



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

- In 2001, 84.3 percent of all heart disease deaths in California occurred among people aged 65 and older.
- During 2001 the California heart disease age-adjusted death rate of 225.9 was lower than the United States rate of 247.7.
- In 2001 Blacks had a heart disease age-adjusted death rate significantly higher than Hispanics, Asian/Other, and Whites.

Heart Disease Deaths in California, 2001

By Daniel H. Cox

Introduction

Heart disease has historically been the leading cause of death in the United States and in California. In 1997, 15 million cases of heart disease were diagnosed in the United States and in 2000, 4.4 million hospital discharges were attributed to heart disease.¹ There were 699,697 heart disease deaths in the United States in 2001.²

This report presents data on heart disease deaths in California during 2001 and provides analysis of crude and age-adjusted death rates for California residents by sex, age, race/ethnicity, and county. The definition of heart disease used in this report is based on the International Classification of Diseases, Tenth Revision (ICD-10) codes I00-I09, I11, I13, and I20-I51 currently presented in National Center for Health Statistics (NCHS) reports.³ The national health objective for heart disease, as defined by the Healthy People 2010 goals, pertains to coronary heart disease (a narrowly defined subset of heart disease). Therefore, an assessment of California's progress in meeting this objective cannot be monitored with the data presented in this report. An analysis of California's progress in meeting the national health objective for coronary heart disease is presented in other Center for Health Statistics (CHS) reports.⁴

Heart Disease Deaths

Table 1 (page 8) displays heart disease death data for 2001 by race/ethnicity, age, and sex. During this period, the number of deaths attributed to heart disease was slightly higher among females (35,080) than among males (33,924). As shown in **Figure 1** (page 2), the number of heart disease deaths among Whites (52,205) was much higher than Hispanics (7,069), Blacks (5,366), and Asian/Other (4,364).

¹ National Center for Health Statistics, Fast Stats A to Z: Heart Disease. Division of Data Services, April 2003. <http://www.cdc.gov/nchs/fastats/heart.htm>

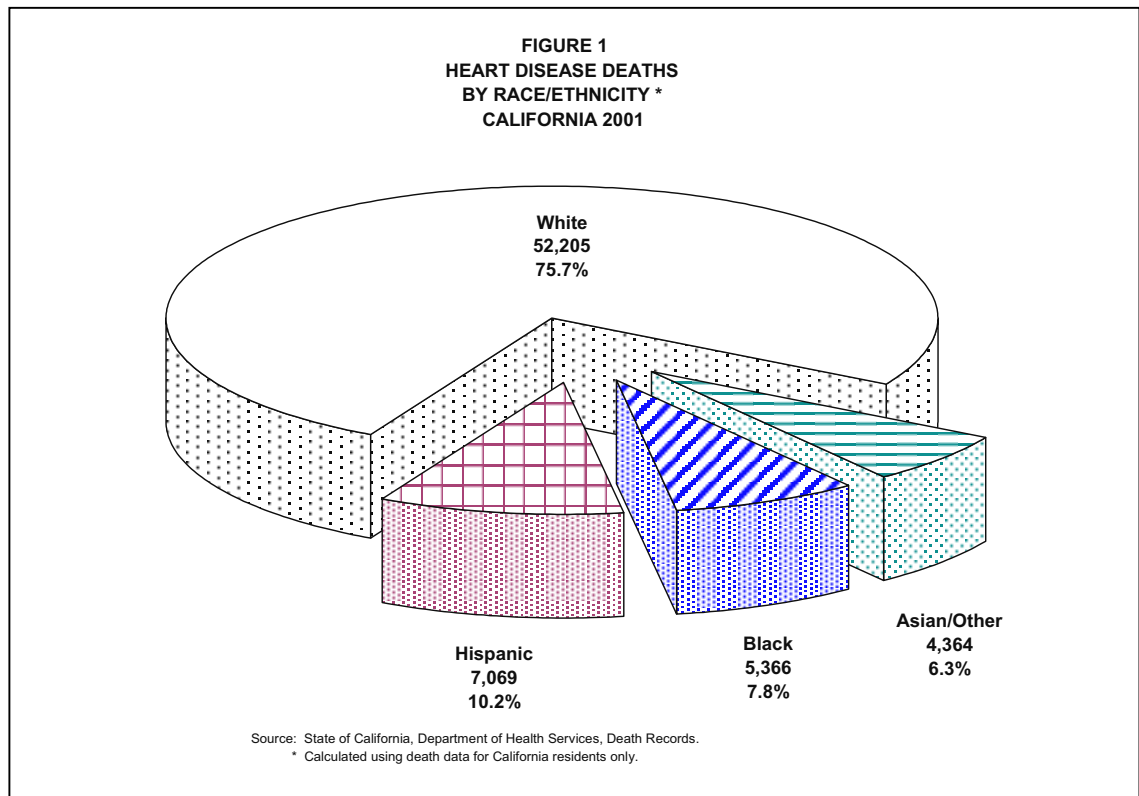
² National Center for Health Statistics, Deaths: Preliminary Data for 2001, National Vital Statistics Reports DHHS Publication Number (PHS) 2003-1120, PRS 03-0165, March 2003; Volume 51, Number 5.

³ National Center for Health Statistics, Deaths: Preliminary Data for 1999, National Vital Statistics Reports DHHS Publication Number (PHS) 2001-1120, PRS 01-0358, June 2001; Volume 49, Number 3.

⁴ Schmidt C., Wilson C. County Health Status Profiles 2003. Center for Health Statistics, California Department of Health Services, April 2003.

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

Heart disease deaths occur predominantly among the older population, and this held true in 2001 with 84.3 percent of all heart disease deaths involving people aged 65 years and older. This age group, within each respective race/ethnic group, accounted for 87.2 percent of all heart disease deaths among Whites, 82.4 percent among Asian/Other, 76.3 percent among Hispanics, and 68.8 percent among Blacks.



Heart Disease Crude Death Rates

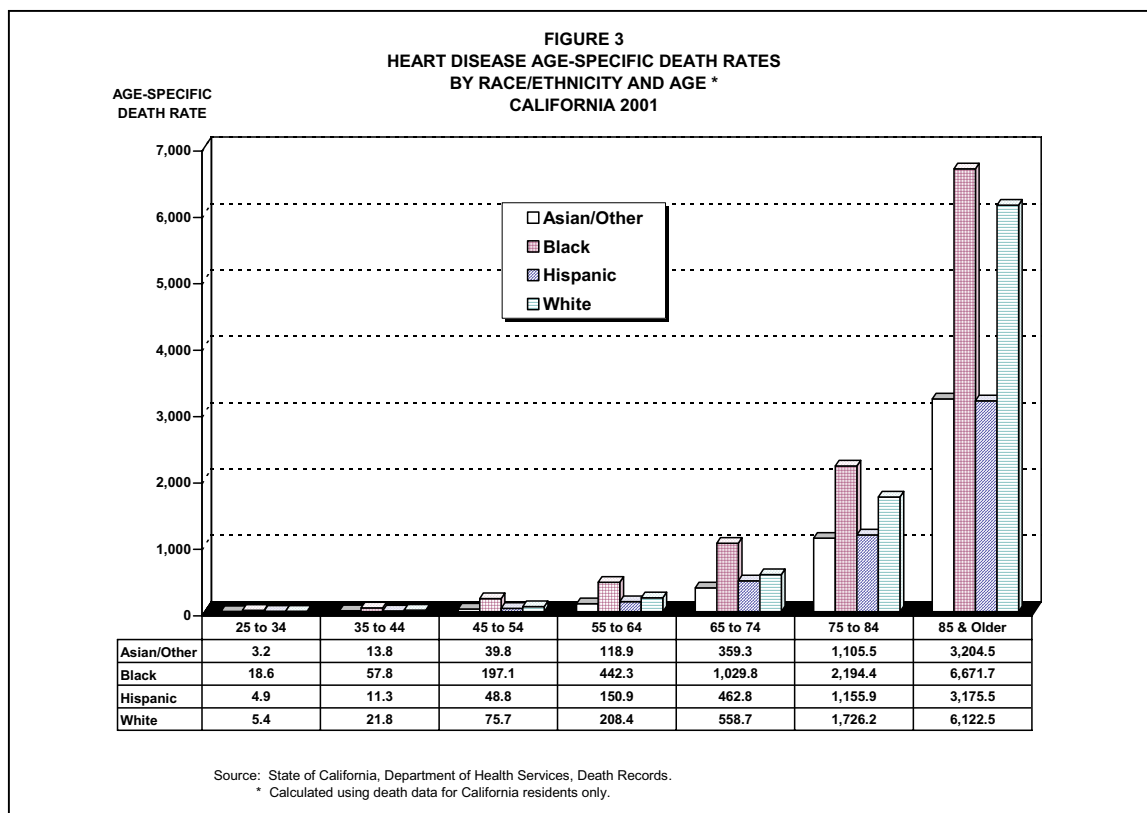
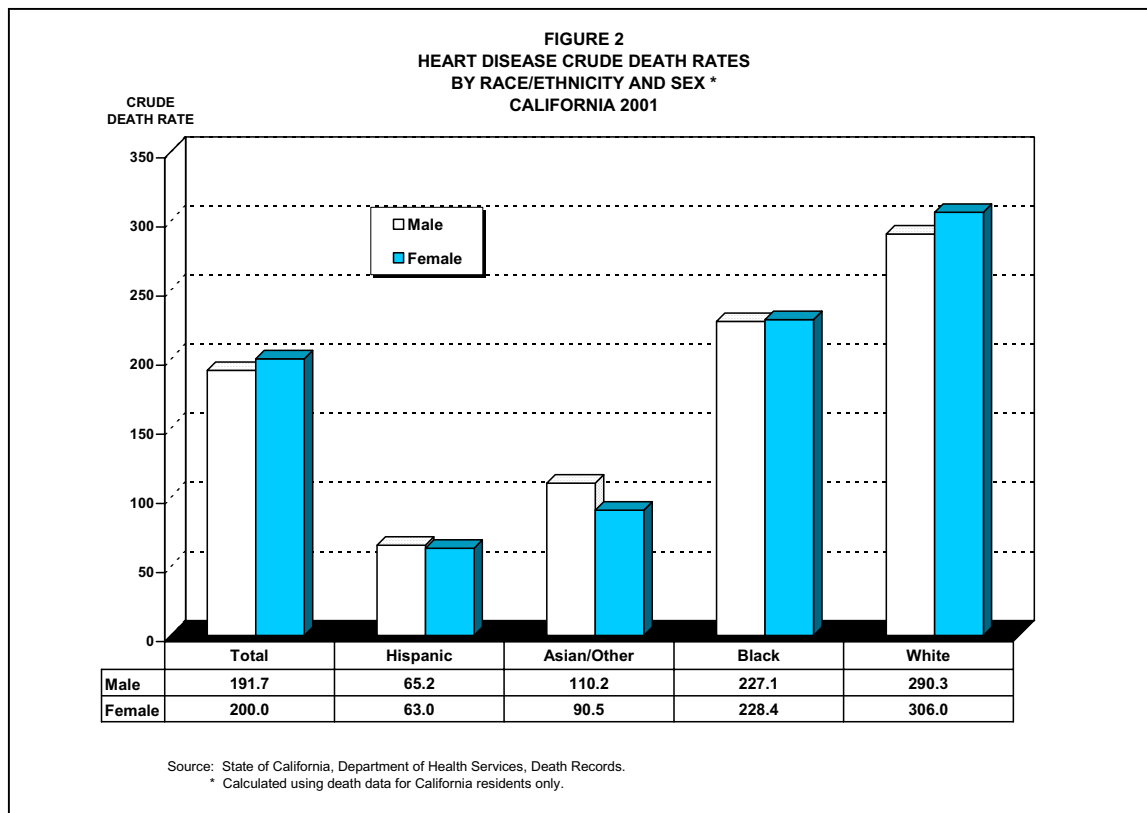
The heart disease crude death rate for California decreased from 197.8 deaths per 100,000 population in 2000 to 195.8 in 2001.⁵ This difference was not statistically significant. As shown in **Table 1** (page 8), Whites had the highest crude death rate in 2001, a rate of 298.3. Blacks were next with a crude rate of 227.8, followed by Asian/Other with a rate of 100.2 and Hispanics with a rate of 64.1. Three of these four rates increased from 2000 when Blacks had a heart disease crude death rate of 226.3, Asian/Other had a rate of 100.1, and Hispanics had a rate of 63.2. The rate for Whites decreased from 2000, when the rate was 300.1. None of these differences between the 2000 and 2001 rates were statistically significant.

Figure 2 (page 3) shows White and Black females had higher heart disease crude death rates than males in the corresponding race/ethnic groups. White females had a rate of 306.0 deaths per 100,000 population, and White males had a rate of 290.3. Black females had a rate of 228.4 and Black males had a rate of 227.1. Only the difference between White males and females was statistically significant. Contrary to the findings for the other two race/ethnic groups, Asian/Other males had a heart disease crude death rate of 110.2, which was significantly higher than the rate of 90.5 for Asian/Other females.

⁵ Cox D. Heart Disease Deaths in California, 2000. Data Summary. Center for Health Statistics, California Department of Health Services, May 2003.

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

Figure 2 also shows Hispanic males had a rate of 65.2 and Hispanic females had a slightly lower rate of 63.0, though the difference between Hispanic males and females was not statistically significant.



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.

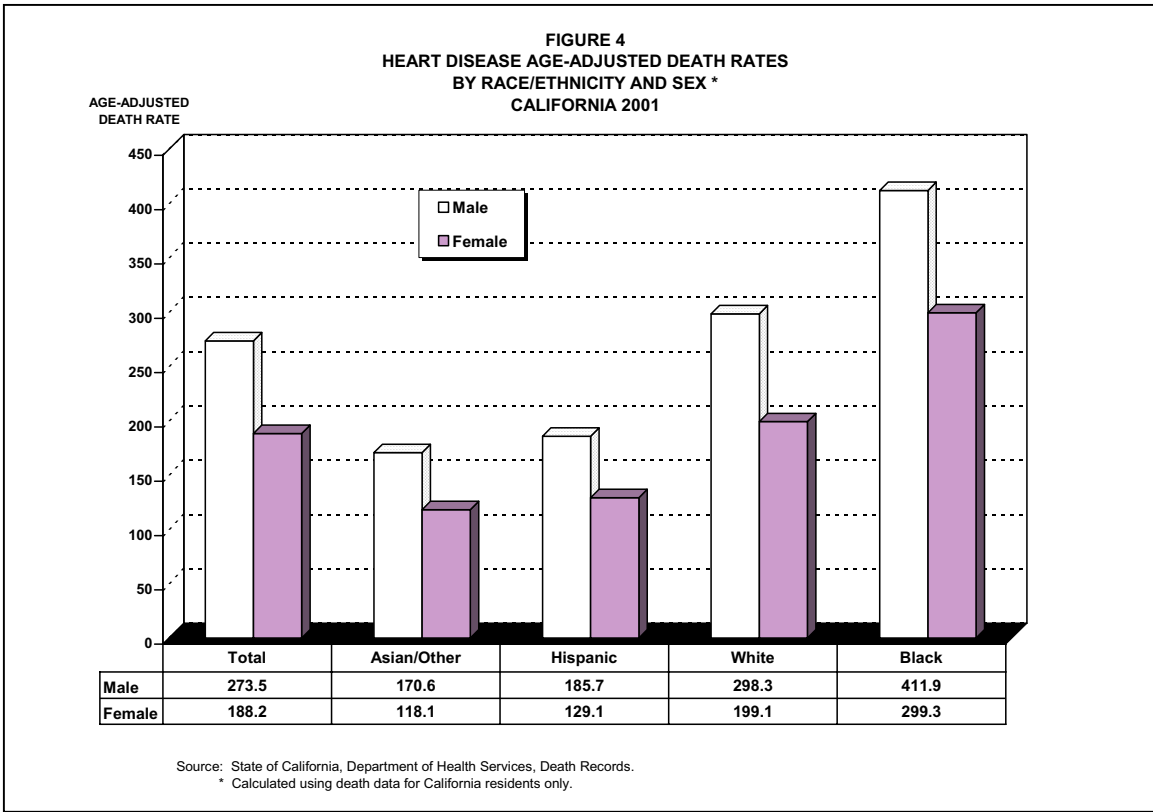
Heart Disease Age-Specific Death Rates

In **Table 1** (page 8) reliable age-specific rates show that among the sexes in 2001, males in all four race/ethnic groups had higher heart disease death rates than females in the corresponding race/ethnic groups. The only exception to this pattern was among the Asian/Other race/ethnic group in the 85 and Older age group where females had a slightly higher heart disease death rate than males.

Figure 3 (page 3) shows that in 2001, among the age groups with reliable rates, Blacks had higher heart disease age-specific death rates than the other three race/ethnic groups. These differences were statistically significant in every age group displayed in **Figure 3**. Not shown in **Figure 3**, but displayed in **Table 1** are the age-specific death rates for the Under 1 age group where Hispanics had the only reliable rate and the 15 to 24 age group where Whites and Hispanics shared the same reliable rate.

Heart Disease Age-Adjusted Death Rates

In 2001 the California heart disease age-adjusted death rate of 225.9 deaths per 100,000 population was lower than the United States rate of 247.7.² The California rate decreased from 2000 when the rate was 231.1.⁵ This difference was statistically significant.



Displayed in **Table 1** (page 8), a comparison among the race/ethnic groups shows that in 2001 Blacks had a heart disease age-adjusted death rate (348.0) significantly higher than Whites (242.4), Hispanics (154.4), and Asian/Other (141.7).

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

As shown in **Figure 4** (page 4), in 2001 the heart disease age-adjusted death rate for males was higher than for females in all four race/ethnic groups. Black males (411.9) had a higher rate than Black females (299.3). White males (298.3) had a higher rate than White females (199.1). Hispanic males (185.7) had a higher rate than Hispanic females (129.1), and Asian/Other males (170.6) had a higher rate than Asian/Other females (118.1). All of these differences were statistically significant.

Heart Disease Death Data for California Counties

Table 2 (page 9) displays the number of deaths, crude death rates, and age-adjusted death rates by county averaged over a three-year period, 1999 to 2001. This averaging is done to reduce the large fluctuations in the death rates that are inherent among counties with a small number of events and/or population.

The highest average number of heart disease deaths occurred in Los Angeles County (19,621.3) and the lowest in Alpine County (1.0).

The highest and lowest reliable heart disease crude death rates were in Lake County (362.9 deaths per 100,000 population) and San Benito County (129.9), respectively.

The ranking for heart disease age-adjusted death rates showed Yuba County with the highest reliable rate (292.0 deaths per 100,000 population) and San Benito County with the lowest (153.0).

Heart Disease Death Data by City Health Jurisdiction

Table 3 displays the number of deaths and crude death rates for California's three city health jurisdictions averaged over a three-year period, 1999 to 2001. Age-adjusted death rates were not calculated for the city health jurisdictions because city population estimates by age were not available.

**TABLE 3
HEART DISEASE DEATHS
AMONG THE CITY HEALTH JURISDICTIONS*
CALIFORNIA, 1999-2001**

CITY HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2000 POPULATION	CRUDE DEATH RATE
BERKELEY	178.3	102,743	173.6
LONG BEACH	1,129.0	461,522	244.6
PASADENA	404.0	133,936	301.6

Note: Rates are per 100,000 population. Data is ICD-10 codes I00-I09, I11, I13, I20-I51.

* Calculated using death data for 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.

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

The city of Long Beach had an average of 1,129.0 heart disease deaths, Pasadena had 404.0, and Berkeley had 178.3.

Pasadena had a heart disease crude death rate of 301.6 deaths per 100,000 population, Long Beach had a crude rate of 244.6, and Berkeley had a crude rate of 173.6.

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, sexes, race/ethnic groups, 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 year 2000 population standard is used as the basis for age-adjustments in this report.

Data Limitations and Qualifications

The heart disease death data presented in this report are based on vital statistics records with ICD-10 codes I00-I09, I11, I13, and I20-I51 as defined by the NCHS.³ Deaths by 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 Cause of death for 1979 through 1998 was coded using the International Classification of Diseases, Ninth Revision (ICD-9). 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.

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

Some of the [earlier reports](#) on this subject are available online.

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 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 death rates that may be underestimated among Hispanics and Asian/Other.⁷

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 where more than one race was listed. Race groups for 2000 and 2001 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 year 2000 population standard, in accordance with new statistical policy implemented by the NCHS. 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 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 city 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 are 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.¹¹

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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. (PHS) 99-1328, September 1999.

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, Ficenec 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
 HEART DISEASE DEATHS
 BY RACE/ETHNICITY, AGE, AND SEX
 CALIFORNIA, 2001
 (By Place of Residence)

AGE GROUPS	DEATHS			POPULATION			RATES			95% CONFIDENCE LIMITS					
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL		MALE		FEMALE	
										LOWER	UPPER	LOWER	UPPER	LOWER	UPPER
TOTAL															
Under 1	44	22	22	560,999	286,873	274,126	7.8	7.7	8.0	5.5	10.2	4.5	10.9	4.7	11.4
1 to 4	17	8	9	2,243,262	1,147,543	1,095,719	0.8 *	0.7 *	0.8 *	0.4	1.1	0.2	1.2	0.3	1.4
5 to 14	30	18	12	5,672,643	2,906,408	2,766,235	0.5	0.6 *	0.4 *	0.3	0.7	0.3	0.9	0.2	0.7
15 to 24	103	70	33	4,753,513	2,467,107	2,286,406	2.2	2.8	1.4	1.7	2.6	2.2	3.5	1.0	1.9
25 to 34	286	185	101	4,918,489	2,594,607	2,323,882	5.8	7.1	4.3	5.1	6.5	6.1	8.2	3.5	5.2
35 to 44	1,161	830	331	5,765,426	2,956,340	2,809,086	20.1	28.1	11.8	19.0	21.3	26.2	30.0	10.5	13.1
45 to 54	3,408	2,509	899	4,674,074	2,325,619	2,348,455	72.9	107.9	38.3	70.5	75.4	103.7	112.1	35.8	40.8
55 to 64	5,761	3,995	1,766	2,862,622	1,396,328	1,466,294	201.2	286.1	120.4	196.1	206.4	277.2	295.0	114.8	126.1
65 to 74	10,781	6,470	4,311	1,976,584	916,584	1,060,000	545.4	705.9	406.7	535.1	555.7	688.7	723.1	394.6	418.8
75 to 84	21,574	11,100	10,474	1,337,545	547,455	790,090	1,613.0	2,027.6	1,325.7	1,591.4	1,634.5	1,989.8	2,065.3	1,300.3	1,351.1
85 & Older	25,830	8,710	17,120	468,178	149,547	318,631	5,517.1	5,824.3	5,373.0	5,449.8	5,584.4	5,701.9	5,946.6	5,292.5	5,453.5
Unknown	9	7	2												
Total	69,004	33,924	35,080	35,233,335	17,694,411	17,538,924	195.8	191.7	200.0	194.4	197.3	189.7	193.8	197.9	202.1
Age-Adjusted							225.9	273.5	188.2	224.2	227.6	270.6	276.5	186.2	190.2
ASIAN/OTHER															
Under 1	2	1	1	69,275	35,440	33,835	2.9 *	2.8 *	3.0 *	0.0	6.9	0.0	8.4	0.0	8.7
1 to 4	1	1	0	274,035	140,219	133,816	0.4 *	0.7 *	0.0 +	0.0	1.1	0.0	2.1	-	-
5 to 14	3	2	1	682,107	351,057	331,050	0.4 *	0.6 *	0.3 *	0.0	0.9	0.0	1.4	0.0	0.9
15 to 24	8	5	3	626,372	320,815	305,557	1.3 *	1.6 *	1.0 *	0.4	2.2	0.2	2.9	0.0	2.1
25 to 34	21	16	5	663,350	335,748	327,602	3.2	4.8 *	1.5 *	1.8	4.5	2.4	7.1	0.2	2.9
35 to 44	98	76	22	709,159	345,299	363,860	13.8	22.0	6.0	11.1	16.6	17.1	27.0	3.5	8.6
45 to 54	237	183	54	596,166	282,159	314,007	39.8	64.9	17.2	34.7	44.8	55.5	74.3	12.6	21.8
55 to 64	398	288	110	334,827	159,091	175,736	118.9	181.0	62.6	107.2	130.5	160.1	201.9	50.9	74.3
65 to 74	808	476	332	224,875	99,888	124,987	359.3	476.5	265.6	334.5	384.1	433.7	519.3	237.1	294.2
75 to 84	1,459	756	703	131,980	56,160	75,820	1,105.5	1,346.2	927.2	1,048.7	1,162.2	1,250.2	1,442.1	858.7	995.7
85 & Older	1,328	559	769	41,442	17,481	23,961	3,204.5	3,197.8	3,209.4	3,032.1	3,376.8	2,932.7	3,462.8	2,982.5	3,432.5
Unknown	1	0	1												
Total	4,364	2,363	2,001	4,353,588	2,143,357	2,210,231	100.2	110.2	90.5	97.3	103.2	105.8	114.7	86.6	94.5
Age-Adjusted							141.7	170.6	118.1	137.5	146.0	163.6	177.6	112.9	123.3
BLACK															
Under 1	5	2	3	37,075	18,968	18,107	13.5 *	10.5 *	16.6 *	1.7	25.3	0.0	25.2	0.0	35.3
1 to 4	3	1	2	148,109	75,817	72,292	2.0 *	1.3 *	2.8 *	0.0	4.3	0.0	3.9	0.0	6.6
5 to 14	2	2	0	413,833	209,845	203,988	0.5 *	1.0 *	0.0 +	0.0	1.2	0.0	2.3	-	-
15 to 24	18	11	7	364,172	192,652	171,520	4.9 *	5.7 *	4.1 *	2.7	7.2	2.3	9.1	1.1	7.1
25 to 34	64	35	29	344,312	182,447	161,865	18.6	19.2	17.9	14.0	23.1	12.8	25.5	11.4	24.4
35 to 44	223	133	90	385,985	188,545	197,440	57.8	70.5	45.6	50.2	65.4	58.6	82.5	36.2	55.0
45 to 54	597	377	220	302,852	142,935	159,917	197.1	263.8	137.6	181.3	212.9	237.1	290.4	119.4	155.8
55 to 64	761	472	289	172,047	79,765	92,282	442.3	591.7	313.2	410.9	473.7	538.4	645.1	277.1	349.3
65 to 74	1,103	616	487	107,106	47,268	59,838	1,029.8	1,303.2	813.9	969.0	1,090.6	1,200.3	1,406.1	741.6	886.1
75 to 84	1,358	624	734	61,885	23,844	38,041	2,194.4	2,617.0	1,929.5	2,077.7	2,311.1	2,411.7	2,822.3	1,789.9	2,069.1
85 & Older	1,230	377	853	18,436	5,511	12,925	6,671.7	6,840.9	6,599.6	6,298.9	7,044.6	6,150.3	7,531.4	6,156.7	7,042.5
Unknown	2	2	0												
Total	5,366	2,652	2,714	2,355,812	1,167,597	1,188,215	227.8	227.1	228.4	221.7	233.9	218.5	235.8	219.8	237.0
Age-Adjusted							348.0	411.9	299.3	338.5	357.6	395.0	428.8	287.9	310.6
HISPANIC															
Under 1	24	14	10	272,023	139,031	132,992	8.8	10.1 *	7.5 *	5.3	12.4	4.8	15.3	2.9	12.2
1 to 4	8	3	5	1,070,328	547,371	522,957	0.7 *	0.5 *	1.0 *	0.2	1.3	0.0	1.2	0.1	1.8
5 to 14	14	7	7	2,398,512	1,225,596	1,172,916	0.6 *	0.6 *	0.6 *	0.3	0.9	0.1	1.0	0.2	1.0
15 to 24	34	24	10	1,664,220	861,697	802,523	2.0	2.8	1.2 *	1.4	2.7	1.7	3.9	0.5	2.0
25 to 34	86	59	27	1,767,279	977,600	789,679	4.9	6.0	3.4	3.8	5.9	4.5	7.6	2.1	4.7
35 to 44	193	141	52	1,701,500	916,547	784,953	11.3	15.4	6.6	9.7	12.9	12.8	17.9	4.8	8.4
45 to 54	513	380	133	1,050,953	536,610	514,343	48.8	70.8	25.9	44.6	53.0	63.7	77.9	21.5	30.3
55 to 64	804	527	277	532,881	260,356	272,525	150.9	202.4	101.6	140.4	161.3	185.1	219.7	89.7	113.6
65 to 74	1,535	878	657	331,669	152,519	179,150	462.8	575.7	366.7	439.7	486.0	537.6	613.7	338.7	394.8
75 to 84	1,997	1,045	952	172,771	71,849	100,922	1,155.9	1,454.4	943.3	1,105.2	1,206.6	1,366.3	1,542.6	883.4	1,003.2
85 & Older	1,860	644	1,216	58,574	19,479	39,095	3,175.5	3,306.1	3,110.4	3,031.2	3,319.8	3,050.8	3,561.5	2,935.5	3,285.2
Unknown	1	1	0												
Total	7,069	3,723	3,346	11,020,710	5,708,655	5,312,055	64.1	65.2	63.0	62.6	65.6	63.1	67.3	60.9	65.1
Age-Adjusted							154.4	185.7	129.1	150.7	158.1	179.3	192.1	124.6	133.5
WHITE															
Under 1	13	5	8	182,626	93,434	89,192	7.1 *	5.4 *	9.0 *	3.2	11.0	0.7	10.0	2.8	15.2
1 to 4	5	3	2	750,790	384,136	366,654	0.7 *	0.8 *	0.5 *	0.1	1.2	0.0	1.7	0.0	1.3
5 to 14	11	7	4	2,178,191	1,119,910	1,058,281	0.5 *	0.6 *	0.4 *	0.2	0.8	0.2	1.1	0.0	0.7
15 to 24	43	30	13	2,098,749	1,091,943	1,006,806	2.0	2.7	1.3 *	1.4	2.7	1.8	3.7	0.6	2.0
25 to 34	115	75	40	2,143,548	1,098,812	1,044,736	5.4	6.8	3.8	4.4	6.3	5.3	8.4	2.6	5.0
35 to 44	647	480	167	2,968,782	1,505,949	1,462,833	21.8	31.9	11.4	20.1	23.5	29.0	34.7	9.7	13.1
45 to 54	2,061	1,569	492	2,724,103	1,363,915	1,360,188	75.7	115.0	36.2	72.4	78.9	109.3	120.7	33.0	39.4
55 to 64	3,798	2,708	1,090	1,822,867	897,116	925,751	208.4	301.9	117.7	201.7	215.0	290.5	313.2	110.8	124.7
65 to 74	7,335	4,500	2,835	1,312,934	616,909	696,025	558.7	729.4	407.3	545.9	571.5	708.1	739.0	392.3	422.3
75 to 84	16,760	8,675	8,085	970,909	395,602	575,307	1,726.2	2,192.9	1,405.3	1,752.4	1,752.4	2,146.7	2,250.0	1,374.7	1,436.0
85 & Older	21,412	7,130	14,282	349,726	107,076	242,650	6,122.5	6,658.8	5,885.8	6,040.5	6,204.5	6,504.3	6,813.4	5,789.3	5,982.4
Unknown	5	4	1												
Total	52,205	25,186	27,019	17,503,225	8,674,802	8,828,423	298.3	290.3	306.0	295.7	300.8	286.7	293.9	302.4	309.7
Age-Adjusted															

TABLE 2
HEART DISEASE DEATHS
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	69,145.7	100.0	34,653,395	199.5	233.1	231.4	234.9
ALAMEDA	2,812.7	4.1	1,470,155	191.3	222.7	214.4	230.9
ALPINE	1.0	0.0 a	1,239	80.7 *	98.9 *	0.0	293.3
AMADOR	116.7	0.2	34,853	334.7	222.1	181.2	262.9
BUTTE	580.0	0.8	207,158	280.0	196.5	180.2	212.9
CALAVERAS	113.3	0.2	42,041	269.6	191.9	156.1	227.7
COLUSA	43.7	0.1	20,973	208.2	202.5	142.2	262.7
CONTRA COSTA	1,832.7	2.7	931,946	196.6	209.0	199.4	218.6
DEL NORTE	67.0	0.1	31,155	215.1	192.4	146.0	238.7
EL DORADO	314.0	0.5	163,197	192.4	199.1	176.9	221.3
FRESNO	1,603.7	2.3	811,179	197.7	239.8	228.0	251.5
GLENN	60.3	0.1	29,298	205.9	188.3	140.4	236.1
HUMBOLDT	303.3	0.4	128,419	236.2	232.5	206.3	258.7
IMPERIAL	229.3	0.3	154,549	148.4	193.2	168.1	218.2
INYO	60.3	0.1	18,437	327.2	213.4	158.8	267.9
KERN	1,520.7	2.2	677,372	224.5	271.5	257.8	285.1
KINGS	198.0	0.3	126,672	156.3	245.2	210.8	279.5
LAKE	218.0	0.3	60,072	362.9	225.8	194.9	256.8
LASSEN	58.3	0.1	35,959	162.2	185.3	137.7	232.8
LOS ANGELES	19,621.3	28.4	9,838,861	199.4	257.4	253.8	261.0
MADERA	260.0	0.4	126,394	205.7	220.0	193.2	246.7
MARIN	498.3	0.7	248,397	200.6	195.2	178.0	212.4
MARIPOSA	43.7	0.1	16,762	260.5	174.3	121.9	226.8
MENDOCINO	206.7	0.3	90,442	228.5	208.1	179.7	236.5
MERCED	358.3	0.5	215,256	166.5	225.8	202.3	249.2
MODOC	24.0	0.0 a	10,481	229.0	165.7	98.8	232.6
MONO	8.0	0.0 a	10,891	73.5 *	106.0 *	30.8	181.3
MONTEREY	634.3	0.9	401,886	157.8	200.8	185.2	216.4
NAPA	341.0	0.5	127,084	268.3	199.3	177.9	220.7
NEVADA	234.7	0.3	97,020	241.9	164.1	142.9	185.2
ORANGE	5,222.0	7.6	2,833,190	184.3	253.9	247.0	260.9
PLACER	518.0	0.7	243,646	212.6	221.7	202.6	240.8
PLUMAS	53.0	0.1	20,852	254.2	172.7	125.7	219.7
RIVERSIDE	4,037.7	5.8	1,570,885	257.0	250.2	242.4	257.9
SACRAMENTO	2,588.3	3.7	1,212,527	213.5	247.7	238.1	257.3
SAN BENITO	67.3	0.1	51,853	129.9	153.0	116.4	189.6
SAN BERNARDINO	3,369.3	4.9	1,727,452	195.0	286.6	276.8	296.3
SAN DIEGO	5,575.7	8.1	2,943,001	189.5	218.1	212.4	223.8
SAN FRANCISCO	1,821.7	2.6	792,049	230.0	184.3	175.7	192.8
SAN JOAQUIN	1,300.0	1.9	579,712	224.2	242.7	229.4	255.9
SAN LUIS OBISPO	600.7	0.9	254,818	235.7	198.8	182.8	214.9
SAN MATEO	1,299.3	1.9	747,061	173.9	172.6	163.2	182.0
SANTA BARBARA	837.7	1.2	412,071	203.3	200.8	187.2	214.4
SANTA CLARA	2,547.7	3.7	1,763,252	144.5	203.2	195.2	211.2
SANTA CRUZ	495.3	0.7	260,248	190.3	199.9	182.2	217.6
SHASTA	462.3	0.7	175,777	263.0	230.9	209.8	251.9
SIERRA	9.7	0.0 a	3,457	279.6 *	157.0 *	57.1	256.8
SISKIYOU	127.3	0.2	45,194	281.7	215.4	177.6	253.2
SOLANO	653.7	0.9	399,841	163.5	233.7	215.5	251.9
SONOMA	1,058.7	1.5	459,258	230.5	208.3	195.7	220.9
STANISLAUS	1,100.3	1.6	459,025	239.7	278.8	262.3	295.3
SUTTER	211.3	0.3	82,040	257.6	244.6	211.5	277.6
TEHAMA	165.3	0.2	56,666	291.8	219.8	185.9	253.8
TRINITY	31.3	0.0 a	13,490	232.3	185.3	119.4	251.2
TULARE	768.0	1.1	379,944	202.1	240.1	223.1	257.1
TUOLUMNE	170.7	0.2	56,125	304.1	224.5	190.5	258.6
VENTURA	1,279.3	1.9	753,820	169.7	208.7	197.2	220.1
YOLO	259.0	0.4	164,010	157.9	194.6	170.9	218.3
YUBA	151.7	0.2	63,983	237.0	292.0	245.5	338.6

Note : Rates are per 100,000 population. ICD-10 codes I00-I09, I11, I13, I20-I51.

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

* Death rate unreliable, relative standard error is greater than or equal to 23 percent.

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

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