.5	1.7	450,187	47.9	44.8	41.5	48.0
STANISLAUS	201.0	1.5	446,056	45.1	53.4	49.0	57.8
SUTTER	46.5	0.4	79,992	58.1	57.1	47.3	66.9
TEHAMA	46.0	0.4	55,806	82.4	62.1	50.9	73.2
TRINITY	6.5	0.1	13,353	48.7*	35.8*	19.7	51.9
TULARE	154.0	1.2	371,640	41.4	50.2	45.5	54.8
TUOLUMNE	29.0	0.2	54,631	53.1	36.8	30.6	42.9
VENTURA	254.0	2.0	744,825	34.1	42.6	40.0	45.3
YOLO	73.0	0.6	160,805	45.4	57.4	50.1	64.7
YUBA	42.5	0.3	63,062	67.4	82.5	67.6	97.4

Note : Rates are per 100,000 population. ICD-10 codes J40-J47.
The race/ethnic groups on this table were tabulated using the first listed race when certificates include more than one race. White, Black, and Asian/Other exclude Hispanic ethnicity. Hispanic includes any race category.

* Death rate unreliable, relative standard error is greater than or equal to 23 percent.
+ Standard error indeterminate, death rate based on no (zero) deaths.
- Confidence limit is not calculated for no (zero) deaths.
a Represents a percent more than zero <0.04

Source: State of California, Department of Health Services, Death Records.
State of California, Department of Finance, 1999 Population Projections by Age, Race/Ethnicity and Sex, December 1998.