



Center for Health Statistics



August 2004

DATA SUMMARY
No. DS04-08000

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

Highlights

- In 2002, 83.9 percent of all heart disease deaths in California occurred among people aged 65 years and older.
- During 2002 the California heart disease age-adjusted death rate of 218.2 was lower than the United States rate of 240.4.
- In 2002 Blacks had a heart disease age-adjusted death rate significantly higher than Hispanics, Asian/Other, and Whites.
- From 2001 to 2002, the California heart disease crude and age-adjusted death rates decreased significantly.

Heart Disease Deaths in California, 2002

By Daniel H. Cox

Introduction

Heart disease has historically been the leading cause of death in the United States and in California. As of 2001, 23 million noninstitutionalized adults had been diagnosed with heart disease in the United States.¹ During that same year 4.3 million hospital discharges were attributed to heart disease with an average length of stay of 4.6 days.¹ There were 695,754 heart disease deaths in the United States in 2002.²

This report presents data on heart disease deaths during 2002 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 initiative, 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 9) displays heart disease death data for 2002 by race/ethnicity, age, and sex. During this period, the number of deaths attributed to heart disease was slightly higher among females (34,432) than among males (33,955). As shown in **Figure 1** (page 2), the number of heart disease deaths among Whites (51,159) was much higher than Hispanics (7,224), Blacks (5,445), and Asian/Other (4,559).

¹ National Center for Health Statistics. Division of Data Services. Fast Stats A to Z: Heart Disease, March 2004. <http://www.cdc.gov/nchs/fastats/heart.htm>

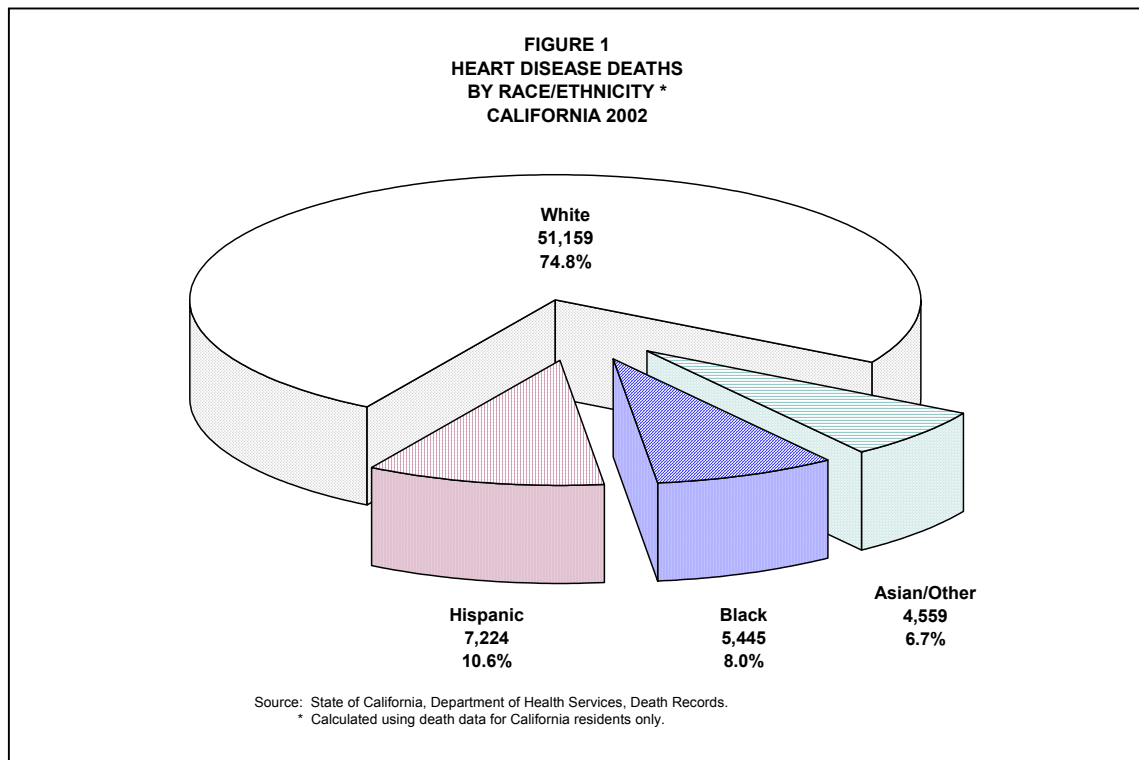
² National Center for Health Statistics. Deaths: Preliminary Data for 2002, National Vital Statistics Reports DHHS Publication Number (PHS) 2004-1120, PRS 04-0167, Volume 52, Number 13, February 2004.

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

⁴ Shippen S, Wilson C. County Health Status Profiles 2004. Center for Health Statistics, California Department of Health Services. April 2004.

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 2002 with 83.9 percent of all heart disease deaths involving people aged 65 years and older. This age group, within each respective race/ethnic group, accounted for 86.8 percent of all heart disease deaths among Whites, 82.4 percent among Asian/Other, 74.8 percent among Hispanics, and 69.7 percent among Blacks.



Heart Disease Crude Death Rates

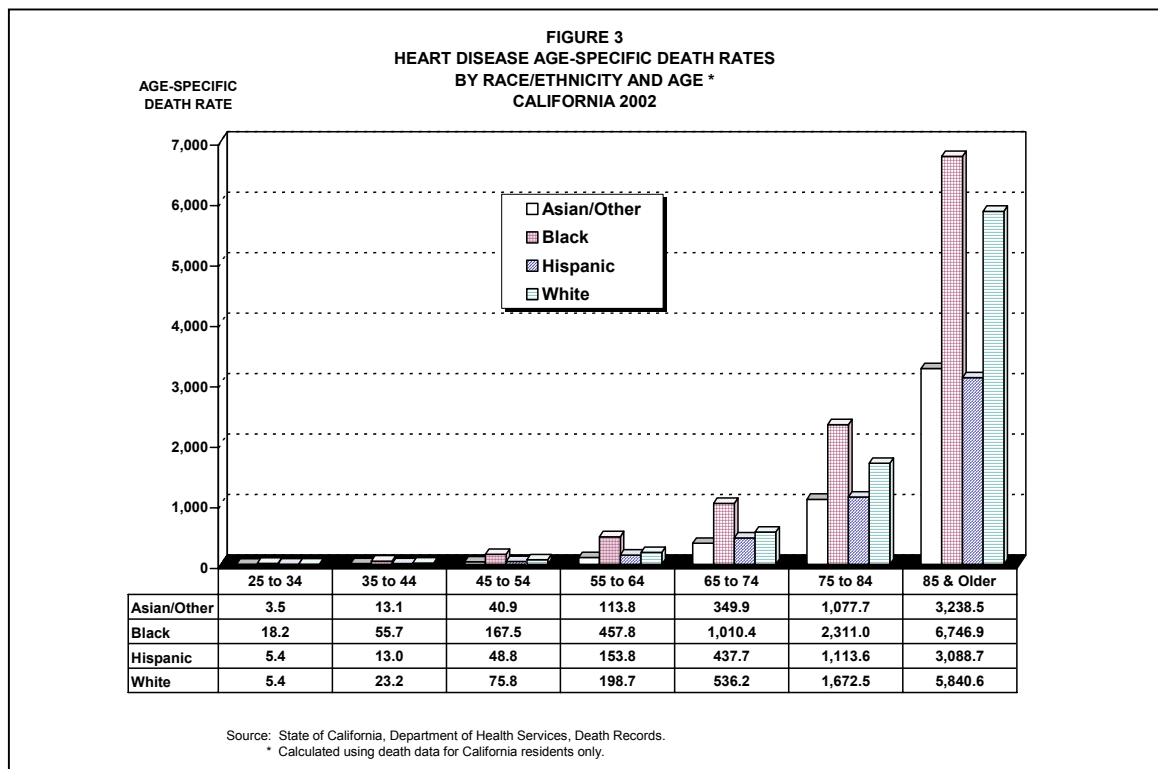
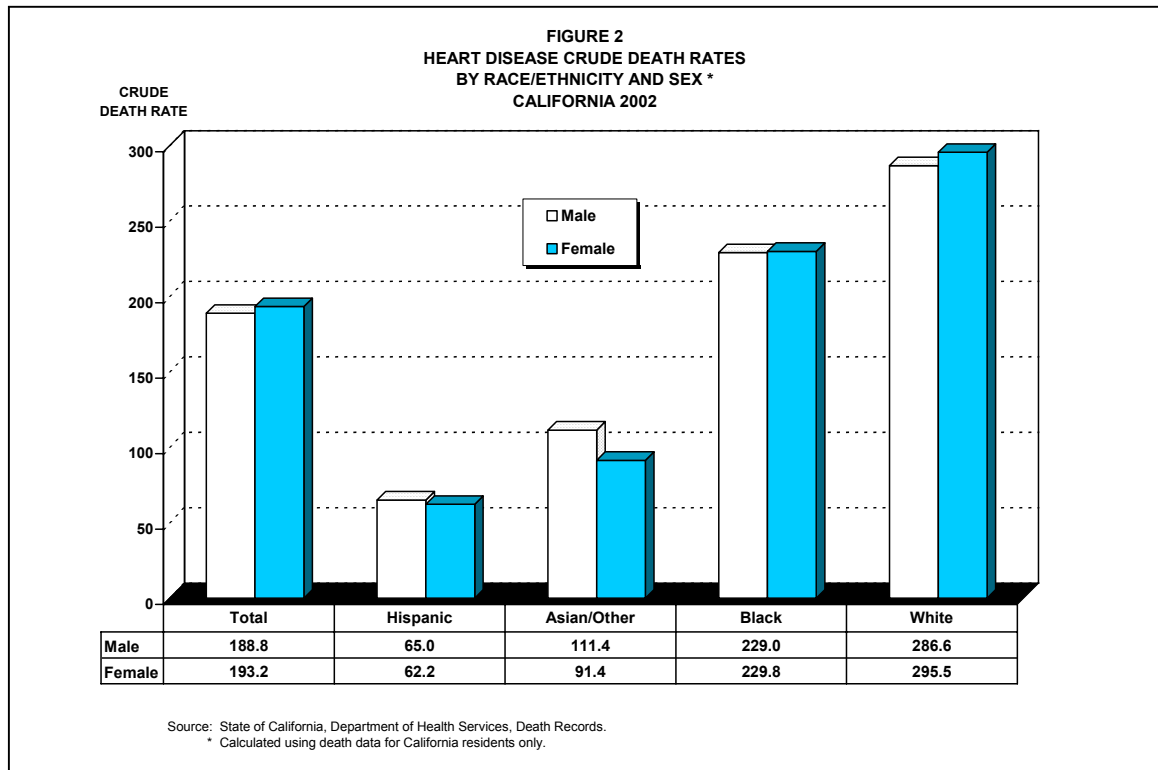
The heart disease crude death rate for California decreased from 195.8 deaths per 100,000 population in 2001 to 191.0 in 2002.⁵ This decrease was statistically significant. As shown in **Table 1** (page 9), Whites had the highest crude death rate in 2002, a rate of 291.1. Blacks were next with a crude rate of 229.4, followed by Asian/Other with a rate of 101.3 and Hispanics with a rate of 63.6. Two of these four rates increased from 2001 when Blacks had a heart disease crude death rate of 227.8 and Asian/Other had a rate of 100.2. The rates for Whites and Hispanics decreased from 2001, when the rates were 298.3 and 64.1 respectively. The only statistically significant change from 2001 to 2002 was the decrease in the heart disease crude death rate among Whites.

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 295.5 deaths per 100,000 population, and White males had a rate of 286.6. Black females had a rate of 229.8 and Black males had a slightly lower rate of 229.0. 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 111.4, which was significantly higher than the rate of 91.4 for Asian/Other females. **Figure 2** also shows Hispanic males had a rate of 65.0 and

⁵ Cox D. Heart Disease Deaths in California, 2001. Data Summary. Center for Health Statistics, California Department of Health Services. December 2003.

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

Hispanic females had a slightly lower rate of 62.2, 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

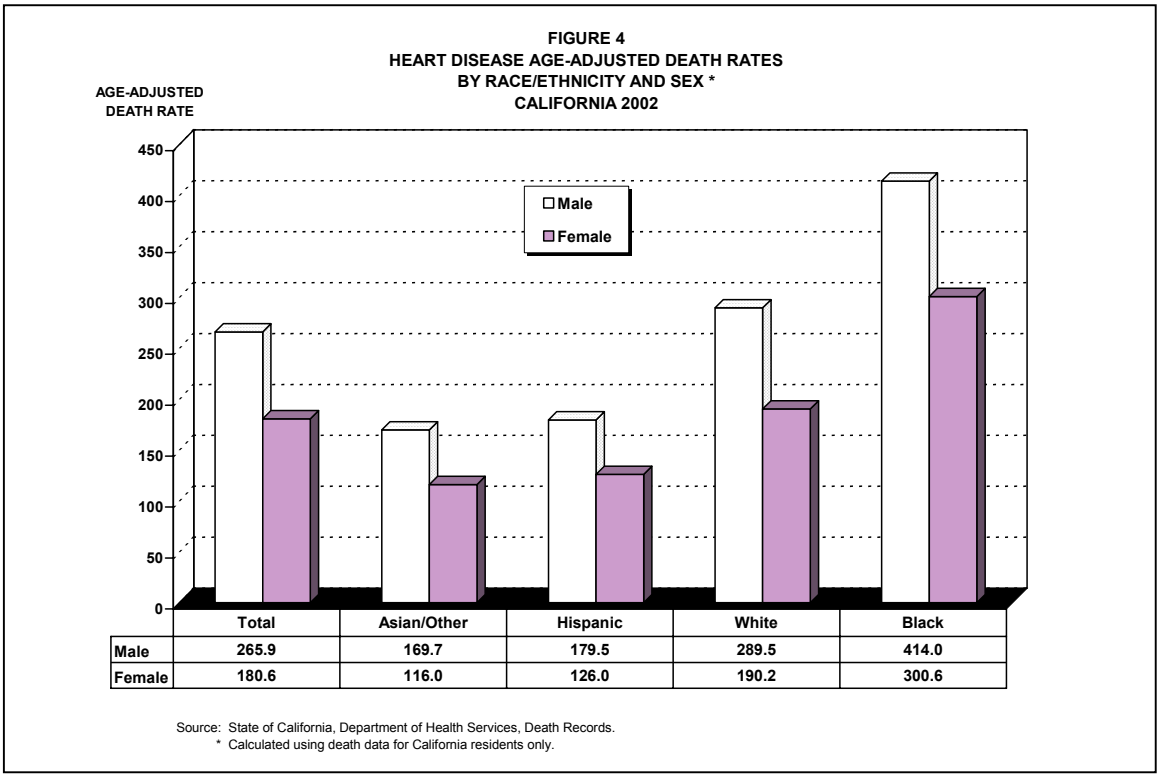
In **Table 1** (page 9) reliable age-specific rates show that among the sexes in 2002, males in all four race/ethnic groups had higher heart disease death rates than females in the corresponding race/ethnic groups. The only exception to this pattern was among the Asian/Other race/ethnic group in the 85 and Older age group where females had a slightly higher heart disease death rate than males.

Figure 3 (page 3) shows that in 2002, 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 15 to 24 age group where Blacks had a significantly higher rate than Hispanics and Whites. In this age group the death rate for Asian/Other was not reliable.

Heart Disease Age-Adjusted Death Rates

In 2002 the California heart disease age-adjusted death rate of 218.2 deaths per 100,000 population was lower than the United States rate of 240.4.² The California rate decreased significantly from 2001 when the rate was 225.9.⁵

Displayed in **Table 1** (page 9), a comparison among the race/ethnic groups shows that in 2002 Blacks had a heart disease age-adjusted death rate (350.2) significantly higher than Whites (233.4), Hispanics (150.1), and Asian/Other (140.1). Three of these four rates decreased from 2001 with declines seen among Whites (242.4), Hispanics (154.4), and Asian/Other (141.7). Contrary to the finding for the other three race/ethnic groups the rate for Blacks (348.0) increased from 2001. The only statistically significant difference from 2001 to 2002 was the decrease in the age-adjusted death rate for Whites.



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 2002 the heart disease age-adjusted death rate for males was higher than for females in all four race/ethnic groups. Black males (414.0) had a higher rate than Black females (300.6). White males (289.5) had a higher rate than White females (190.2). Hispanic males (179.5) had a higher rate than Hispanic females (126.0), and Asian/Other males (169.7) had a higher rate than Asian/Other females (116.0). All of these differences between the sexes were statistically significant.

Heart Disease Death Data for California Counties

Table 2 (page 10) displays the number of deaths, crude death rates, and age-adjusted death rates by county averaged over a three-year period, 2000 to 2002. 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 (19,283.0) and the lowest in Alpine County (1.7).

The highest and lowest reliable heart disease crude death rates were in Lake County (354.4 deaths per 100,000 population) and San Benito County (121.9), respectively.

The ranking for heart disease age-adjusted death rates showed Stanislaus County with the highest reliable rate (285.0 deaths per 100,000 population) and San Benito County with the lowest (144.0).

**TABLE 3
HEART DISEASE DEATHS
AMONG THE CITY HEALTH JURISDICTIONS*
CALIFORNIA, 2000-2002**

CITY HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2001 POPULATION	CRUDE DEATH RATE
BERKELEY	180.7	103,600	174.4
LONG BEACH	1,136.7	466,500	243.7
PASADENA	375.7	135,300	277.7

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, E-4 Population Estimates for Cities, Counties and the State, 2001-2003, with 2000 DRU Benchmark, May 2003.
State of California, Department of Health Services, Death records.

Heart Disease Death Data by City Health Jurisdiction

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

Table 3 (page 5) displays the number of deaths and crude death rates for California's three city health jurisdictions averaged over a three-year period, 2000 to 2002. Age-adjusted death rates were not calculated for the city health jurisdictions because city population estimates by age were not available.

The city of Long Beach had an average of 1,136.7 heart disease deaths, Pasadena had 375.7, and Berkeley had 180.7.

Pasadena had a heart disease crude death rate of 277.7 deaths per 100,000 population, Long Beach had a crude rate of 243.7, and Berkeley had a crude rate of 174.4.

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 (*).

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

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.

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 later 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 10). 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 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,

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. (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; Volume 47, No. 3, Hyattsville, Maryland: National Center for Health Statistics. October 1998

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.

“Vital Statistics of California.”¹⁰ Formulas used to calculate death rates are included in the technical notes of the “County Health Status Profiles” report.⁴

This Data Summary was prepared by Daniel H. Cox, Center for Health Statistics, 1616 Capitol Avenue, Suite 74.165, MS 5103, P.O. Box 997410, Sacramento, CA 95814, Telephone (916) 552-8095 and Fax (916) 650-6889.

¹⁰ Ficene S, Bindra K. Vital Statistics of California 2001. Center for Health Statistics, California Department of Health Services. April 2004.

TABLE 1
HEART DISEASE DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2002
(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	50	28	22	565,286	289,063	276,223	8.8	9.7	8.0	6.4	11.3	6.1	13.3	4.6	11.3
1 to 4	13	7	6	2,259,315	1,155,699	1,103,616	0.6 *	0.6 *	0.5 *	0.3	0.9	0.2	1.1	0.1	1.0
5 to 14	26	14	12	5,779,949	2,962,038	2,817,911	0.4	0.5 *	0.4 *	0.3	0.6	0.2	0.7	0.2	0.7
15 to 24	96	75	21	4,878,693	2,531,467	2,347,226	2.0	3.0	0.9	1.6	2.4	2.3	3.6	0.5	1.3
25 to 34	295	221	74	4,876,792	2,566,475	2,310,317	6.0	8.6	3.2	5.4	6.7	7.5	9.7	2.5	3.9
35 to 44	1,208	894	314	5,762,850	2,962,675	2,800,175	21.0	30.2	11.2	19.8	22.1	28.2	32.2	10.0	12.5
45 to 54	3,403	2,504	899	4,794,731	2,387,728	2,407,003	71.0	104.9	37.3	68.6	73.4	100.8	109.0	34.9	39.8
55 to 64	5,946	4,112	1,834	3,041,927	1,484,478	1,557,449	195.5	277.0	117.8	190.5	200.4	268.5	285.5	112.4	123.1
65 to 74	10,463	6,359	4,104	1,998,910	931,513	1,067,397	523.4	682.7	384.5	513.4	533.5	665.9	699.4	372.7	396.3
75 to 84	21,295	10,894	10,401	1,360,295	557,358	802,937	1,565.5	1,954.6	1,295.4	1,544.4	1,586.5	1,917.9	1,991.3	1,270.5	1,320.3
85 & Older	25,586	8,845	16,741	483,490	155,701	327,789	5,291.9	5,680.8	5,107.2	5,227.1	5,356.8	5,562.4	5,799.1	5,029.9	5,184.6
Unknown	6	2	4												
Total	68,387	33,955	34,432	35,802,238	17,984,195	17,818,043	191.0	188.8	193.2	189.6	192.4	186.8	190.8	191.2	195.3
Age-Adjusted							218.2	265.9	180.6	216.5	219.8	263.0	268.7	178.7	182.5
ASIAN/OTHER															
Under 1	9	6	3	71,070	36,363	34,707	12.7 *	16.5 *	8.6 *	4.4	20.9	3.3	29.7	0.0	18.4
1 to 4	1	1	0	282,531	144,555	137,976	0.4 *	0.7 *	0.0 +	0.0	1.0	0.0	2.0	-	-
5 to 14	2	2	0	704,536	362,486	342,050	0.3 *	0.6 *	0.0 +	0.0	0.7	0.0	1.3	-	-
15 to 24	8	8	0	647,043	331,690	315,353	1.2 *	2.4 *	0.0 +	0.4	2.1	0.7	4.1	-	-
25 to 34	24	21	3	679,965	344,174	335,791	3.5	6.1	0.9 *	2.1	4.9	3.5	8.7	0.0	1.9
35 to 44	94	81	13	719,105	350,905	368,200	13.1	23.1	3.5 *	10.4	15.7	18.1	28.1	1.6	5.4
45 to 54	254	190	64	620,977	294,261	326,716	40.9	64.6	19.6	35.9	45.9	55.4	73.7	14.8	24.4
55 to 64	410	295	115	360,153	170,641	189,512	113.8	172.9	60.7	102.8	124.9	153.1	192.6	49.6	71.8
65 to 74	815	470	345	232,917	104,165	128,752	349.9	451.2	268.0	373.9	410.4	492.0	239.7	296.2	
75 to 84	1,502	798	704	139,375	58,899	80,476	1,077.7	1,354.9	874.8	1,023.2	1,132.2	1,260.9	1,448.9	810.2	939.4
85 & Older	1,440	598	842	44,465	18,527	25,938	3,238.5	3,227.7	3,246.2	3,071.2	3,405.8	2,969.0	3,486.4	3,026.9	3,465.5
Unknown	0	0	0												
Total	4,559	2,470	2,089	4,502,137	2,216,666	2,285,471	101.3	111.4	91.4	98.3	104.2	107.0	115.8	87.5	95.3
Age-Adjusted							140.1	169.7	116.0	136.0	144.2	162.8	176.5	111.0	121.0
BLACK															
Under 1	5	1	4	37,035	18,947	18,088	13.5 *	5.3 *	22.1 *	1.7	25.3	0.0	15.6	0.4	43.8
1 to 4	2	1	1	148,422	75,963	72,459	1.3 *	1.3 *	1.4 *	0.0	3.2	0.0	3.9	0.0	4.1
5 to 14	3	3	0	412,599	209,510	203,089	0.7 *	1.4 *	0.0 +	0.0	1.5	0.0	3.1	-	-
15 to 24	20	15	5	370,840	196,122	174,718	5.4	7.6 *	2.9 *	3.0	7.8	3.8	11.5	0.4	5.4
25 to 34	62	38	24	340,450	181,068	159,382	18.2	21.0	15.1	13.7	22.7	14.3	27.7	9.0	21.1
35 to 44	213	139	74	382,583	187,179	195,404	55.7	74.3	37.9	48.2	63.2	61.9	86.6	29.2	46.5
45 to 54	524	328	196	312,810	147,562	165,248	167.5	222.3	118.6	153.2	181.9	198.2	246.3	102.0	135.2
55 to 64	819	508	311	178,888	82,569	96,319	457.8	615.2	322.9	426.5	489.2	561.7	668.7	287.0	358.8
65 to 74	1,099	630	469	108,774	48,191	60,583	1,010.4	1,307.3	774.1	950.6	1,070.1	1,205.2	1,409.4	704.1	844.2
75 to 84	1,442	653	789	62,397	24,072	38,325	2,311.0	2,712.7	2,058.7	2,191.7	2,430.3	2,504.6	2,920.8	1,915.1	2,202.4
85 & Older	1,255	379	876	18,601	5,543	13,058	6,746.9	6,837.5	6,708.5	6,373.7	7,120.2	6,149.1	7,525.8	6,264.3	7,152.8
Unknown	1	0	1												
Total	5,445	2,695	2,750	2,373,399	1,176,726	1,196,673	229.4	229.0	229.8	223.3	235.5	220.4	237.7	221.2	238.4
Age-Adjusted							350.2	414.0	300.6	340.6	359.7	397.1	430.8	289.3	311.9
HISPANIC															
Under 1	18	7	11	276,097	141,109	134,988	6.5 *	5.0 *	8.1 *	3.5	9.5	1.3	8.6	3.3	13.0
1 to 4	4	0	4	1,083,387	553,994	529,393	0.4 *	0.0 +	0.8 *	0.0	0.7	-	-	0.0	1.5
5 to 14	13	5	8	2,502,767	1,279,414	1,223,353	0.5 *	0.4 *	0.7 *	0.2	0.8	0.0	0.7	0.2	1.1
15 to 24	40	32	8	1,717,001	889,356	827,645	2.3	3.6	1.0 *	1.6	3.1	2.4	4.8	0.3	1.6
25 to 34	95	75	20	1,748,261	960,276	787,985	5.4	7.8	2.5	4.3	6.5	6.0	9.6	1.4	3.7
35 to 44	228	182	46	1,756,084	951,727	804,357	13.0	19.1	5.7	11.3	14.7	16.3	21.9	4.1	7.4
45 to 54	544	382	162	1,113,871	570,189	543,682	48.8	67.0	29.8	44.7	52.9	60.3	73.7	25.2	34.4
55 to 64	876	591	285	569,723	279,445	290,278	153.8	211.5	98.2	143.6	163.9	194.4	228.5	86.8	109.6
65 to 74	1,496	874	622	341,805	157,826	183,979	437.7	553.8	338.1	415.5	459.9	517.1	590.5	311.5	364.7
75 to 84	2,042	1,009	1,033	183,377	76,439	106,938	1,113.6	1,320.0	966.0	1,065.3	1,161.9	1,238.6	1,401.5	907.1	1,024.9
85 & Older	1,868	663	1,205	60,479	19,997	40,482	3,088.7	3,315.5	2,976.6	2,948.6	3,228.7	3,063.1	3,567.9	2,808.6	3,144.7
Unknown	0	0	0												
Total	7,224	3,820	3,404	11,352,852	5,879,772	5,473,080	63.6	65.0	62.2	62.2	65.1	62.9	67.0	60.1	64.3
Age-Adjusted							150.1	179.5	126.0	146.5	153.7	173.3	185.6	121.8	130.3
WHITE															
Under 1	18	14	4	181,084	92,644	88,440	9.9 *	15.1 *	4.5 *	5.3	14.5	7.2	23.0	0.1	9.0
1 to 4	6	5	1	744,975	381,187	363,788	0.8 *	1.3 *	0.3 *	0.2	1.4	0.2	2.5	0.0	0.8
5 to 14	8	4	4	2,160,047	1,110,628	1,049,419	0.4 *	0.4 *	0.4 *	0.1	0.6	0.0	0.7	0.0	0.8
15 to 24	28	20	8	2,143,809	1,114,299	1,029,510	1.3	1.8	0.8 *	0.8	1.8	1.0	2.6	0.2	1.3
25 to 34	114	87	27	2,108,116	1,080,957	1,027,159	5.4	8.0	2.6	4.4	6.4	6.4	9.7	1.6	3.6
35 to 44	673	492	181	2,905,078	1,472,864	1,432,214	23.2	33.4	12.6	21.4	24.9	30.5	36.4	10.8	14.5
45 to 54	2,081	1,604	477	2,747,073	1,375,716	1,371,357	75.8	116.6	34.8	72.5	79.0	110.9	122.3	31.7	37.9
55 to 64	3,841	2,718	1,123	1,933,163	951,823	981,340	198.7	285.6	114.4	192.4	205.0	274.8	296.3	107.7	121.1
65 to 74	7,053	4,385	2,668	1,315,414	621,331	694,083	536.2	705.7	384.4	523.7	548.7	684.9	726.6	369.8	399.0
75 to 84	16,309	8,434	7,875	975,146	397,948	577,198	1,672.5	2,119.4	1,364.3	1,646.8	1,698.1	2,074.1	2,164.6	1,334.2	1,394.5
85 & Older	21,023	7,205	13,818	359,945	111,634	248,311	5,840.6	6,454.1	5,564.8	5,761.7	5,919.6	6,305.1	6,603.2	5,472.0	5,657.6
Unknown	5	2	3												
Total	51,159	24,970	26,189	17,573,850	8,711,031	8,862,819	291.1	286.6	295.5	288.6	293.6	283.1	290.2	291.9	299.1

TABLE 2
HEART DISEASE DEATHS
CALIFORNIA, 2000-2002
(By Place of Residence)

COUNTY	2000-2002 DEATHS (Average)	PERCENT	2001 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	68,641.3	100.0	35,233,335	194.8	224.7	223.0	226.4
ALAMEDA	2,717.3	4.0	1,492,004	182.1	209.5	201.6	217.4
ALPINE	1.7	0.0 a	1,268	131.4 *	155.7 *	0.0	393.1
AMADOR	113.3	0.2	35,242	321.6	211.2	171.8	250.6
BUTTE	617.0	0.9	213,040	289.6	203.0	186.6	219.4
CALAVERAS	115.0	0.2	43,392	265.0	186.1	151.8	220.5
COLUSA	40.0	0.1	22,012	181.7	174.3	120.1	228.6
CONTRA COSTA	1,874.7	2.7	942,662	198.9	206.5	197.1	215.9
DEL NORTE	72.0	0.1	31,801	226.4	200.1	153.6	246.7
EL DORADO	309.3	0.5	168,912	183.1	188.0	166.9	209.1
FRESNO	1,630.0	2.4	825,365	197.5	237.0	225.4	248.5
GLENN	58.3	0.1	30,291	192.6	176.2	130.6	221.9
HUMBOLDT	299.3	0.4	129,211	231.7	224.9	199.4	250.4
IMPERIAL	229.0	0.3	161,177	142.1	182.5	158.9	206.2
INYO	61.7	0.1	18,510	333.2	215.3	160.7	269.9
KERN	1,546.7	2.3	694,749	222.6	266.5	253.2	279.8
KINGS	196.0	0.3	129,375	151.5	232.3	199.6	265.0
LAKE	220.0	0.3	62,080	354.4	218.9	189.1	248.7
LASSEN	58.0	0.1	36,759	157.8	176.8	131.3	222.3
LOS ANGELES	19,283.0	28.1	9,925,413	194.3	247.0	243.5	250.5
MADERA	267.3	0.4	131,052	204.0	217.6	191.5	243.7
MARIN	494.3	0.7	249,634	198.0	188.5	171.9	205.2
MARIPOSA	44.7	0.1	17,218	259.4	174.3	122.3	226.3
MENDOCINO	207.7	0.3	91,963	225.8	202.0	174.5	229.6
MERCED	377.0	0.5	219,936	171.4	230.1	206.8	253.3
MODOC	28.0	0.0 a	10,589	264.4	184.4	115.4	253.5
MONO	10.3	0.0 a	11,081	93.3 *	128.8 *	47.6	210.1
MONTEREY	642.3	0.9	409,511	156.9	198.6	183.2	213.9
NAPA	352.7	0.5	129,130	273.1	203.7	182.2	225.3
NEVADA	241.7	0.4	99,670	242.5	164.2	143.3	185.1
ORANGE	5,151.3	7.5	2,872,632	179.3	243.9	237.2	250.6
PLACER	553.3	0.8	252,688	219.0	226.5	207.6	245.4
PLUMAS	48.7	0.1	21,044	231.3	153.5	109.8	197.3
RIVERSIDE	4,055.3	5.9	1,626,134	249.4	242.6	235.1	250.1
SACRAMENTO	2,620.0	3.8	1,236,054	212.0	241.2	231.9	250.4
SAN BENITO	65.3	0.1	53,577	121.9	144.0	109.0	179.0
SAN BERNARDINO	3,377.3	4.9	1,771,707	190.6	277.2	267.8	286.6
SAN DIEGO	5,462.3	8.0	3,005,038	181.8	206.8	201.3	212.3
SAN FRANCISCO	1,773.0	2.6	794,342	223.2	176.1	167.8	184.3
SAN JOAQUIN	1,282.7	1.9	593,538	216.1	231.4	218.7	244.1
SAN LUIS OBISPO	562.7	0.8	262,123	214.7	179.7	164.7	194.7
SAN MATEO	1,248.0	1.8	759,313	164.4	161.7	152.7	170.7
SANTA BARBARA	834.0	1.2	417,331	199.8	196.5	183.1	209.9
SANTA CLARA	2,478.0	3.6	1,795,132	138.0	191.1	183.5	198.7
SANTA CRUZ	485.3	0.7	264,525	183.5	191.7	174.5	208.9
SHASTA	481.7	0.7	179,892	267.8	231.3	210.6	252.0
SIERRA	8.7	0.0 a	3,465	250.1 *	144.7 *	47.3	242.1
SISKIYOU	136.3	0.2	45,624	298.8	222.9	185.1	260.8
SOLANO	667.0	1.0	408,095	163.4	229.5	211.8	247.2
SONOMA	1,035.0	1.5	468,682	220.8	198.3	186.2	210.4
STANISLAUS	1,168.3	1.7	472,096	247.5	285.0	268.7	301.4
SUTTER	208.0	0.3	83,999	247.6	231.8	200.2	263.4
TEHAMA	160.7	0.2	57,642	278.7	208.5	175.8	241.1
TRINITY	32.7	0.0 a	13,605	240.1	186.6	121.2	251.9
TULARE	766.3	1.1	388,730	197.1	233.5	216.9	250.0
TUOLUMNE	180.0	0.3	57,497	313.1	228.4	194.7	262.2
VENTURA	1,280.3	1.9	763,586	167.7	203.0	191.8	214.2
YOLO	260.0	0.4	167,259	155.4	188.7	165.7	211.7
YUBA	150.7	0.2	64,938	232.0	282.8	237.6	328.0

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

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

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

Source : State of California, Department of Finance; 2001 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.
State of California, Department of Health Services, Death Records.