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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 2002, 86.7 percent of all hypertension disease deaths in California involved people aged 65 years and older.
- In 2002, the California hypertension disease age-adjusted death rate of 7.5 deaths per 100,000 population was higher than the United States death rate of 7.0.
- During 2002, Blacks had a hypertension disease age-adjusted death rate significantly higher than the rate for Whites, Asian/Other, and Hispanics.

Hypertension Disease Deaths in California, 1999-2002

By Daniel H. Cox

Introduction

Hypertension disease, also known as essential (primary) hypertension and hypertensive renal disease or high blood pressure, is a leading cause of death in the United States and in California. Hypertension disease increases the risk for heart disease and stroke, two other leading causes of death. Approximately one in four American adults have hypertension disease and more than 31 percent of those affected are unaware of their condition.¹ In 2002 there were 20,261 hypertension disease deaths in the United States; 2,330 of those deaths occurred in California.²

This report presents data on hypertension disease deaths from 1999 to 2002 with the focus on 2002. It provides analysis of crude and age-adjusted death rates for California residents by sex, age, race/ethnicity, and county. The definition of hypertension disease used in this report is based on the International Classification of Diseases, Tenth Revision (ICD-10) codes I10 and I12 presented in National Center for Health Statistics (NCHS) reports.³ The national health objective for hypertension disease, as defined by the Healthy People 2010 initiative, pertains only to morbidity, so an assessment of California's progress in meeting this objective cannot be accomplished with the mortality data presented in this report.

Hypertension Disease Deaths

Table 1 (page 9) displays hypertension disease death data for 2002 by race/ethnicity, age, and sex. During this period, the number of deaths attributed to hypertension disease was higher among females (1,419) than among males (911). As shown in **Figure 1** (page 2), the number of hypertension disease deaths among Whites (1,532) was higher than Blacks (304), Hispanics (284), and Asian/Other (210).

¹ National Center for Chronic Disease Prevention and Health Promotion. Cardiovascular Health Program. High Blood Pressure Fact Sheet, September 2004. Available online at: http://www.cdc.gov/cvh/library/fs_bloodpressure.htm

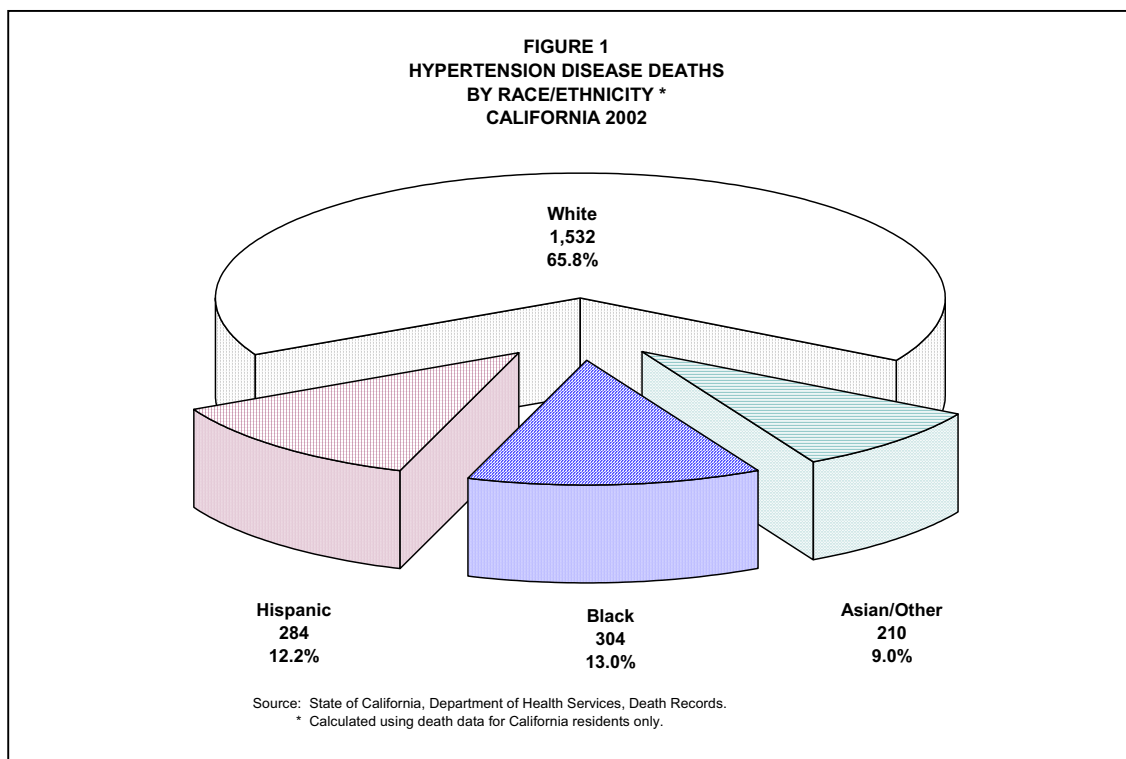
² National Center for Health Statistics. Deaths: Final Data for 2002. National Vital Statistics Reports; DHHS Publication Number (PHS) 2005-1120, PRS 04-0536, Volume 53, Number 5, October 2004.

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.

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

Tables 2 (page 10), **3** (page 11), and **4** (page 12) display hypertension disease death data for 2001, 2000, and 1999. These tables show the same patterns of higher death numbers among females than among males and higher death numbers among Whites than among the other three race/ethnic groups.

Hypertension disease deaths occur predominantly among the older population, and this held true in 2002 with 86.7 percent of all hypertension disease deaths involving people aged 65 years and older. This age group, within each respective race/ethnic group, accounted for 91.3 percent of all hypertension disease deaths among Whites, 86.7 percent among Asian/Other, 79.2 percent among Hispanics, and 70.4 percent among Blacks. This pattern of hypertension disease deaths among older Californians was similar for the three earlier years covered in this report.



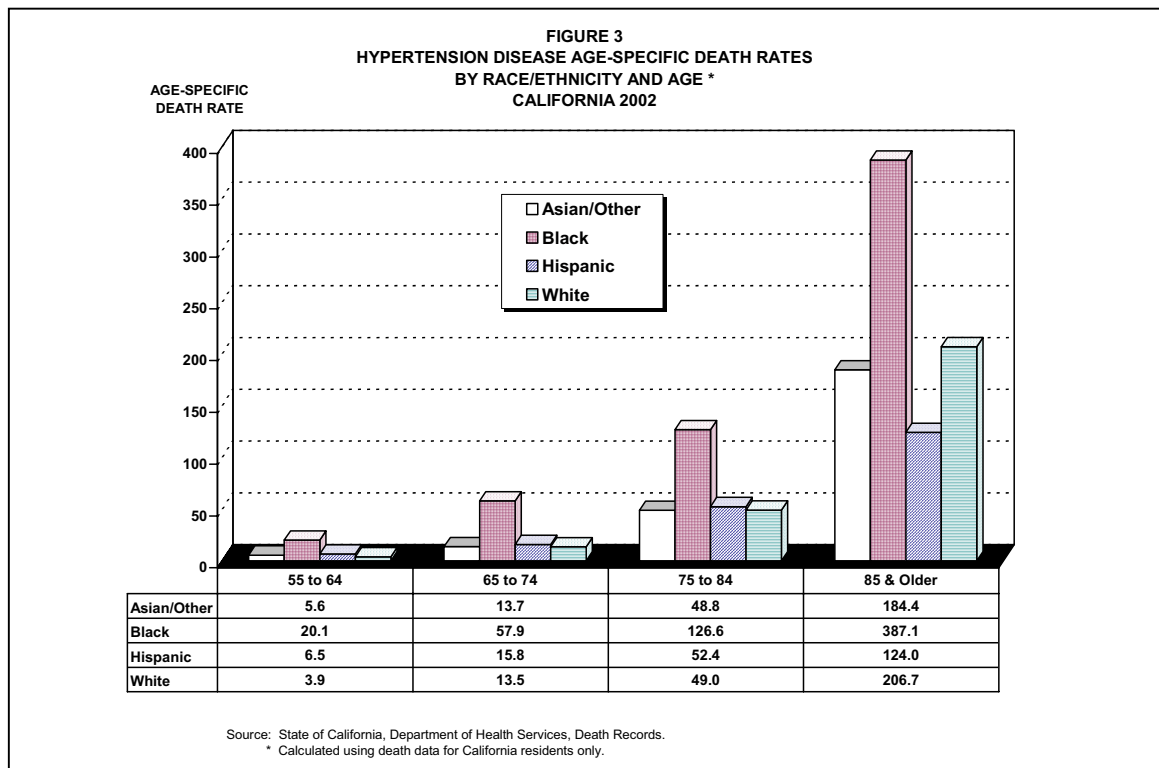
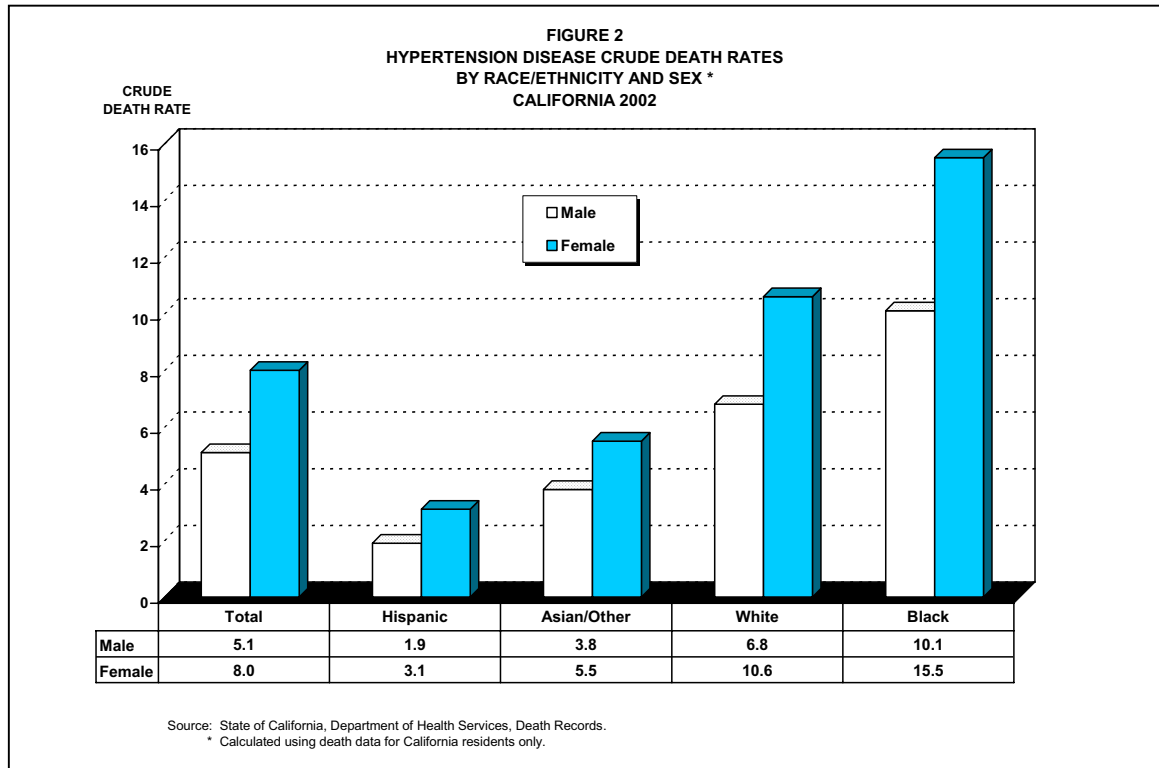
Hypertension Disease Crude Death Rates

The hypertension disease crude death rate for California increased from 5.5 deaths per 100,000 population in 1999 to 6.5 deaths in 2002. The rate increase from 1999 to 2002 was statistically significant. As shown in **Table 1** (page 9), Blacks had the highest crude death rate in 2002, a rate of 12.8. Whites were next with a crude rate of 8.7, followed by Asian/Other with a rate of 4.7 and Hispanics with a rate of 2.5. Rates for all race/ethnic groups increased from 1999 (**Table 4**, page 12) when Blacks had a hypertension disease crude death rate of 11.5, Whites had a crude rate of 7.2, Asian/Other had a rate of 3.8, and Hispanics had a rate of 2.0. Only the increases in the hypertension disease crude death rates among Hispanics and Whites were statistically significant. The data for 2000 and 2001 were similar to the data displayed here for 2002.

Figure 2 (page 3) shows females in all four race/ethnic groups had higher hypertension disease crude death rates than males in the corresponding race/ethnic groups for the year 2002. Black females had a rate of 15.5 deaths per 100,000 population, and Black

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

males had a rate of 10.1. White females had a rate of 10.6 and White males had a rate of 6.8. Asian/Other females had a rate of 5.5 and Asian/Other males had a rate of 3.8. Hispanic females had a crude death rate of 3.1 and Hispanic males had a rate of 1.9. Each of the differences between males and females in each of the four race/ethnic groups was 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.

Hypertension Disease Age-Specific Death Rates

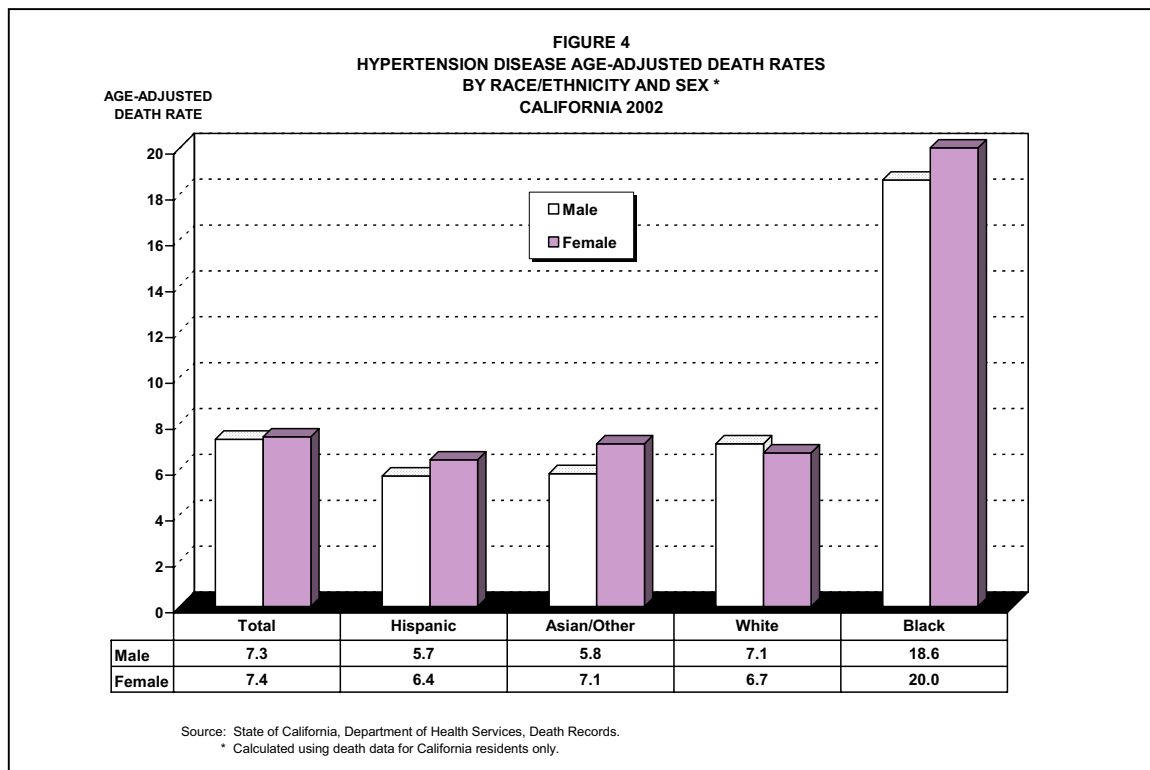
Figure 3 (page 3) shows that in 2002, among the age groups with reliable rates, Blacks had higher hypertension disease age-specific death rates than the other three race/ethnic groups. These rate differences were statistically significant in every age group displayed in **Figure 3**. Not shown in **Figure 3**, but displayed in **Table 1** (page 9) are the age-specific death rates for the 45 to 54 age group where Blacks had a significantly higher rate than Whites and the 35 to 44 age group where Blacks had the only reliable rate. In the 45 to 54 age group the death rates for Hispanics and Asian/Other were not reliable.

The years 1999, 2000, and 2001 showed a similar pattern of higher hypertension disease age-specific death rates among Blacks compared with the other three race/ethnic groups displayed in this report.

Hypertension Disease Age-Adjusted Death Rates

In 2002 the California hypertension disease age-adjusted death rate of 7.5 deaths per 100,000 population was higher than the United States rate of 7.0.² The California rate increased significantly from 1999 when the rate was 6.5.

Displayed in **Table 1** (page 9), a comparison among the race/ethnic groups shows that in 2002 Blacks had a hypertension disease age-adjusted death rate of 19.6, which was significantly higher than the White rate of 6.9, the Asian/Other rate of 6.6, and the Hispanic rate of 6.1. Rates for all race/ethnic groups increased from 1999 when the rate for Blacks was 18.2, the rate for Whites was 6.1, the rate for Asian/Other was 5.8 and the rate for Hispanics was 5.1 (**Table 4**, page 12). Whites had the only statistically significant increase in age-adjusted death rates from 1999 to 2002.



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

Displayed in **Table 2** (page 10), **Table 3** (page 11), and **Table 4** (page 12) the years 1999, 2000, and 2001 show the same pattern of higher hypertension disease age-adjusted death rates for Blacks compared with the other race/ethnic groups.

As shown in **Figure 4** (page 4), in 2002 the hypertension disease age-adjusted death rate for females was higher than for males in three of the four race/ethnic groups. Black females (20.0) had a higher rate than Black males (18.6). Asian/Other females (7.1) had a higher rate than Asian/Other males (5.8), and Hispanic females (6.4) had a higher rate than Hispanic males (5.7). In contrast, White males had a higher hypertension disease age-adjusted death rate (7.1) than White females (6.7). None of these gender differences were statistically significant.

Hypertension Disease Death Data for California Counties

Table 5 (page 13) 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 hypertension disease deaths occurred in Los Angeles County (659.3) and the lowest in Alpine County (0.0) and Mono County (0.0).

The highest and lowest reliable hypertension disease crude death rates were in Butte County (9.1 deaths per 100,000 population) and Santa Barbara County (4.6), respectively.

The ranking for reliable hypertension disease age-adjusted death rates showed Fresno County with the highest rate (9.6) and San Francisco County with the lowest (4.0).

TABLE 6
HYPERTENSION DISEASE DEATHS
AMONG THE CITY HEALTH JURISDICTIONS*
CALIFORNIA, 2000-2002

CITY HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2001 POPULATION	CRUDE DEATH RATE
BERKELEY	8.3	103,600	8.0 +
LONG BEACH	30.3	466,500	6.5
PASADENA	9.7	135,300	7.1 +

Note: Rates are per 100,000 population. Data is ICD-10 codes I10, I12.

* Calculated using death data for California residents only.

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

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.

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

Hypertension Disease Death Data by City Health Jurisdiction

Table 6 (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 30.3 hypertension disease deaths, Pasadena had 9.7, and Berkeley had 8.3.

Berkeley had a hypertension disease crude death rate of 8.0 deaths per 100,000 population, Pasadena had a crude rate of 7.1, and Long Beach had a crude rate of 6.5 though the rates for Berkeley and Pasadena were not reliable.

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 hypertension disease death data presented in this report are based on vital statistics records with ICD-10 codes I10 and I12 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-10.⁴ 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.⁵

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.⁶ 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 6** (page 5) differ from the population data used to calculate the crude rates in **Table 5** (page 13). 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.⁷ Detailed information on data quality and limitations are presented in the appendix of the annual report,

⁴ World Health Organization. International Statistical Classification of Diseases and Related Health Problems. Tenth Revision. Geneva: World Health Organization. 1992.

⁵ 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.

⁶ 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

⁷ 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.”⁸ Formulas used to calculate death rates are included in the technical notes of the “County Health Status Profiles” report.⁹

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⁸ Ficenc S, Bindra K. Vital Statistics of California, 2001. Center for Health Statistics, California Department of Health Services. April 2004.

⁹ Shippen S, Wilson C. County Health Status Profiles 2004. Center for Health Statistics, California Department of Health Services. April 2004

TABLE 1
HYPERTENSION 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	1	1	0	565,286	289,063	276,223	0.2 *	0.3 *	0.0 +	0.0	0.5	0.0	1.0	-	-
1 to 4	0	0	0	2,259,315	1,155,699	1,103,616	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,779,949	2,962,038	2,817,911	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	2	0	2	4,878,693	2,531,467	2,347,226	0.0 *	0.0 +	0.1 *	0.0	0.1	-	-	0.0	0.2
25 to 34	7	6	1	4,876,792	2,566,475	2,310,317	0.1 *	0.2 *	0.0 *	0.0	0.2	0.0	0.4	0.0	0.1
35 to 44	41	28	13	5,762,850	2,962,675	2,800,175	0.7	0.9	0.5 *	0.5	0.9	0.6	1.3	0.2	0.7
45 to 54	91	56	35	4,794,731	2,387,728	2,407,003	1.9	2.3	1.5	1.5	2.3	1.7	3.0	1.0	1.9
55 to 64	168	87	81	3,041,927	1,484,478	1,557,449	5.5	5.9	5.2	4.7	6.4	4.6	7.1	4.1	6.3
65 to 74	326	147	179	1,998,910	931,513	1,067,397	16.3	15.8	16.8	14.5	18.1	13.2	18.3	14.3	19.2
75 to 84	721	305	416	1,360,295	557,358	802,937	53.0	54.7	51.8	49.1	56.9	48.6	60.9	46.8	56.8
85 & Older	973	281	692	483,490	155,701	327,789	201.2	180.5	211.1	188.6	213.9	159.4	201.6	195.4	226.8
Total	2,330	911	1,419	35,802,238	17,984,195	17,818,043	6.5	5.1	8.0	6.2	6.8	4.7	5.4	7.5	8.4
Age-Adjusted							7.5	7.3	7.4	7.2	7.8	6.8	7.8	7.1	7.8
ASIAN/OTHER															
Under 1	0	0	0	71,070	36,363	34,707	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	282,531	144,555	137,976	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	704,536	362,486	342,050	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	647,043	331,690	315,353	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	2	2	0	679,965	344,174	335,791	0.3 *	0.6 *	0.0 +	0.0	0.7	0.0	1.4	-	-
35 to 44	1	1	0	719,105	350,905	368,200	0.1 *	0.3 *	0.0 +	0.0	0.4	0.0	0.8	-	-
45 to 54	5	4	1	620,977	294,261	326,716	0.8 *	1.4 *	0.3 *	0.1	1.5	0.0	2.7	0.0	0.9
55 to 64	20	15	5	360,153	170,641	189,512	5.6	8.8 *	2.6 *	3.1	8.0	4.3	13.2	0.3	5.0
65 to 74	32	18	14	232,917	104,165	128,752	13.7	17.3 *	10.9 *	9.0	18.5	9.3	25.3	5.2	16.6
75 to 84	68	23	45	139,375	58,899	80,476	48.8	39.0	55.9	37.2	60.4	23.1	55.0	39.6	72.3
85 & Older	82	22	60	44,465	18,527	25,938	184.4	118.7	231.3	144.5	224.3	69.1	168.4	172.8	289.9
Total	210	85	125	4,502,137	2,216,666	2,285,471	4.7	3.8	5.5	4.0	5.3	3.0	4.6	4.5	6.4
Age-Adjusted							6.6	5.8	7.1	5.7	7.5	4.5	7.1	5.8	8.3
BLACK															
Under 1	0	0	0	37,035	18,947	18,088	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	148,422	75,963	72,459	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	412,599	209,510	203,089	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	370,840	196,122	174,718	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	2	2	0	340,450	181,068	159,382	0.6 *	1.1 *	0.0 +	0.0	1.4	0.0	2.6	-	-
35 to 44	19	13	6	382,583	187,179	195,404	5.0	6.9 *	3.1 *	2.7	7.2	3.2	10.7	0.6	5.5
45 to 54	33	16	17	312,810	147,562	165,248	10.5	10.8 *	10.3 *	7.0	14.1	5.5	16.2	5.4	15.2
55 to 64	36	14	22	178,888	82,569	96,319	20.1	17.0 *	22.8	13.6	26.7	8.1	25.8	13.3	32.4
65 to 74	63	23	40	108,774	48,191	60,583	57.9	47.7	66.0	43.6	72.2	28.2	67.2	45.6	86.5
75 to 84	79	33	46	62,397	24,072	38,325	126.6	137.1	120.0	98.7	154.5	90.3	183.9	85.3	154.7
85 & Older	72	18	54	18,601	5,543	13,058	387.1	324.7 *	413.5	297.7	476.5	174.7	474.8	303.2	523.8
Total	304	119	185	2,373,399	1,176,726	1,196,673	12.8	10.1	15.5	11.4	14.2	8.3	11.9	13.2	17.7
Age-Adjusted							19.6	18.6	20.0	17.3	21.8	14.9	22.2	17.1	22.9
HISPANIC															
Under 1	1	1	0	276,097	141,109	134,988	0.4 *	0.7 *	0.0 +	0.0	1.1	0.0	2.1	-	-
1 to 4	0	0	0	1,083,387	553,994	529,393	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,502,767	1,279,414	1,223,353	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	1,717,001	889,356	827,645	0.0 +	0.0 +	0.1 *	0.0	0.2	-	-	0.0	0.4
25 to 34	3	2	1	1,748,261	960,276	787,985	0.2 *	0.2 *	0.1 *	0.0	0.4	0.0	0.5	0.0	0.4
35 to 44	9	7	2	1,756,084	951,727	804,357	0.5 *	0.7 *	0.2 *	0.2	0.8	0.2	1.3	0.0	0.6
45 to 54	8	5	3	1,113,871	570,189	543,682	0.7 *	0.9 *	0.6 *	0.2	1.2	0.1	1.6	0.0	1.2
55 to 64	37	17	20	569,723	279,445	290,278	6.5	6.1 *	6.9	4.4	8.6	3.2	9.0	3.9	9.9
65 to 74	54	20	34	341,805	157,826	183,979	15.8	12.7	18.5	11.6	20.0	7.1	18.2	12.3	24.7
75 to 84	96	38	58	183,377	76,439	106,938	52.4	49.7	54.2	41.9	62.8	33.9	65.5	40.3	68.2
85 & Older	75	24	51	60,479	19,997	40,482	124.0	120.0	126.0	95.9	152.1	72.0	168.0	91.4	160.6
Total	284	114	170	11,352,852	5,879,772	5,473,080	2.5	1.9	3.1	2.2	2.8	1.6	2.3	2.6	3.6
Age-Adjusted							6.1	5.7	6.4	5.4	6.8	4.6	6.9	5.4	7.3
WHITE															
Under 1	0	0	0	181,084	92,644	88,440	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	744,975	381,187	363,788	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,160,047	1,110,628	1,049,419	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	2,143,809	1,114,299	1,029,510	0.0 *	0.0 +	0.1 *	0.0	0.1	-	-	0.0	0.3
25 to 34	0	0	0	2,108,116	1,080,957	1,027,159	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
35 to 44	12	7	5	2,905,078	1,472,864	1,432,214	0.4 *	0.5 *	0.3 *	0.2	0.6	0.1	0.8	0.0	0.7
45 to 54	45	31	14	2,747,073	1,375,716	1,371,357	1.6	2.3	1.0 *	1.2	2.1	1.5	3.0	0.5	1.6
55 to 64	75	41	34	1,933,163	951,823	981,340	3.9	4.3	3.5	3.0	4.8	3.0	5.6	2.3	4.6
65 to 74	177	86	91	1,315,414	621,331	694,083	13.5	13.8	13.1	11.5	15.4	10.9	16.8	10.4	15.8
75 to 84	478	211	267	975,146	397,948	577,198	49.0	53.0	46.3	44.6	53.4	45.9	60.2	40.7	51.8
85 & Older	744	217	527	359,945	111,634	248,311	206.7	194.4	212.2	191.8	221.6	168.5	220.2	194.1	230.4
Total	1,532	593	939	17,573,850	8,711,031	8,862,819	8.7	6.8	10.6	8.3	9.2	6.3	7.4	9.9	11.3
Age-Adjusted							6.9	7.1	6.7	6.6	7.3	6.5	7.6	6.3	7.2

Note: Rates are per 100,000 population. ICD-10 codes I10, I12.
White, Black, and Asian/Other exclude Hispanic ethnicity.
Hispanic includes any race category.
The race/ethnic groups in this table were tabulated using the first listed race when certificates included more than one race.

* 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 Finance; 2002 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.
State of California, Department of Health Services, Death Records.

TABLE 2
HYPERTENSION 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	0	0	0	560,999	286,873	274,126	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	2,243,262	1,147,543	1,095,719	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,672,643	2,906,408	2,766,235	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	7	5	2	4,753,513	2,467,107	2,286,406	0.1 *	0.2 *	0.1 *	0.0	0.3	0.0	0.4	0.0	0.2
25 to 34	13	5	8	4,918,489	2,594,607	2,323,882	0.3 *	0.2 *	0.3 *	0.1	0.4	0.0	0.4	0.1	0.6
35 to 44	45	28	17	5,765,426	2,956,340	2,809,086	0.8	0.9	0.6 *	0.6	1.0	0.6	1.3	0.3	0.9
45 to 54	99	59	40	4,674,074	2,325,619	2,348,455	2.1	2.5	1.7	1.7	2.5	1.9	3.2	1.2	2.2
55 to 64	186	90	96	2,862,622	1,396,328	1,466,294	6.5	6.4	6.5	5.6	7.4	5.1	7.8	5.2	7.9
65 to 74	323	162	161	1,976,584	916,584	1,060,000	16.3	17.7	15.2	14.6	18.1	15.0	20.4	12.8	17.5
75 to 84	752	294	458	1,337,545	547,455	790,090	56.2	53.7	58.0	52.2	60.2	47.6	59.8	52.7	63.3
85 & Older	923	290	633	468,178	149,547	318,631	197.1	193.9	198.7	184.4	209.9	171.6	216.2	183.2	214.1
Total	2,348	933	1,415	35,233,335	17,694,411	17,538,924	6.7	5.3	8.1	6.4	6.9	4.9	5.6	7.6	8.5
Age-Adjusted							7.7	7.7	7.6	7.4	8.0	7.2	8.2	7.2	8.0
ASIAN/OTHER															
Under 1	0	0	0	69,275	35,440	33,835	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	274,035	140,219	133,816	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	682,107	351,057	331,050	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	626,372	320,815	305,557	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	3	1	2	663,350	335,748	327,602	0.5 *	0.3 *	0.6 *	0.0	1.0	0.0	0.9	0.0	1.5
35 to 44	3	2	1	709,159	345,299	363,860	0.4 *	0.6 *	0.3 *	0.0	0.9	0.0	1.4	0.0	0.8
45 to 54	11	6	5	596,166	282,159	314,007	1.8 *	2.1 *	1.6 *	0.8	2.9	0.4	3.8	0.2	3.0
55 to 64	14	5	9	334,827	159,091	175,736	4.2 *	3.1 *	5.1 *	2.0	6.4	0.4	5.9	1.8	8.5
65 to 74	46	15	31	224,875	99,888	124,987	20.5	15.0 *	24.8	14.5	26.4	7.4	22.6	16.1	33.5
75 to 84	66	29	37	131,980	56,160	75,820	50.0	51.6	48.8	37.9	62.1	32.8	70.4	33.1	64.5
85 & Older	55	19	36	41,442	17,481	23,961	132.7	108.7	150.2	97.6	167.8	59.8	157.6	101.2	199.3
Total	198	77	121	4,353,588	2,143,357	2,210,231	4.5	3.6	5.5	3.9	5.2	2.8	4.4	4.5	6.5
Age-Adjusted							6.4	5.7	6.9	5.5	7.3	4.4	7.0	5.7	8.2
BLACK															
Under 1	0	0	0	37,075	18,968	18,107	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	148,109	75,817	72,292	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	413,833	209,845	203,988	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	364,172	192,652	171,520	0.3 *	0.0 +	0.6 *	0.0	0.8	-	-	0.0	1.7
25 to 34	5	2	3	344,312	182,447	161,865	1.5 *	1.1 *	1.9 *	0.2	2.7	0.0	2.6	0.0	4.0
35 to 44	14	8	6	385,985	188,545	197,440	3.6 *	4.2 *	3.0 *	1.7	5.5	1.3	7.2	0.6	5.5
45 to 54	31	19	12	302,852	142,935	159,917	10.2	13.3	7.5 *	6.6	13.8	7.3	19.3	3.3	11.7
55 to 64	50	26	24	172,047	79,765	92,282	29.1	32.6	26.0	21.0	37.1	20.1	45.1	15.6	36.4
65 to 74	48	27	21	107,106	47,268	59,838	44.8	57.1	35.1	32.1	57.5	35.6	78.7	20.1	50.1
75 to 84	84	34	50	61,885	23,844	38,041	135.7	142.6	131.4	106.7	164.8	94.7	190.5	95.0	167.9
85 & Older	69	25	44	18,436	5,511	12,925	374.3	453.6	340.4	286.0	462.6	275.8	631.5	239.8	441.0
Total	302	141	161	2,355,812	1,167,597	1,188,215	12.8	12.1	13.5	11.4	14.3	10.1	14.1	11.5	15.6
Age-Adjusted							19.6	22.7	17.6	17.3	21.9	18.6	26.7	14.9	20.3
HISPANIC															
Under 1	0	0	0	272,023	139,031	132,992	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	1,070,328	547,371	522,957	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,398,512	1,225,596	1,172,916	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	2	1	1	1,664,220	861,697	802,523	0.1 *	0.1 *	0.1 *	0.0	0.3	0.0	0.3	0.0	0.4
25 to 34	2	1	1	1,767,279	977,600	789,679	0.1 *	0.1 *	0.1 *	0.0	0.3	0.0	0.3	0.0	0.4
35 to 44	4	4	0	1,701,500	916,547	784,953	0.2 *	0.4 *	0.2 *	0.0	0.5	0.0	0.9	-	-
45 to 54	18	12	6	1,050,953	536,610	514,343	1.7 *	2.2 *	1.0 *	0.9	2.5	1.0	3.5	0.2	2.1
55 to 64	29	10	19	532,881	260,356	272,525	5.4	3.8 *	7.0	3.5	7.4	1.5	6.2	3.8	10.1
65 to 74	47	23	24	331,669	152,519	179,150	14.2	15.1	13.4	10.1	18.2	8.9	21.2	8.0	18.8
75 to 84	88	36	52	172,771	71,849	100,922	50.9	50.1	51.5	40.3	61.6	33.7	66.5	37.5	65.5
85 & Older	88	26	62	58,574	19,479	39,095	150.2	133.5	158.6	118.8	181.6	82.2	184.8	119.1	198.1
Total	278	113	165	11,020,710	5,708,655	5,312,055	2.5	2.0	3.1	2.2	2.8	1.6	2.3	2.6	3.6
Age-Adjusted							6.3	6.1	6.5	5.6	7.1	4.9	7.2	5.5	7.4
WHITE															
Under 1	0	0	0	182,626	93,434	89,192	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	750,790	384,136	366,654	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,178,191	1,119,910	1,058,281	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	4	4	0	2,098,749	1,091,943	1,006,806	0.2 *	0.4 *	0.0 +	0.0	0.4	0.0	0.7	-	-
25 to 34	3	1	2	2,143,548	1,098,812	1,044,736	0.1 *	0.1 *	0.2 *	0.0	0.3	0.0	0.3	0.0	0.5
35 to 44	24	14	10	2,968,782	1,505,949	1,462,833	0.8	0.9 *	0.7 *	0.5	1.1	0.4	1.4	0.3	1.1
45 to 54	39	22	17	2,724,103	1,363,915	1,360,188	1.4	1.6	1.2 *	1.0	1.9	0.9	2.3	0.7	1.8
55 to 64	93	49	44	1,822,867	897,116	925,751	5.1	5.5	4.8	4.1	6.1	3.9	7.0	3.3	6.2
65 to 74	182	97	85	1,312,934	616,909	696,025	13.9	15.7	12.2	11.8	15.9	12.6	18.9	9.6	14.8
75 to 84	514	195	319	970,909	395,602	575,307	52.9	49.3	55.4	48.4	57.5	42.4	56.2	49.4	61.5
85 & Older	711	220	491	349,726	107,076	242,650	203.3	205.5	202.3	188.4	218.2	178.3	232.6	184.5	220.2
Total	1,570	602	968	17,503,225	8,674,802	8,828,423	9.0	6.9	11.0	8.5	9.4	6.4	7.5	10.3	11.7
Age-Adjusted							7.3	7.3	7.2	6.9	7.6	6.8	7.9	6.7	7.6

Note: Rates are per 100,000 population. ICD-10 codes I10, I12.
 White, Black, and Asian/Other exclude Hispanic ethnicity.
 Hispanic includes any race category.
 The race/ethnic groups in this table were tabulated using the first listed race when certificates included more than one race.
 * 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 Finance; 2001 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.
 State of California, Department of Health Services, Death Records.

TABLE 3
HYPERTENSION DISEASE DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2000
(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	1	1	0	556,635	284,653	271,982	0.2 *	0.4 *	0.0 +	0.0	0.5	0.0	1.0	-	-
1 to 4	0	0	0	2,225,385	1,138,537	1,086,848	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,567,090	2,851,540	2,715,550	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	4	1	3	4,615,641	2,395,832	2,219,809	0.1 *	0.0 *	0.1 *	0.0	0.2	0.0	0.1	0.0	0.3
25 to 34	7	3	4	4,998,216	2,643,192	2,355,024	0.1 *	0.1 *	0.2 *	0.0	0.2	0.0	0.2	0.0	0.3
35 to 44	36	22	14	5,751,694	2,942,371	2,809,323	0.6	0.7	0.5 *	0.4	0.8	0.4	1.1	0.2	0.8
45 to 54	74	47	27	4,469,059	2,221,466	2,247,593	1.7	2.1	1.2	1.3	2.0	1.5	2.7	0.7	1.7
55 to 64	133	77	56	2,756,954	1,343,573	1,413,381	4.8	5.7	4.0	4.0	5.6	4.5	7.0	2.9	5.0
65 to 74	272	145	127	1,957,505	901,472	1,056,033	13.9	16.1	12.0	12.2	15.5	13.5	18.7	9.9	14.1
75 to 84	659	261	398	1,305,454	533,995	771,459	50.5	48.9	51.6	46.6	54.3	42.9	54.8	46.5	56.7
85 & Older	834	234	600	449,762	142,364	307,398	185.4	164.4	195.2	172.8	198.0	143.3	185.4	179.6	210.8
Total	2,020	791	1,229	34,653,395	17,398,995	17,254,400	5.8	4.5	7.1	5.6	6.1	4.2	4.9	6.7	7.5
Age-Adjusted							6.8	6.7	6.8	6.5	7.1	6.3	7.2	6.4	7.1
ASIAN/OTHER															
Under 1	0	0	0	67,434	34,501	32,933	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	266,651	136,640	130,011	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	660,070	339,469	320,601	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	604,654	309,566	295,088	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	1	1	0	649,462	328,916	320,546	0.2 *	0.3 *	0.0 +	0.0	0.5	0.0	0.9	-	-
35 to 44	3	2	1	698,724	339,157	359,567	0.4 *	0.6 *	0.3 *	0.0	0.9	0.0	1.4	0.0	0.8
45 to 54	10	6	4	561,189	265,710	295,479	1.8 *	2.3 *	1.4 *	0.7	2.9	0.5	4.1	0.0	2.7
55 to 64	10	6	4	317,872	151,006	166,866	3.1 *	4.0 *	2.4 *	1.2	5.1	0.8	7.2	0.0	4.7
65 to 74	29	15	14	217,081	95,695	121,386	13.4	15.7 *	11.5 *	8.5	18.2	7.7	23.6	5.5	17.6
75 to 84	56	22	34	123,907	53,227	70,680	45.2	41.3	48.1	33.4	57.0	24.1	58.6	31.9	64.3
85 & Older	48	15	33	38,153	16,296	21,857	125.8	92.0 *	151.0	90.2	161.4	45.5	138.6	99.5	202.5
Total	157	67	90	4,205,197	2,070,183	2,135,014	3.7	3.2	4.2	3.1	4.3	2.5	4.0	3.3	5.1
Age-Adjusted							5.5	5.1	5.7	4.6	6.3	3.9	6.4	4.5	6.9
BLACK															
Under 1	0	0	0	37,159	19,020	18,139	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	147,839	75,557	72,282	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	414,580	210,046	204,534	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	356,933	188,930	168,003	0.3 *	0.0 +	0.6 *	0.0	0.8	-	-	0.0	1.8
25 to 34	1	0	1	352,200	185,909	166,291	0.3 *	0.0 +	0.6 *	0.0	0.8	-	-	0.0	1.8
35 to 44	15	9	6	388,391	189,399	198,992	3.9 *	4.8 *	3.0 *	1.9	5.8	1.6	7.9	0.6	5.4
45 to 54	29	17	12	287,837	135,895	151,942	10.1	12.5 *	7.9 *	6.4	13.7	6.6	18.5	3.4	12.4
55 to 64	40	21	19	168,721	78,536	90,185	23.7	26.7	21.1	16.4	31.1	15.3	38.2	11.6	30.5
65 to 74	50	32	18	105,627	46,350	59,277	47.3	69.0	30.4 *	34.2	60.5	45.1	93.0	16.3	44.4
75 to 84	85	37	48	60,380	23,176	37,204	140.8	159.6	129.0	110.8	170.7	108.2	211.1	92.5	165.5
85 & Older	74	16	58	18,268	5,491	12,777	405.1	291.4 *	453.9	312.8	497.4	148.6	434.2	337.1	570.8
Total	295	132	163	2,337,935	1,158,309	1,179,626	12.6	11.4	13.8	11.2	14.1	9.5	13.3	11.7	15.9
Age-Adjusted							19.9	21.0	18.4	17.5	22.2	17.2	24.9	15.5	21.2
HISPANIC															
Under 1	1	1	0	267,741	136,840	130,901	0.4 *	0.7 *	0.0 +	0.0	1.1	0.0	2.2	-	-
1 to 4	0	0	0	1,055,221	539,226	515,995	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,296,937	1,173,481	1,123,456	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	3	1	2	1,609,062	832,517	776,545	0.2 *	0.1 *	0.3 *	0.0	0.4	0.0	0.4	0.0	0.6
25 to 34	2	1	1	1,793,492	998,691	794,801	0.1 *	0.1 *	0.1 *	0.0	0.3	0.0	0.3	0.0	0.4
35 to 44	9	8	1	1,643,440	880,073	763,367	0.5 *	0.9 *	0.1 *	0.2	0.9	0.3	1.5	0.0	0.4
45 to 54	7	6	1	978,139	498,051	480,088	0.7 *	1.2 *	0.2 *	0.2	1.2	0.2	2.2	0.0	0.6
55 to 64	30	21	9	506,398	246,133	260,265	5.9	8.5	3.5 *	3.8	8.0	4.9	12.2	1.2	5.7
65 to 74	42	20	22	320,415	146,540	173,875	13.1	13.6	12.7	9.1	17.1	7.7	19.6	7.4	17.9
75 to 84	60	28	32	161,694	67,052	94,642	37.1	41.8	33.8	27.7	46.5	26.3	57.2	22.1	45.5
85 & Older	68	23	45	56,213	18,817	37,396	121.0	122.2	120.3	92.2	149.7	72.3	172.2	85.2	155.5
Total	222	109	113	10,688,752	5,537,421	5,151,331	2.1	2.0	2.2	1.8	2.4	1.6	2.3	1.8	2.6
Age-Adjusted							5.2	5.8	4.6	4.5	5.9	4.6	6.9	3.8	5.5
WHITE															
Under 1	0	0	0	184,301	94,292	90,009	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	755,674	387,114	368,560	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,195,503	1,128,544	1,066,959	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	2,044,992	1,064,819	980,173	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	3	1	2	2,203,062	1,129,676	1,073,386	0.1 *	0.1 *	0.2 *	0.0	0.3	0.0	0.3	0.0	0.4
35 to 44	9	3	6	3,021,139	1,533,742	1,487,397	0.3 *	0.2 *	0.4 *	0.1	0.5	0.0	0.4	0.1	0.7
45 to 54	28	18	10	2,641,894	1,321,810	1,320,084	1.1	1.4 *	0.8 *	0.7	1.5	0.7	2.0	0.3	1.2
55 to 64	53	29	24	1,763,963	867,898	896,065	3.0	3.3	2.7	2.2	3.8	2.1	4.6	1.6	3.7
65 to 74	151	78	73	1,314,382	612,887	701,495	11.5	12.7	10.4	9.7	13.3	9.9	15.6	8.0	12.8
75 to 84	458	174	284	959,473	390,540	568,933	47.7	44.6	49.9	43.4	52.1	37.9	51.2	44.1	55.7
85 & Older	644	180	464	337,128	101,760	235,368	191.0	176.9	197.1	176.3	205.8	151.0	202.7	179.2	215.1
Total	1,346	483	863	17,421,511	8,633,082	8,788,429	7.7	5.6	9.8	7.3	8.1	5.1	6.1	9.2	10.5
Age-Adjusted							6.3	6.1	6.4	6.0	6.7	5.5	6.7	6.0	6.8

Note: Rates are per 100,000 population. ICD-10 codes I10, I12.
White, Black, and Asian/Other exclude Hispanic ethnicity.
Hispanic includes any race category.

The race/ethnicity groups in this table were tabulated using the first listed race when certificates included more than one race.

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

TABLE 4
HYPERTENSION DISEASE DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 1999
(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	0	0	0	553,480	283,033	270,447	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	1	0	1	2,218,731	1,134,840	1,083,891	0.0 *	0.0 +	0.1 *	0.0	0.1	-	-	0.0	0.3
5 to 14	0	0	0	5,438,254	2,785,041	2,653,213	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	2	2	0	4,490,994	2,331,075	2,159,919	0.0 *	0.1 *	0.0 +	0.0	0.1	0.0	0.2	-	-
25 to 34	12	8	4	5,088,372	2,693,838	2,394,534	0.2 *	0.3 *	0.2 *	0.1	0.4	0.1	0.5	0.0	0.3
35 to 44	34	20	14	5,703,159	2,911,607	2,791,552	0.6	0.7	0.5 *	0.4	0.8	0.4	1.0	0.2	0.8
45 to 54	96	57	39	4,284,494	2,127,558	2,156,936	2.2	2.7	1.8	1.8	2.7	2.0	3.4	1.2	2.4
55 to 64	128	76	52	2,647,776	1,289,251	1,358,525	4.8	5.9	3.8	4.0	5.7	4.6	7.2	2.8	4.9
65 to 74	299	149	150	1,945,679	889,827	1,055,852	15.4	16.7	14.2	13.6	17.1	14.1	19.4	11.9	16.5
75 to 84	607	259	348	1,272,523	519,523	753,000	47.7	49.9	46.2	43.9	51.5	43.8	55.9	41.4	51.1
85 & Older	700	198	502	429,016	134,219	294,797	163.2	147.5	170.3	151.1	175.3	127.0	168.1	155.4	185.2
Total	1,879	769	1,110	34,072,478	17,099,812	16,972,666	5.5	4.5	6.5	5.3	5.8	4.2	4.8	6.2	6.9
Age-Adjusted							6.5	6.7	6.3	6.2	6.8	6.2	7.2	6.0	6.7
ASIAN/OTHER															
Under 1	0	0	0	65,732	33,636	32,096	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	1	0	1	260,730	133,774	126,956	0.4 *	0.0 +	0.8 *	0.0	1.1	-	-	0.0	2.3
5 to 14	0	0	0	637,566	327,540	310,026	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	584,065	299,316	284,749	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	2	2	0	635,628	321,836	313,792	0.3 *	0.6 *	0.0 +	0.0	0.8	0.0	1.5	-	-
35 to 44	1	1	0	685,240	331,715	353,525	0.1 *	0.3 *	0.0 +	0.0	0.4	0.0	0.9	-	-
45 to 54	11	3	8	528,902	250,278	278,624	2.1 *	1.2 *	2.9 *	0.9	3.3	0.0	2.6	0.9	4.9
55 to 64	10	6	4	300,304	142,774	157,530	3.3 *	4.2 *	2.5 *	1.3	5.4	0.8	7.6	0.1	5.0
65 to 74	26	19	7	209,410	91,786	117,624	12.4	20.7	6.0 *	7.6	17.2	11.4	30.0	1.5	10.4
75 to 84	57	21	36	116,337	50,337	66,000	49.0	41.7	54.5	36.3	61.7	23.9	59.6	36.7	72.4
85 & Older	48	20	28	35,195	15,278	19,917	136.4	130.9	140.6	97.8	175.0	73.5	188.3	88.5	192.7
Total	156	72	84	4,059,109	1,998,270	2,060,839	3.8	3.6	4.1	3.2	4.4	2.8	4.4	3.2	4.9
Age-Adjusted							5.8	5.9	5.7	4.9	6.7	4.5	7.3	4.4	6.9
BLACK															
Under 1	0	0	0	37,436	19,147	18,289	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	150,150	76,493	73,657	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	412,399	208,881	203,518	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	1	0	352,398	186,295	166,103	0.3 *	0.5 *	0.0 +	0.0	0.8	0.0	1.6	-	-
25 to 34	1	0	1	361,723	189,557	172,166	0.3 *	0.0 +	0.6 *	0.0	0.8	-	-	0.0	1.7
35 to 44	17	9	8	387,780	188,667	199,113	4.4 *	4.8 *	4.0 *	2.3	6.5	1.7	7.9	1.2	6.8
45 to 54	38	25	13	274,298	129,075	145,223	13.9	19.4	9.0 *	9.4	18.3	11.8	27.0	4.1	13.8
55 to 64	29	14	15	164,532	76,514	88,018	17.6	18.3 *	17.0 *	11.2	24.0	8.7	27.9	8.4	25.7
65 to 74	44	23	21	103,767	44,942	58,825	42.4	51.2	35.7	29.9	54.9	30.3	72.1	20.4	51.0
75 to 84	83	36	47	58,756	22,082	36,674	141.3	163.0	128.2	110.9	171.7	109.8	216.3	91.5	164.8
85 & Older	55	11	44	17,677	5,158	12,519	311.1	213.3 *	351.5	228.9	393.4	87.2	339.3	247.6	455.3
Total	268	119	149	2,320,916	1,146,811	1,174,105	11.5	10.4	12.7	10.2	12.9	8.5	12.2	10.7	14.7
Age-Adjusted							18.2	19.1	17.0	15.9	20.4	15.4	22.7	14.2	19.7
HISPANIC															
Under 1	0	0	0	263,940	134,897	129,043	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	1,043,348	532,534	510,814	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,187,045	1,117,326	1,069,719	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	1,555,795	803,837	751,958	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	2	1	1	1,812,547	1,014,469	798,078	0.1 *	0.1 *	0.1 *	0.0	0.3	0.0	0.3	0.0	0.4
35 to 44	5	3	2	1,581,171	842,312	738,859	0.3 *	0.4 *	0.3 *	0.0	0.6	0.0	0.8	0.0	0.6
45 to 54	12	7	5	912,180	462,923	449,257	1.3 *	1.5 *	1.1 *	0.6	2.1	0.4	2.6	0.1	2.1
55 to 64	26	15	11	481,158	233,374	247,784	5.4	6.4 *	4.4 *	3.3	7.5	3.2	9.7	1.8	7.1
65 to 74	50	25	25	309,686	140,820	168,866	16.1	17.8	14.8	11.7	20.6	10.8	24.7	9.0	20.6
75 to 84	73	33	40	152,091	62,846	89,245	48.0	52.5	44.8	37.0	59.0	34.6	70.4	30.9	58.7
85 & Older	41	10	31	53,802	18,170	35,632	76.2	55.0 *	87.0	52.9	99.5	20.9	89.1	56.4	117.6
Total	209	94	115	10,352,763	5,363,508	4,989,255	2.0	1.8	2.3	1.7	2.3	1.4	2.1	1.9	2.7
Age-Adjusted							5.1	5.2	4.9	4.4	5.8	4.1	6.3	4.0	5.8
WHITE															
Under 1	0	0	0	186,372	95,353	91,019	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	764,503	392,039	372,464	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,201,244	1,131,294	1,069,950	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	1	0	1,998,736	1,041,627	957,109	0.1 *	0.1 *	0.0 +	0.0	0.1	0.0	0.3	-	-
25 to 34	7	5	2	2,278,474	1,167,976	1,110,498	0.3 *	0.4 *	0.2 *	0.1	0.5	0.1	0.8	0.0	0.4
35 to 44	11	7	4	3,048,968	1,548,913	1,500,055	0.4 *	0.5 *	0.3 *	0.1	0.6	0.1	0.8	0.0	0.5
45 to 54	35	22	13	2,569,114	1,285,282	1,283,832	1.4	1.7	1.0 *	0.9	1.8	1.0	2.4	0.5	1.6
55 to 64	63	41	22	1,701,782	836,589	865,193	3.7	4.9	2.5	2.8	4.6	3.4	6.4	1.5	3.6
65 to 74	179	82	97	1,322,816	612,279	710,537	13.5	13.4	13.7	11.5	15.5	10.5	16.3	10.9	16.4
75 to 84	394	169	225	945,339	384,258	561,081	41.7	44.0	40.1	37.6	45.8	37.3	50.6	34.9	45.3
85 & Older	556	157	399	322,342	95,613	226,729	172.5	164.2	176.0	158.2	186.8	138.5	189.9	158.7	193.2
Total	1,246	484	762	17,339,690	8,591,223	8,748,467	7.2	5.6	8.7	6.8	7.6	5.1	6.1	8.1	9.3
Age-Adjusted							6.1	6.2	5.9	5.7	6.4	5.6	6.8	5.4	6.3

Note : Rates are per 100,000 population. ICD-10 codes I10, I12.
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 Finance; 1999 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.
State of California, Department of Health Services, Death Records.

TABLE 5
HYPERTENSION 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	2,232.7	100.0	35,233,335	6.3	7.3	7.0	7.6
ALAMEDA	112.3	5.0	1,492,004	7.5	8.6	7.0	10.3
ALPINE	0.0	0.0	1,268	0.0 +	0.0 +	-	-
AMADOR	1.0	0.0 a	35,242	2.8 *	1.7 *	0.0	5.0
BUTTE	19.3	0.9	213,040	9.1	6.3 *	3.4	9.2
CALAVERAS	2.0	0.1	43,392	4.6 *	3.4 *	0.0	8.3
COLUSA	1.7	0.1	22,012	7.6 *	7.6 *	0.0	19.3
CONTRA COSTA	63.0	2.8	942,662	6.7	6.9	5.2	8.7
DEL NORTE	2.0	0.1	31,801	6.3 *	5.3 *	0.0	12.7
EL DORADO	7.3	0.3	168,912	4.3 *	4.6 *	1.3	8.0
FRESNO	66.7	3.0	825,365	8.1	9.6	7.3	11.9
GLENN	2.0	0.1	30,291	6.6 *	6.1 *	0.0	14.5
HUMBOLDT	5.0	0.2	129,211	3.9 *	3.8 *	0.5	7.1
IMPERIAL	5.7	0.3	161,177	3.5 *	4.5 *	0.8	8.2
INYO	1.3	0.1	18,510	7.2 *	4.2 *	0.0	11.3
KERN	35.7	1.6	694,749	5.1	6.1	4.1	8.1
KINGS	8.0	0.4	129,375	6.2 *	9.5 *	2.9	16.0
LAKE	6.7	0.3	62,080	10.7 *	6.6 *	1.4	11.8
LASSEN	1.0	0.0 a	36,759	2.7 *	3.1 *	0.0	9.3
LOS ANGELES	659.3	29.5	9,925,413	6.6	8.4	7.8	9.1
MADERA	9.3	0.4	131,052	7.1 *	7.6 *	2.7	12.5
MARIN	17.0	0.8	249,634	6.8 *	6.5 *	3.4	9.6
MARIPOSA	0.3	0.0 a	17,218	1.9 *	1.2 *	0.0	5.4
MENDOCINO	6.3	0.3	91,963	6.9 *	6.1 *	1.3	10.8
MERCED	13.3	0.6	219,936	6.1 *	8.3 *	3.8	12.8
MODOC	0.7	0.0 a	10,589	6.3 *	6.1 *	0.0	21.7
MONO	0.0	0.0	11,081	0.0 +	0.0 +	-	-
MONTEREY	22.3	1.0	409,511	5.5	6.9	4.0	9.8
NAPA	5.0	0.2	129,130	3.9 *	2.7 *	0.3	5.1
NEVADA	8.7	0.4	99,670	8.7 *	5.7 *	1.9	9.6
ORANGE	154.7	6.9	2,872,632	5.4	7.4	6.2	8.6
PLACER	18.0	0.8	252,688	7.1 *	7.5 *	4.0	10.9
PLUMAS	2.0	0.1	21,044	9.5 *	7.3 *	0.0	17.9
RIVERSIDE	105.0	4.7	1,626,134	6.5	6.3	5.1	7.5
SACRAMENTO	76.0	3.4	1,236,054	6.1	7.0	5.4	8.6
SAN BENITO	1.3	0.1	53,577	2.5 *	3.0 *	0.0	8.2
SAN BERNARDINO	111.0	5.0	1,771,707	6.3	9.1	7.4	10.8
SAN DIEGO	219.3	9.8	3,005,038	7.3	8.3	7.2	9.4
SAN FRANCISCO	41.7	1.9	794,342	5.2	4.0	2.8	5.3
SAN JOAQUIN	35.3	1.6	593,538	6.0	6.3	4.2	8.4
SAN LUIS OBISPO	21.0	0.9	262,123	8.0	6.6	3.7	9.4
SAN MATEO	41.7	1.9	759,313	5.5	5.4	3.8	7.1
SANTA BARBARA	19.3	0.9	417,331	4.6	4.6	2.6	6.7
SANTA CLARA	88.7	4.0	1,795,132	4.9	6.9	5.5	8.4
SANTA CRUZ	18.7	0.8	264,525	7.1 *	7.5 *	4.1	10.9
SHASTA	12.7	0.6	179,892	7.0 *	6.1 *	2.7	9.5
SIERRA	0.3	0.0 a	3,465	9.6 *	4.9 *	0.0	21.4
SISKIYOU	3.3	0.1	45,624	7.3 *	5.0 *	0.0	10.3
SOLANO	24.0	1.1	408,095	5.9	8.6	5.2	12.1
SONOMA	29.3	1.3	468,682	6.3	5.5	3.5	7.5
STANISLAUS	28.0	1.3	472,096	5.9	6.8	4.3	9.4
SUTTER	4.7	0.2	83,999	5.6 *	5.1 *	0.5	9.7
TEHAMA	3.0	0.1	57,642	5.2 *	3.9 *	0.0	8.5
TRINITY	1.0	0.0 a	13,605	7.4 *	5.1 *	0.0	15.0
TULARE	28.3	1.3	388,730	7.3	8.6	5.4	11.8
TUOLUMNE	4.0	0.2	57,497	7.0 *	5.1 *	0.0	10.2
VENTURA	43.3	1.9	763,586	5.7	7.0	4.9	9.1
YOLO	10.3	0.5	167,259	6.2 *	7.4 *	2.9	11.8
YUBA	3.7	0.2	64,938	5.6 *	7.0 *	0.0	14.2

Note : Rates are per 100,000 population. ICD-10 codes I10, I12.

* 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.

+ 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 Finance; 2001 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.

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