



Center for Health Statistics



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DATA
SUMMARY
No. DS03-12000

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 96 percent of all CLRD deaths occurred among people aged 55 and older.**
- **Crude death rate for CLRD increased from 36.8 in 2000 to 37.1 in 2001.**
- **The age-adjusted death rate for CLRD was 43.0 in 2001.**
- **Yuba County had the highest reliable age-adjusted death rate and Imperial County the lowest for CLRD.**

Chronic Lower Respiratory Disease Deaths California 2001

By Fred Richards

Introduction

Chronic lower respiratory disease (CLRD) is the fourth leading cause of death in California and nationally.^{1,2} Prior to 1999, CLRD was called chronic obstructive pulmonary disease (COPD). A majority of CLRD deaths are caused by cigarette smoking, a leading cause of preventable disease and death in the United States.³

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 24-10 refers to COPD rather than CLRD and calls for a reduction in COPD deaths to 60 per 100,000 for persons aged 45 and older by 2010.³ Data in this report reflect the change to the International Classification of Diseases, Tenth Revision (ICD-10).

The more recent ICD-10 disease classifications (beginning in 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) 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 five percent more deaths were classified as CLRD under ICD-10 than as COPD under ICD-9.⁴

This report presents data on CLRD for 2001 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 ICD-10 codes J40-J47 as currently presented in NCHS reports.

¹ California Department of Health Services, Center for Health Statistics, Web site at http://www.dhs.ca.gov/hisp/chs/OHIR/vssdata/2001data/01Ch5Ex/5_10_2001.xls

² Arias E, Smith BL. Deaths: Preliminary Data for 2001. National Vital Statistics Reports; Vol. 51 No. 5. Hyattsville, Maryland: National Center for Health Statistics. 2003.

³ U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd Ed. Understanding and Improving Health and Objectives for Improving Health. 2 Vols. Washington, DC: U.S. Government Printing Office. November 2000.

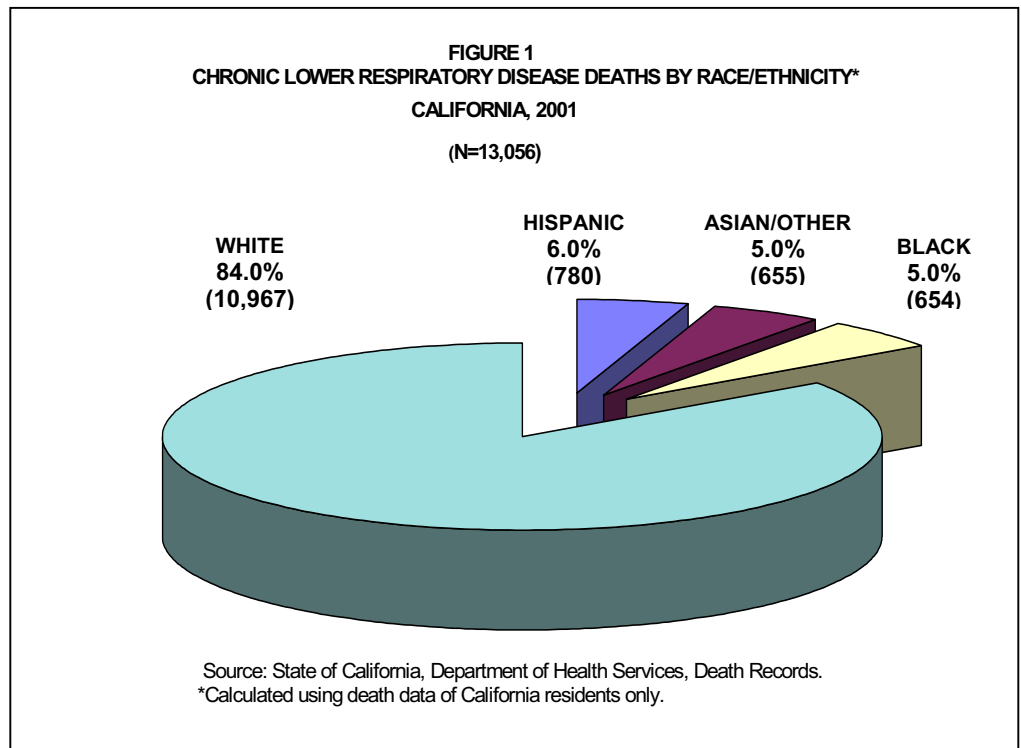
⁴ Anderson RN, et al. Comparability of Cause of Death Between ICD-9 and ICD-10: Preliminary Estimates. National Vital Statistics Reports; Vol. 49 No. 2. Hyattsville, Maryland: National Center for Health Statistics. 2001.

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

CLRD Deaths

Table 1 (page 8) displays California's CLRD death data by race/ethnicity, age group, and sex for 2001. In 2001 the female statewide CLRD death total was about 15 percent higher than for males 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 84.0 percent, followed by Hispanics with 6.0 percent, Blacks with 5.0 percent, Asian/Other with 5.0 percent in 2001.



CLRD Crude Death Rates

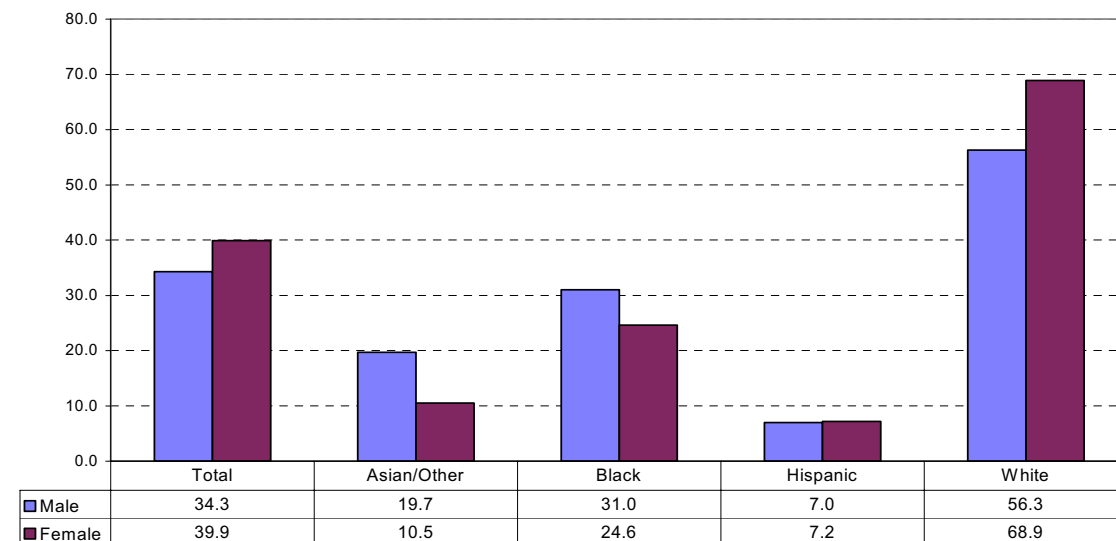
California's CLRD crude death rate for 2001 was 37.1 (**Table 1**, page 8), an increase from the crude rate of 36.8 in 2000.⁵ More females than males died from CLRD and the female crude death rate (39.9) was higher than the male rate (34.3) in 2001 (**Figure 2**, page 3).

Whites had the highest crude CLRD death rates and Hispanics had the lowest crude CLRD death rates of the four major race/ethnic groups in 2001. Crude CLRD rates for total population and all of the race/ethnic groups increased slightly in 2001 compared with 2000, except for the Asian/Other group that decreased slightly.⁵ Females had significantly higher crude CLRD death rates than males for Whites. Males had significantly higher rates than females for Blacks and Asian/Other. Hispanic males had a lower crude CLRD death rate than Hispanic females, but the difference was not statistically significant.

⁵ Richards F. Chronic Lower Respiratory Disease Deaths 1999-2000. Data Summary No. DS03-01001. Center for Health Statistics, California Department of Health Services. January 2003.

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 AND SEX*
CALIFORNIA, 2001

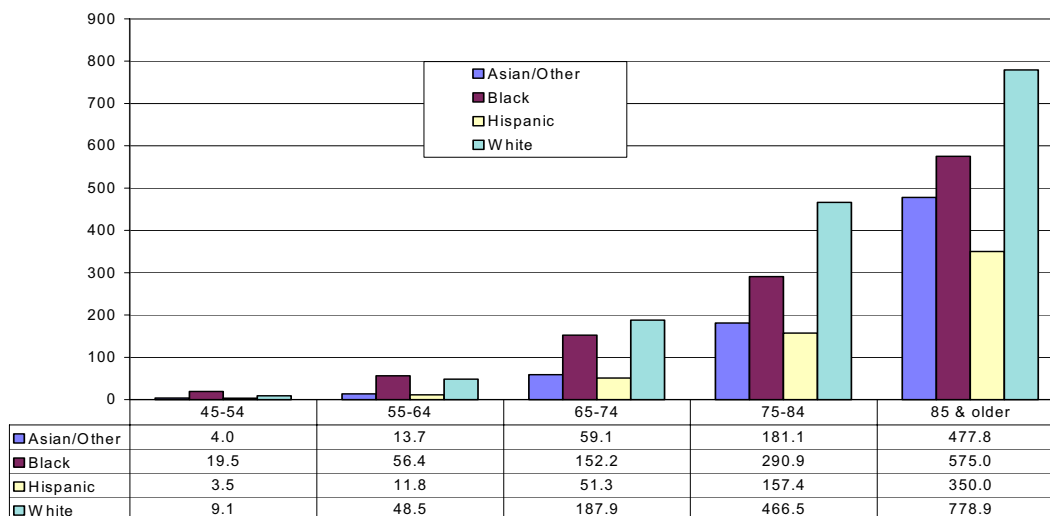


Source: State of California, Department of Health Services, Death Records.
*Calculated using death data of California residents only.

CLRD Age-Specific Death Rates

Table 1 (page 8) 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 and older age groups.

FIGURE 3
CHRONIC LOWER RESPIRATORY DISEASE
AGE-SPECIFIC DEATH RATES BY RACE/ETHNICITY AND AGE*
CALIFORNIA, 2001



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 Web site 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 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, followed by Whites. Whites had higher rates in the over 65 and older age groups. Hispanics had the lowest age-specific CLRD death rates of all ages followed by Asian/Other.

CLRD Age-Adjusted Death Rates

Table 1 (page 8) shows the CLRD age-adjusted death rate for California in 2001 was 43.0 per 100,000 population (the national rate for 2001 was 44.0).² **Figure 4** shows males had the higher age-adjusted rate at 49.2 and females had a rate of 39.1 in 2001, a statistically significant difference.

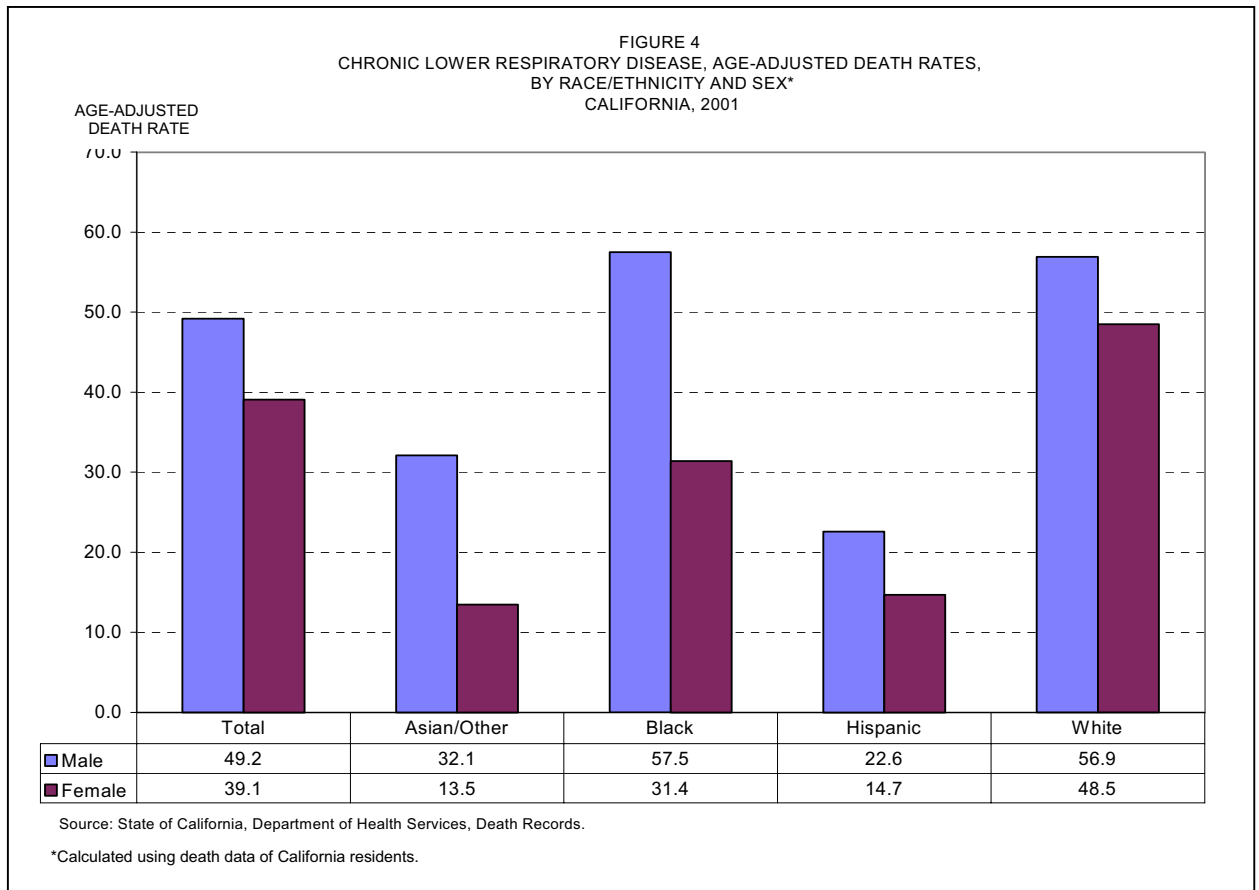


Table 1 (page 8) shows comparisons among race/ethnic groups for 2001. Gender differences between age-adjusted CLRD death rates among the four race/ethnic groups were statistically significant. **Figure 4** shows males had the higher rates among the four race/ethnic groups. Black males had the highest rate at 57.5, followed by White males at 56.9, Asian/Other males at 32.1, and Hispanic males at 22.6. White females were highest at 48.5, followed by Black females at 31.4, Hispanic females at 14.7, and Asian/Other females at 13.5. 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 except between Black and White males and between Asian/Other and Hispanic females.

For more data, see DHS Center for Health Statistics, Home Page at www.dhs.ca.gov/org/hisp/chs/chsindex.htm

CLRD Death Data for California Counties

Table 2 (page 9) displays the 1999-2001 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 (94.3 per 100,000 population) and Imperial County (23.5 per 100,000 population), respectively.

Of the counties with reliable age-adjusted death rates due to CLRD, Yuba County had the highest rate (77.5 per 100,000 population) while Imperial County had the lowest rate (30.5 per 100,000 population).

CLRD Death Data for City Health Departments

Table 3 shows the 1999-2001 average number of CLRD deaths and the crude death rates for California's three city health departments. Berkeley had 20.7 deaths due to CLRD with a crude death rate of 20.1 per 100,000 population and Long Beach had 225.0 deaths with a crude rate of 48.8, the highest rate of the three cities. Pasadena had 52.3 deaths and a crude rate of 39.1 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 3
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE
AMONG THE LOCAL HEALTH JURISDICTIONS*
CALIFORNIA, 1999-2001

LOCAL HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2000 POPULATION	CRUDE DEATH RATE	95% CONFIDENCE LIMITS	
				LOWER	UPPER
BERKELEY	20.7	102,743	20.1	11.4	28.8
LONG BEACH	225.0	461,522	48.8	42.4	55.1
PASADENA	52.3	133,936	39.1	28.5	49.7

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

2000 Revised Historical Estimates of California Cities and Counties, March 2002. State of California, Department of Health Services, Death Records.

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

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

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.² 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-10.⁶ Depending on the specific cause of death, the number of deaths and death rates are not comparable between ICD-9 and ICD-10. Therefore, our analyses do not combine both ICD-9 and ICD-10 data.

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 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, Hmong, 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.⁷

⁶ World Health Organization. International Statistical Classification of Diseases and Related Health Problems. Tenth Revision. Geneva: World Health Organization. 1992.

⁷ Rosenberg 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. 99-1328. September 1999.

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 used 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.⁸ 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 city crude rates in **Table 3** (page 5) differ from the population data used to calculate the crude rates in **Table 2** (page 9). 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 2010 Statistical Notes” publication.⁹ Detailed information on data quality and limitations is presented in the appendix of the annual report, “Vital Statistics of California.”¹⁰ Formulas used to calculate death rates are included in the technical notes of the “County Health Status Profiles” report available from the Department of Health Services Web site at <http://www.dhs.ca.gov/hisp/chs/OHIR/publication/publicationindex.htm>.¹¹

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⁸ Anderson 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.

⁹ Klein RJ, Schoenborn CA. Healthy People 2010 Statistical Notes, Age adjustment using the 2000 Projected U.S. Population. National Center for Health Statistics, DHHS Publication No. 20. January 2001.

¹⁰ Riedmiller K, Ficenc S, Bindra K, Christensen J. Vital Statistics of California, 1999. Center for Health Statistics, California Department of Health Services. April 2002.

¹¹ Schmidt C, Wilson C. County Health Status Profiles 2003. Center for Health Statistics, California Department of Health Services. April 2003.

TABLE 1
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2001
(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	8	4	4	560,999	286,873	274,126	1.4	1.4	1.5	0.4	2.4	0.0	2.8	0.0	2.9	
1 to 4	6	3	3	2,243,262	1,147,543	1,095,719	0.3	0.3	0.3	0.1	0.5	0.0	0.6	0.0	0.6	
5 to 14	11	7	4	5,672,643	2,906,408	2,766,235	0.2	0.2	0.1	0.1	0.3	0.1	0.4	0.0	0.3	
15 to 24	26	16	10	4,753,513	2,467,107	2,286,406	0.5	0.6	0.4	0.3	0.8	0.3	1.0	0.2	0.7	
25 to 34	36	22	14	4,918,489	2,594,607	2,323,882	0.7	0.8	0.6	0.5	1.0	0.5	1.2	0.3	0.9	
35 to 44	125	59	66	5,765,426	2,956,340	2,809,086	2.2	2.0	2.3	1.8	2.5	1.5	2.5	1.8	2.9	
45 to 54	367	189	178	4,674,074	2,325,619	2,348,455	7.9	8.1	7.6	7.0	8.7	7.0	9.3	6.5	8.7	
55 to 64	1,091	564	527	2,862,622	1,396,328	1,466,294	38.1	40.4	35.9	35.9	40.4	37.1	43.7	32.9	39.0	
65 to 74	2,933	1,417	1,516	1,976,584	916,584	1,060,000	148.4	154.6	143.0	143.0	153.8	146.5	162.6	135.8	150.2	
75 to 84	5,220	2,487	2,733	1,337,545	547,455	790,090	390.3	454.3	345.9	379.7	400.9	436.4	472.1	332.9	358.9	
85 & Older	3,233	1,294	1,939	468,178	149,547	318,631	690.5	865.3	608.5	666.7	714.4	818.1	912.4	581.5	635.6	
Unknown	0	0	0													
Total	13,056	6,062	6,994	35,233,335	17,694,411	17,538,924	37.1	34.3	39.9	36.4	37.7	33.4	35.1	38.9	40.8	
Age-Adjusted							43.0	49.2	39.1	42.2	43.7	48.0	50.5	38.2	40.0	
ASIAN/OTHER																
Under 1	1	1	0	69,275	35,440	33,835	1.4	2.8	0.0	0.0	4.3	0.0	8.4	-	-	
1 to 4	0	0	0	274,035	140,219	133,816	0.0	0.0	0.0	-	-	-	-	-	-	
5 to 14	1	0	1	682,107	351,057	331,050	0.1	0.0	0.3	0.0	0.4	-	-	0.0	0.9	
15 to 24	4	4	0	626,372	320,815	305,557	0.6	1.2	0.0	0.0	1.3	0.0	2.5	-	-	
25 to 34	1	1	0	663,350	335,748	327,602	0.2	0.3	0.0	0.0	0.4	0.0	0.9	-	-	
35 to 44	8	4	4	709,159	345,299	363,860	1.1	1.2	1.1	0.3	1.9	0.0	2.3	0.0	2.2	
45 to 54	24	18	6	596,166	282,159	314,007	4.0	6.4	1.9	2.4	5.6	3.4	9.3	0.4	3.4	
55 to 64	46	27	19	334,827	159,091	175,736	13.7	17.0	10.8	9.8	17.7	10.6	23.4	6.0	15.7	
65 to 74	133	79	54	224,875	99,888	124,987	59.1	79.1	43.2	49.1	69.2	61.6	96.5	31.7	54.7	
75 to 84	239	169	70	131,980	56,160	75,820	181.1	300.9	92.3	158.1	204.0	255.6	346.3	70.7	114.0	
85 & Older	198	120	78	41,442	17,481	23,961	477.8	686.5	325.5	411.2	544.3	563.6	809.3	253.3	397.8	
Unknown	0	0	0													
Total	655	423	232	4,353,588	2,143,357	2,210,231	15.0	19.7	10.5	13.9	16.2	17.9	21.6	9.1	11.8	
Age-Adjusted							21.5	32.1	13.5	19.8	23.2	29.1	35.2	11.7	15.2	
BLACK																
Under 1	1	0	1	37,075	18,968	18,107	2.7	0.0	5.5	0.0	8.0	-	-	0.0	16.3	
1 to 4	0	0	0	148,109	75,817	72,292	0.0	0.0	0.0	-	-	-	-	-	-	
5 to 14	3	1	2	413,833	209,845	203,988	0.7	0.5	1.0	0.0	1.5	0.0	1.4	0.0	2.3	
15 to 24	7	6	1	364,172	192,652	171,520	1.9	3.1	0.6	0.5	3.3	0.6	5.6	0.0	1.7	
25 to 34	13	8	5	344,312	182,447	161,865	3.8	4.4	3.1	1.7	5.8	1.3	7.4	0.4	5.8	
35 to 44	25	12	13	385,985	188,545	197,440	6.5	6.4	6.6	3.9	9.0	2.8	10.0	3.0	10.2	
45 to 54	59	29	30	302,852	142,935	159,917	19.5	20.3	18.8	14.5	24.5	12.9	27.7	12.0	25.5	
55 to 64	97	60	37	172,047	79,765	92,282	56.4	75.2	40.1	45.2	67.6	56.2	94.3	27.2	53.0	
65 to 74	163	96	67	107,106	47,268	59,838	152.2	203.1	112.0	128.8	175.5	162.5	243.7	85.2	138.8	
75 to 84	180	102	78	61,885	23,844	38,041	290.9	427.8	205.0	248.4	333.4	344.8	510.8	159.5	250.5	
85 & Older	106	48	58	18,436	5,511	12,925	575.0	871.0	448.7	465.5	684.4	624.6	1,117.4	333.3	564.2	
Unknown	0	0	0													
Total	654	362	292	2,355,812	1,167,597	1,188,215	27.8	31.0	24.6	25.6	29.9	27.8	34.2	21.8	27.4	
Age-Adjusted							41.5	57.5	31.4	38.3	44.8	51.2	63.9	27.8	35.0	
HISPANIC																
Under 1	2	1	1	272,023	139,031	132,992	0.7	0.7	0.8	0.0	1.8	0.0	2.1	0.0	2.2	
1 to 4	4	2	2	1,070,328	547,371	522,957	0.4	0.4	0.4	0.0	0.7	0.0	0.9	0.0	0.9	
5 to 14	2	2	0	2,398,512	1,225,596	1,172,916	0.1	0.2	0.0	0.0	0.2	0.0	0.4	-	-	
15 to 24	6	3	3	1,664,220	861,697	802,523	0.4	0.3	0.4	0.1	0.6	0.0	0.7	0.0	0.8	
25 to 34	6	2	4	1,767,279	977,600	789,679	0.3	0.2	0.5	0.1	0.6	0.0	0.5	0.0	1.0	
35 to 44	13	6	7	1,701,500	916,547	784,953	0.8	0.7	0.9	0.3	1.2	0.1	1.2	0.2	1.6	
45 to 54	37	13	24	1,050,953	536,610	514,343	3.5	2.4	4.7	2.4	4.7	1.1	3.7	2.8	6.5	
55 to 64	63	34	29	532,881	260,356	272,525	11.8	13.1	10.6	8.9	14.7	8.7	17.4	6.8	14.5	
65 to 74	170	90	80	331,669	152,519	179,150	51.3	59.0	44.7	43.6	59.0	46.8	71.2	34.9	54.4	
75 to 84	272	141	131	172,771	71,849	100,922	157.4	196.2	129.8	138.7	176.1	163.9	228.6	107.6	152.0	
85 & Older	205	103	102	58,574	19,479	39,095	350.0	528.8	260.9	302.1	397.9	426.7	630.9	210.3	311.5	
Unknown	0	0	0													
Total	780	397	383	11,020,710	5,708,655	5,312,055	7.1	7.0	7.2	6.6	7.6	6.3	7.6	6.5	7.9	
Age-Adjusted							17.6	22.6	14.7	16.4	18.9	20.3	24.9	13.2	16.2	
WHITE																
Under 1	4	2	2	182,626	93,434	89,192	2.2	2.1	2.2	0.0	4.3	0.0	5.1	0.0	5.4	
1 to 4	2	1	1	750,790	384,136	366,654	0.3	0.3	0.3	0.0	0.6	0.0	0.8	0.0	0.8	
5 to 14	5	4	1	2,178,191	1,119,910	1,058,281	0.2	0.4	0.1	0.0	0.4	0.0	0.7	0.0	0.3	
15 to 24	9	3	6	2,098,749	1,091,943	1,006,806	0.4	0.3	0.6	0.1	0.7	0.0	0.6	0.1	1.1	
25 to 34	16	11	5	2,143,548	1,098,812	1,044,736	0.7	1.0	0.5	0.4	1.1	0.4	1.6	0.1	0.9	
35 to 44	79	37	42	2,968,782	1,505,949	1,462,833	2.7	2.5	2.9	2.1	3.2	1.7	3.2	2.0	3.7	
45 to 54	247	129	118	2,724,103	1,363,915	1,360,188	9.1	9.5	8.7	7.9	10.2	7.8	11.1	7.1	10.2	
55 to 64	885	443	442	1,822,867	897,116	925,751	48.5	49.4	47.7	45.4	51.7	44.8	54.0	43.3	52.2	
65 to 74	2,467	1,152	1,315	1,312,934	616,909	696,025	187.9	186.7	188.9	180.5	195.3	176.0	197.5	178.7	199.1	
75 to 84	4,529	2,075	2,454	970,909	395,602	575,307	466.5	524.5	426.6	452.9	480.1	501.9	547.1	409.7	443.4	
85 & Older	2,724	1,023	1,701	349,726	107,076	242,650	778.9	955.4	701.0	749.6	808.1	896.8	1,013.9	667.7	734.3	
Unknown	0	0	0													
Total	10,967	4,880	6,087	17,503,225	8,674,802	8,828,423	62.7	56.3	68.9	61.5	63.8	54.7	57.8	67.2	70.7	
Age-Adjusted							51.5	56.9	48.5	50.6	52.5	55.3	58.5	47.3	49.7	

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, 2001 Population Projections by Age, Race/Ethnicity and Sex, December 1998.

TABLE 2
DEATHS DUE TO CHRONIC LOWER RESPIRATORY DISEASE BY COUNTY
CALIFORNIA, 1999-2001
(By Place of Residence)

COUNTY	1999-2001 DEATHS (Average)	PERCENT	2000 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	12,999.0	100.0	34,653,395	37.5	43.9	43.2	44.7
ALAMEDA	461.0	3.5	1,470,155	31.4	37.0	33.6	40.4
ALPINE	0.7	a	1,239	53.8*	55.7*	0.0	189.5
AMADOR	20.3	0.2	34,853	58.3	36.2	20.4	51.9
BUTTE	148.0	1.1	207,158	71.4	51.1	42.7	59.5
CALAVERAS	26.0	0.2	42,041	61.8	42.8	26.2	59.4
COLUSA	9.0	0.1	20,973	42.9*	41.7*	14.4	69.1
CONTRA COSTA	363.3	2.8	931,946	39.0	41.3	37.1	45.6
DEL NORTE	15.0	0.1	31,155	48.1*	43.7*	21.5	65.9
EL DORADO	63.0	0.5	163,197	38.6	38.8	29.2	48.4
FRESNO	294.3	2.3	811,179	36.3	44.4	39.3	49.5
GLENN	12.3	0.1	29,298	42.1*	39.2*	17.2	61.2
HUMBOLDT	86.3	0.7	128,419	67.2	67.6	53.3	81.8
IMPERIAL	36.3	0.3	154,549	23.5	30.5	20.6	40.5
INYO	15.3	0.1	18,437	83.2*	54.5*	26.7	82.2
KERN	332.0	2.6	677,372	49.0	59.4	53.0	65.8
KINGS	42.3	0.3	126,672	33.4	53.4	37.3	69.6
LAKE	52.7	0.4	60,072	87.7	52.6	38.1	67.2
LASSEN	15.0	0.1	35,959	41.7*	47.2*	23.3	71.1
LOS ANGELES	2,941.0	22.6	9,838,861	29.9	38.9	37.5	40.3
MADERA	51.0	0.4	126,394	40.4	42.7	31.0	54.4
MARIN	97.0	0.7	248,397	39.1	37.3	29.9	44.8
MARIPOSA	11.0	0.1	16,762	65.6*	42.5*	17.2	67.8
MENDOCINO	53.3	0.4	90,442	59.0	53.9	39.4	68.4
MERCED	91.7	0.7	215,256	42.6	57.4	45.7	69.2
MODOC	8.3	0.1	10,481	79.5*	56.1*	17.8	94.5
MONO	3.0	a	10,891	27.5*	35.5*	0.0	76.7
MONTEREY	134.7	1.0	401,886	33.5	42.8	35.5	50.0
NAPA	76.7	0.6	127,084	60.3	46.8	36.3	57.4
NEVADA	64.3	0.5	97,020	66.3	44.1	33.3	55.0
ORANGE	922.0	7.1	2,833,190	32.5	44.5	41.6	47.4
PLACER	124.7	1.0	243,646	51.2	53.2	43.9	62.6
PLUMAS	19.7	0.2	20,852	94.3	62.5	34.7	90.3
RIVERSIDE	873.7	6.7	1,570,885	55.6	53.8	50.3	57.4
SACRAMENTO	560.3	4.3	1,212,527	46.2	53.1	48.7	57.5
SAN BENITO	15.3	0.1	51,853	29.6*	35.1*	17.5	52.8
SAN BERNARDINO	785.7	6.0	1,727,452	45.5	66.3	61.6	70.9
SAN DIEGO	1,140.3	8.8	2,943,001	38.7	44.6	42.0	47.2
SAN FRANCISCO	302.0	2.3	792,049	38.1	31.4	27.8	34.9
SAN JOAQUIN	278.3	2.1	579,712	48.0	52.8	46.6	59.0
SAN LUIS OBISPO	117.7	0.9	254,818	46.2	38.8	31.8	45.9
SAN MATEO	257.7	2.0	747,061	34.5	34.3	30.1	38.5
SANTA BARBARA	144.7	1.1	412,071	35.1	35.3	29.6	41.1
SANTA CLARA	439.0	3.4	1,763,252	24.9	34.2	31.0	37.4
SANTA CRUZ	107.0	0.8	260,248	41.1	44.6	36.1	53.1
SHASTA	137.7	1.1	175,777	78.3	67.3	56.0	78.5
SIERRA	0.7	a	3,457	19.3*	10.4*	0.0	35.4
SISKIYOU	31.3	0.2	45,194	69.3	52.7	34.2	71.3
SOLANO	137.7	1.1	399,841	34.4	49.0	40.7	57.2
SONOMA	218.0	1.7	459,258	47.5	44.1	38.2	49.9
STANISLAUS	199.7	1.5	459,025	43.5	51.1	44.0	58.2
SUTTER	45.7	0.4	82,040	55.7	54.0	38.3	69.7
TEHAMA	47.7	0.4	56,666	84.1	62.5	44.6	80.4
TRINITY	10.0	0.1	13,490	74.1*	54.6*	20.6	88.7
TULARE	152.0	1.2	379,944	40.0	48.4	40.7	56.1
TUOLUMNE	30.0	0.2	56,125	53.5	37.3	23.8	50.7
VENTURA	259.0	2.0	753,820	34.4	42.5	37.3	47.6
YOLO	76.0	0.6	164,010	46.3	57.6	44.7	70.6
YUBA	40.7	0.3	63,983	63.6	77.5	53.7	101.4

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%.

a Represents a percentage of more than zero but less than 0.05.

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