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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 2003, 86.8 percent of all hypertension deaths in California involved people aged 65 years and older.
- During 2003 the California hypertension age-adjusted death rate of 7.8 deaths per 100,000 population was higher than the United States rate of 7.4.
- In 2003 Blacks had a hypertension age-adjusted death rate significantly higher than the rate for Hispanics, Whites, and Asians.

## Hypertension Deaths in California, 2000-2003

By Daniel H. Cox

### Introduction

Hypertension, also known as essential (primary) hypertension and hypertensive renal disease or high blood pressure, is a leading cause of death in the United States (U.S.) and in California. Hypertension increases the risk for heart disease and stroke, two other leading causes of death. Approximately one in three American adults have hypertension and more than 31 percent of those affected are unaware of their condition.<sup>1</sup> In 2003 there were 21,841 hypertension deaths in the U.S.; 2,578 of those deaths occurred in California.<sup>2,3</sup>

This report presents data on hypertension deaths from 2000 to 2003 with the focus on 2003. It provides analysis of crude and age-adjusted death rates for California residents by sex, age, race/ethnicity, and county. The definition of hypertension 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.<sup>4</sup> The national health objective for hypertension, 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 Deaths

**Table 1** (page 9) displays hypertension death data for 2003 by race/ethnicity, age, and sex. During this period, the number of deaths attributed to hypertension was higher among females (1,558) than among males (1,020). As shown in **Figure 1** (page 2), the number of hypertension deaths among Whites (1,710) was higher than Hispanics (333), Blacks (317), and Asians (190).

**Tables 2, 3, and 4** (pages 10-12) display hypertension death data for 2002, 2001, and 2000, respectively. These tables show the same patterns of higher

<sup>1</sup> National Center for Chronic Disease Prevention and Health Promotion. Cardiovascular Health Program. High Blood Pressure Fact Sheet, June 2005. Available online at: [http://www.cdc.gov/cvh/library/fs\\_bloodpressure.htm](http://www.cdc.gov/cvh/library/fs_bloodpressure.htm)

<sup>2</sup> National Center for Health Statistics. Deaths: Preliminary Data for 2003. National Vital Statistics Reports DHHS Publication Number (PHS) 2005-1120, PRS 05-0162, Volume 53, Number 15, February 2005.

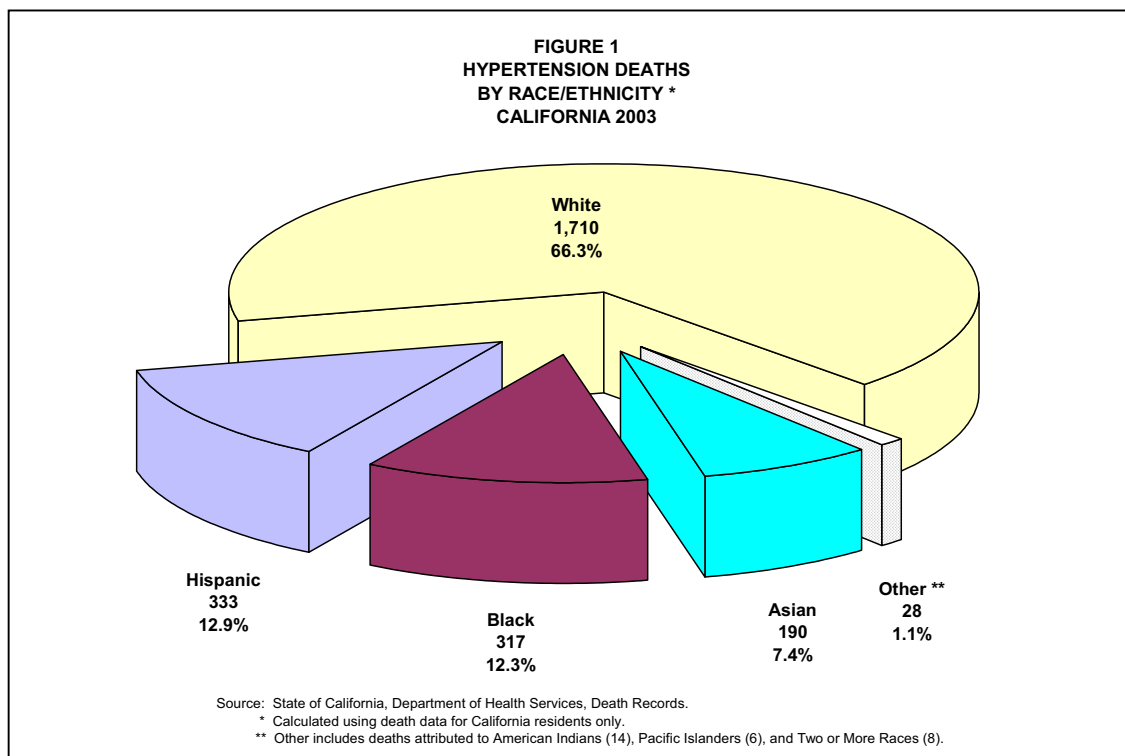
<sup>3</sup> State of California. Department of Health Services, Death Records.

<sup>4</sup> 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.

death numbers among females than among males and higher death numbers among Whites than among the other three race/ethnic groups.

Hypertension deaths occur predominantly among the older population, and this held true in 2003 with 86.8 percent of all hypertension deaths involving people aged 65 years and older. This age group, within each respective race/ethnic group, accounted for 91.5 percent of all hypertension deaths among Whites, 89.5 percent among Asian, 79.0 percent among Hispanics, and 70.0 percent among Blacks. This pattern of hypertension deaths among older Californians was similar for the years 2000, 2001, and 2002.



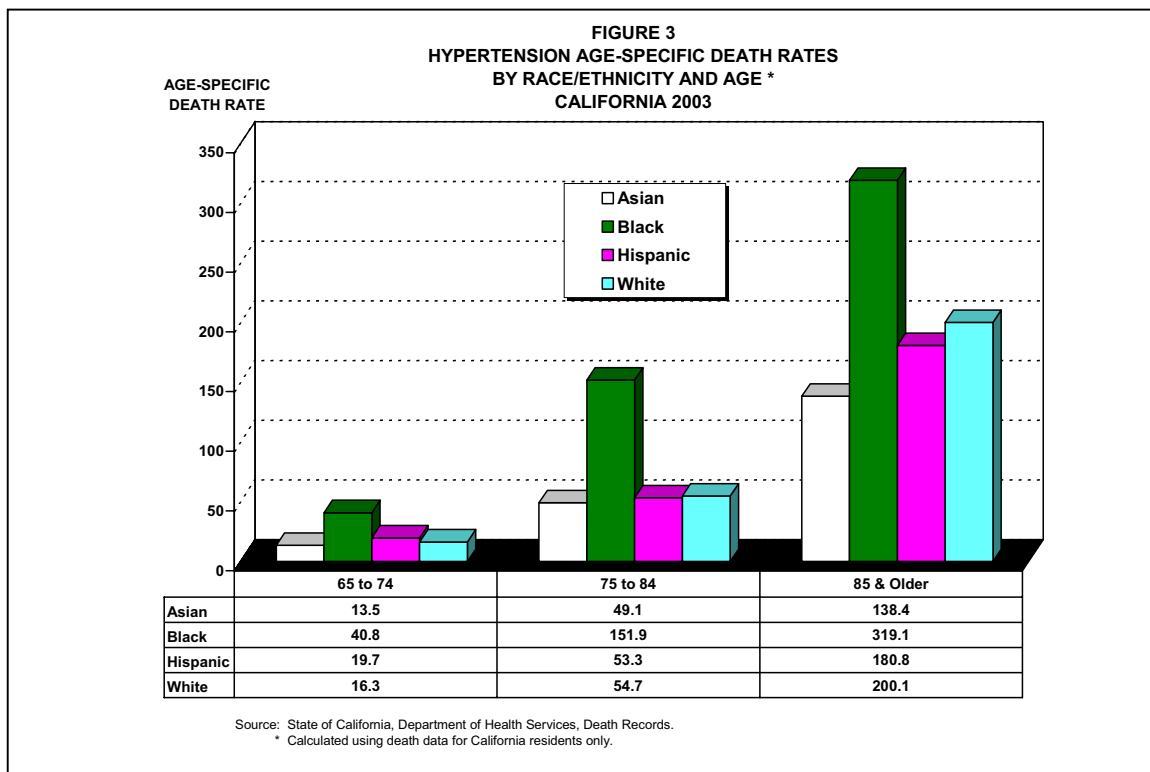
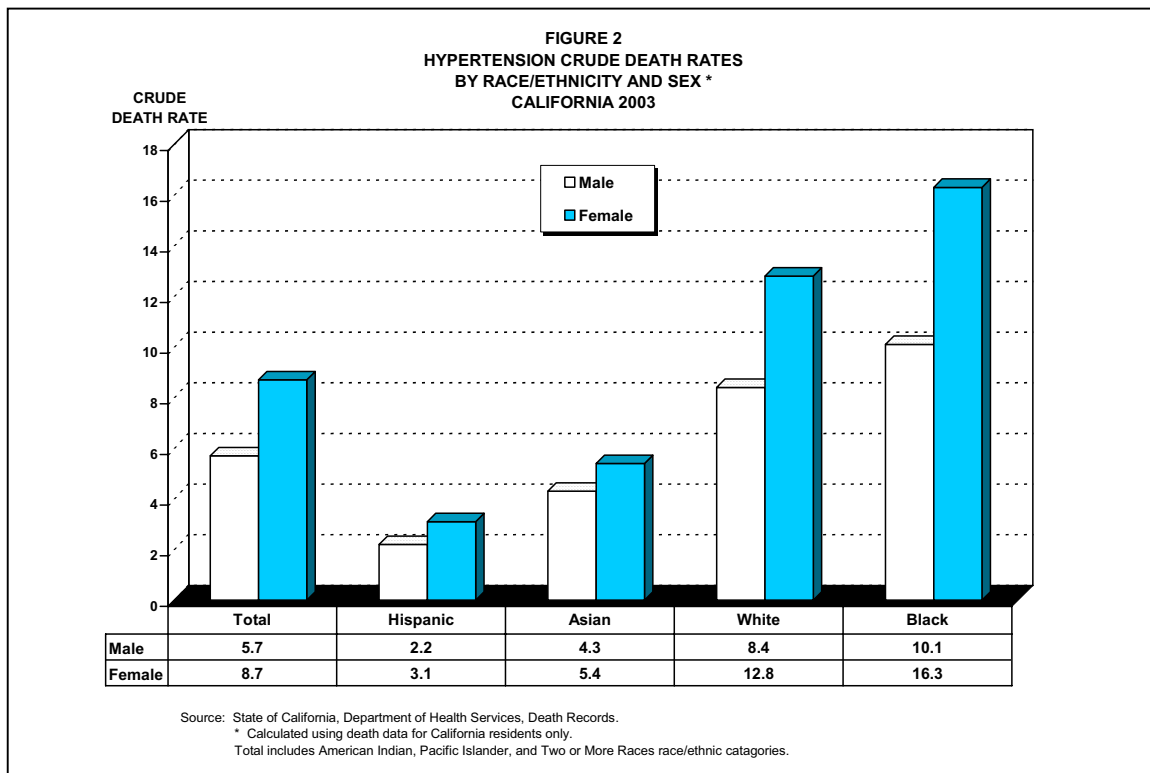
## Hypertension Crude Death Rates

The hypertension crude death rate for California increased from 5.9 deaths per 100,000 population in 2000 to 7.2 deaths in 2003. This rate increase from 2000 to 2003 was statistically significant. As shown in **Table 1** (page 9), Blacks had the highest crude death rate in 2003, a rate of 13.2. Whites were next with a crude rate of 10.6, followed by Asians with a rate of 4.8 and Hispanics with a rate of 2.7. Rates for three of the four race/ethnic groups increased from 2000 (**Table 4**, page 12) when Whites had a crude rate of 8.4, Asians had a rate of 3.8, and Hispanics had a rate of 2.0. The exception to this was among Blacks where the hypertension death rate was the same for 2000, a rate of 13.2. The increases in the hypertension crude death rates among Asians, Hispanics and Whites were statistically significant. The rates for 2001 and 2002 were similar to the rates displayed here for 2003.

**Figure 2** (page 3) shows females in all four race/ethnic groups had higher hypertension crude death rates than males in the corresponding race/ethnic groups for the year 2003. Black females had a rate of 16.3 deaths per 100,000 population, and Black males had a

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

rate of 10.1. White females had a rate of 12.8 and White males had a rate of 8.4. Asian females had a rate of 5.4 and Asian males had a rate of 4.3. Hispanic females had a rate of 3.1 and Hispanic males had a rate of 2.2. The differences between males and females in three of the four race/ethnic groups were statistically significant, the exception to this was the difference between Asian males and females.



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

## Hypertension Age-Specific Death Rates

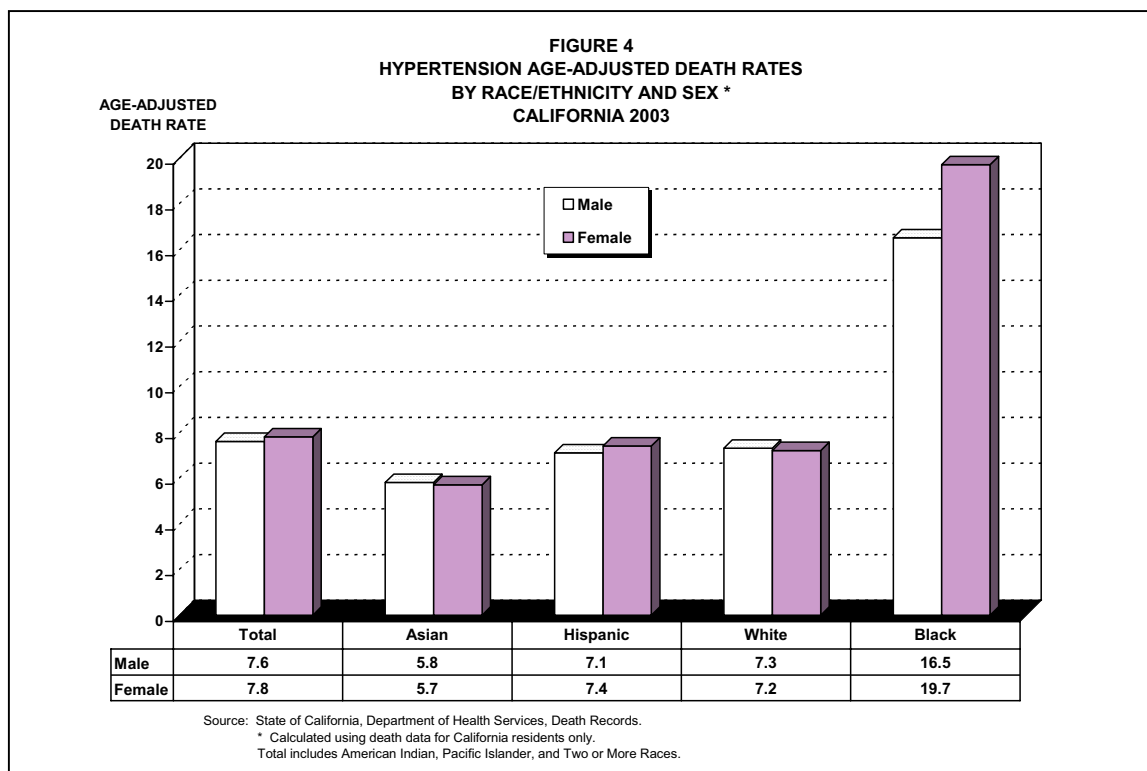
**Figure 3** (page 3) shows that in 2003, among the age groups with reliable rates, Blacks had higher hypertension age-specific death rates than the other three race/ethnic groups. These rate differences were statistically significant in every age group displayed in **Figure 3**. Not shown in **Figure 3**, but displayed in **Table 1** (page 9) are the age-specific death rates for the 45 to 54 and 55 to 64 age groups where Blacks had a significantly higher rate than Whites and Hispanics. In the 45 to 54 and 55 to 64 age groups the death rates for Asians were not reliable.

The years 2000, 2001, and 2002 showed a similar pattern of higher hypertension age-specific death rates among Blacks compared with Whites, Hispanics and Asians.

## Hypertension Age-Adjusted Death Rates

In 2003 the California hypertension age-adjusted death rate of 7.8 deaths per 100,000 population was higher than the U.S. rate of 7.4.<sup>2</sup> The California rate increased significantly from 2000 when the rate was 7.0.

Displayed in **Table 1** (page 9), a comparison among the race/ethnic groups shows that in 2003 Blacks had a hypertension age-adjusted death rate of 18.6, which was significantly higher than the Hispanic rate of 7.4, the White rate of 7.3, and the Asian rate of 5.7. Rates for three of the race/ethnic groups increased from 2000 (**Table 4**, page 12) when the rate for Hispanics was 6.2, the rate for Whites was 6.3, and the rate for Asians was 5.6. Conversely, the rate for Blacks went down from 2000 when the rate was 19.7. Whites had the only statistically significant difference in death rates in the comparison between 2000 and 2003.



See the Vital Statistics Query System (VSQ) at our Web site [www.applications.dhs.ca.gov/vsq/default.asp](http://www.applications.dhs.ca.gov/vsq/default.asp) to create your own vital statistics tables.

Displayed in **Table 2**, **Table 3**, and **Table 4** (pages 10-12) the years 2002, 2001, and 2000 show a similar pattern of higher hypertension age-adjusted death rates for Blacks compared with the other race/ethnic groups.

As shown in **Figure 4** (page 4), in 2003 the hypertension age-adjusted death rate for females was higher than for males in two of the four race/ethnic groups. Black females (19.7) had a higher rate than Black males (16.5) and Hispanic females (7.4) had a higher rate than Hispanic males (7.1). In contrast, White males had a higher hypertension age-adjusted death rate (7.3) than White females (7.2) and Asian males (5.8) had a higher rate than Asian females (5.7). None of these gender differences were statistically significant.

## Hypertension 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, 2001 to 2003. 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 three counties with the highest average number of hypertension deaths were Los Angeles County (695.7), San Diego County (226.0), and Orange County (170.3).

The highest and lowest reliable hypertension crude death rates were in Butte County (15.4 per 100,000 population) and San Francisco County (5.4).

The status of hypertension age-adjusted death rates among the counties again showed Butte County with the highest reliable rate (11.9 deaths per 100,000 population) and San Francisco County with the lowest (4.7).

Among counties with reliable rates, three had significantly different hypertension age-adjusted death rates than the California rate of 7.6.

TABLE 6  
HYPERTENSION DEATHS  
AMONG THE CITY HEALTH JURISDICTIONS\*  
CALIFORNIA, 2001-2003

CITY HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2002 POPULATION	CRUDE DEATH RATE
BERKELEY	7.3	104,254	7.0 +
LONG BEACH	32.7	473,363	6.9
PASADENA	7.7	138,904	5.5 +

Note: Rates are per 100,000 population. Data is ICD-10 codes I10 and 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, 2001-2005, with 2000 DRU Benchmark, May 2005.  
State of California, Department of Health Services, Death records.

For more data, see DHS Center for Health Statistics, Office of Health Information and Research Home Page at [www.dhs.ca.gov/ohir](http://www.dhs.ca.gov/ohir)

## Hypertension 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, 2001 to 2003. 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 32.7 hypertension deaths, Pasadena had an average of 7.7 deaths, and Berkeley had an average of 7.3 deaths.

Berkeley had a hypertension crude death rate of 7.0 deaths per 100,000 population, Long Beach had a crude rate of 6.9, and Pasadena had a crude rate of 5.5 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 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. The weighted average 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.

Age-adjusted rates are presented when the single, summary measure is needed, but data analysts should inspect age-specific rates first.<sup>5</sup> Age-specific rates provide insights to important age-related mortality trends that can be masked by age-adjusted rates. For example, a shift in the number of deaths from one age group to another could produce very little change in the age-adjusted rate, but may warrant further investigation. In addition, analysis of age-specific rates can reveal that populations being compared do not show a consistent relationship (e.g., the trend is not in the same direction for all age-specific rates) in which case the analysis of age-specific rates is recommended over age-adjusted rates.

### Data Limitations and Qualifications

The hypertension death data presented in this report are based on vital statistics records with ICD-10 codes I10 and I12 as defined by the NCHS.<sup>4</sup> Deaths by place of residence means that the data include only those deaths occurring among residents of California, regardless of the place of death.

The term "significant" within the text indicates statistical significance based on the difference between two independent rates ( $p < .05$ ). Significant difference between the

<sup>5</sup> Choi BCK, de Guia NA, and Walsh P. Look before you leap: Stratify before you standardize. American Journal of Epidemiology, 149: 1087-1096. 1999.

Some of the earlier reports on this subject are available online at [www.dhs.ca.gov/ohir](http://www.dhs.ca.gov/ohir)

county and State age-adjusted death rates was determined by comparing the 95 percent confidence intervals (CI) of the two rates, which are based on the rate, standard deviation, and standard error. Rates were considered to be significantly different from each other when their CIs (rounded to the nearest hundredth) did not overlap. If the upper limit of the county CI fell below the lower limit of the State CI, the county rate was deemed to be significantly lower. If the lower limit of the county CI exceeded the higher limit of the State CI, the county rate was deemed to be significantly higher. Significant differences of overlapping CIs were not addressed in this report. Overlapping CIs require a more precise statistical measure to determine significant and non-significant differences in rates because CIs may overlap as much as 29 percent and still be significantly different.<sup>6</sup>

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. To assist the reader, the 95 percent CIs are provided in the data tables as a tool for measuring the reliability of death rates. Rates with a relative standard error (coefficient of variation) greater than or equal to 23 percent are indicated with an asterisk (\*). The CIs represent the range of values likely to contain the “true” value 95 percent of the time.

Beginning in 1999, cause of death is reported using ICD-10.<sup>7</sup> 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 numbers of deaths and death rates are not comparable between ICD-9 and ICD-10. Therefore, our analyses do not combine both ICD-9 and ICD-10 data.

To meet the U.S. Office of Management and Budget minimum standards for race and ethnicity data collection and reporting, the report presents the following race/ethnic groups: American Indian, Asian, Black, Hispanic, Pacific Islander, White, and Two or More Races. Hispanic origin of decedents is determined first and includes any race group. Second, decedents of the Two or More Races group are determined and are not reported in single race groups. In order to remain consistent with the population data obtained from the Department of Finance, the single race groups are defined as follows: the “American Indian” race group includes Aleut, American Indian, and Eskimo; the “Asian” race group includes Asian Indian, Asian (specified/unspecified), Cambodian, Chinese, Filipino, Hmong, Japanese, Korean, Laotian, Thai, and Vietnamese; the “Pacific Islander” race group includes Guamanian, Hawaiian, Samoan, and Other Pacific Islander; the “White” race group includes White, Other (specified), Not Stated, and Unknown.

Caution should be exercised in the interpretation of mortality data by race/ethnicity. Misclassification of race/ethnicity on death certificates may contribute to death rates that may be understated among American Indians, Asians, Hispanics, and Pacific Islanders.<sup>8</sup>

<sup>6</sup> van Belle G. Statistical Rules of Thumb, Rule 2.5. Wiley Publishing. March 2002.

<sup>7</sup> World Health Organization. International Statistical Classification of Diseases and Related Health Problems. Tenth Revision. Geneva: World Health Organization. 1992.

<sup>8</sup> 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.

This problem could contribute to understatement of rates for the Two or More Races group as well. All race groups may not be individually displayed on the tables due to unreliable rates, but the State totals do include their data.

Beginning in 2000 federal race/ethnicity reporting guidelines changed to allow reporting of more than one race on death certificates. California initiated use of the new guidelines on January 1, 2000, and collects up to three races. California's population estimates recently added the Multirace (Two or More Races) group. To be consistent with the population groups, current reports tabulate race of decedent using all races mentioned on the death certificate. Therefore, prior reports depicting race group statistics based on single race are not comparable with current reports.

The 2000 U.S. population standard was used for calculating age-adjustments in accordance with statistical policy implemented by NCHS.<sup>9</sup> Age-adjusted death rates are not comparable when rates are calculated with different population standards, e.g., the 1940 standard population. Additionally, population data used to calculate city crude rates in **Table 6** (page 5) differ from population data used to calculate county crude rates in **Table 5** (page 13). Caution should be exercised when comparing the crude rates of the three city health jurisdictions with the crude rates of the 58 California counties. Age-adjusted rates for city health jurisdictions were not calculated.

A more complete explanation of age-adjustment methodology is available in the "Healthy People 2010 Statistical Notes" publication.<sup>10</sup> Detailed information on data quality and limitations is presented in the appendix of the annual report, "Vital Statistics of California."<sup>11</sup> Formulas used to calculate death rates are included in the technical notes of the "County Health Status Profiles" report.<sup>12</sup>

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<sup>9</sup> 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.

<sup>10</sup> 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.

<sup>11</sup> Ficenc S, Bindra K, Christensen J. Vital Statistics of California, 2002. Center for Health Statistics, California Department of Health Services. August 2004.

<sup>12</sup> Shippen S, Wilson C. County Health Status Profiles 2005. Center for Health Statistics, California Department of Health Services. April 2005.



**TABLE 1  
HYPERTENSION DEATHS  
BY RACE/ETHNICITY, AGE, AND SEX  
CALIFORNIA, 2003  
(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
<b>TOTAL<sup>1</sup></b>															
Under 1	0	0	0	531,434	271,162	260,272	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	2,008,528	1,026,713	981,815	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,420,822	2,777,200	2,643,622	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	2	0	2	5,160,658	2,691,409	2,469,249	0.0 *	0.0 +	0.1 *	0.0	0.1	-	-	0.0	0.2
25 to 34	13	7	6	5,246,137	2,705,863	2,540,274	0.2 *	0.3 *	0.2 *	0.1	0.4	0.1	0.5	0.0	0.4
35 to 44	33	22	11	5,648,662	2,870,936	2,777,726	0.6	0.8	0.4 *	0.4	0.8	0.4	1.1	0.2	0.6
45 to 54	96	59	37	4,819,832	2,382,693	2,437,139	2.0	2.5	1.5	1.6	2.4	1.8	3.1	1.0	2.0
55 to 64	196	118	78	3,146,705	1,520,342	1,626,363	6.2	7.8	4.8	5.4	7.1	6.4	9.2	3.7	5.9
65 to 74	361	173	188	1,997,161	921,535	1,075,626	18.1	18.8	17.5	16.2	19.9	16.0	21.6	15.0	20.0
75 to 84	820	328	492	1,414,654	587,119	827,535	58.0	55.9	59.5	54.0	61.9	49.8	61.9	54.2	64.7
85 & Older	1,057	313	744	540,374	183,447	356,927	195.6	170.6	208.4	183.8	207.4	151.7	189.5	193.5	223.4
<b>Total</b>	<b>2,578</b>	<b>1,020</b>	<b>1,558</b>	<b>35,934,967</b>	<b>17,938,419</b>	<b>17,996,548</b>	<b>7.2</b>	<b>5.7</b>	<b>8.7</b>	<b>6.9</b>	<b>7.5</b>	<b>5.3</b>	<b>6.0</b>	<b>8.2</b>	<b>9.1</b>
<b>Age-Adjusted</b>							<b>7.8</b>	<b>7.6</b>	<b>7.8</b>	<b>7.5</b>	<b>8.1</b>	<b>7.1</b>	<b>8.0</b>	<b>7.4</b>	<b>8.2</b>
<b>ASIAN</b>															
Under 1	0	0	0	49,099	25,103	23,996	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	181,821	93,219	88,602	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	500,584	258,445	242,139	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	547,727	281,307	266,420	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	0	0	0	609,005	297,832	311,173	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
35 to 44	2	1	1	654,269	313,201	341,068	0.3 *	0.3 *	0.3 *	0.0	0.7	0.0	0.9	0.0	0.9
45 to 54	3	1	2	590,179	275,078	315,101	0.5 *	0.4 *	0.6 *	0.0	1.1	0.0	1.1	0.0	1.5
55 to 64	15	7	8	356,471	166,544	189,927	4.2 *	4.2 *	4.2 *	2.1	6.3	1.1	7.3	1.3	7.1
65 to 74	32	13	19	236,933	103,366	133,567	13.5	12.6 *	14.2	8.8	18.2	5.7	19.4	7.8	20.6
75 to 84	72	31	41	146,599	62,184	84,415	49.1	49.9	48.6	37.8	60.5	32.3	67.4	33.7	63.4
85 & Older	66	28	38	47,703	19,092	28,611	138.4	146.7	132.8	105.0	171.7	92.3	201.0	90.6	175.0
<b>Total</b>	<b>190</b>	<b>81</b>	<b>109</b>	<b>3,920,390</b>	<b>1,895,371</b>	<b>2,025,019</b>	<b>4.8</b>	<b>4.3</b>	<b>5.4</b>	<b>4.2</b>	<b>5.5</b>	<b>3.3</b>	<b>5.2</b>	<b>4.4</b>	<b>6.4</b>
<b>Age-Adjusted</b>							<b>5.7</b>	<b>5.8</b>	<b>5.7</b>	<b>4.9</b>	<b>6.5</b>	<b>4.5</b>	<b>7.1</b>	<b>4.6</b>	<b>6.7</b>
<b>BLACK</b>															
Under 1	0	0	0	32,376	16,503	15,873	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	122,874	62,658	60,216	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	415,801	211,605	204,196	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	379,857	197,146	182,711	0.3 *	0.0 +	0.5 *	0.0	0.8	-	-	0.0	1.6
25 to 34	3	2	1	329,285	162,507	166,778	0.9 *	1.2 *	0.6 *	0.0	1.9	0.0	2.9	0.0	1.8
35 to 44	11	5	6	401,674	200,729	200,945	2.7 *	2.5 *	3.0 *	1.1	4.4	0.3	4.7	0.6	5.4
45 to 54	35	23	12	319,425	155,654	163,771	11.0	14.8	7.3 *	7.3	14.6	8.7	20.8	3.2	11.5
55 to 64	45	22	23	190,319	88,453	101,866	23.6	24.9	22.6	16.7	30.6	14.5	35.3	13.4	31.8
65 to 74	48	17	31	117,685	53,462	64,223	40.8	31.8 *	48.3	29.2	52.3	16.7	46.9	31.3	65.3
75 to 84	97	32	65	63,864	24,858	39,006	151.9	128.7	166.6	121.7	182.1	84.1	173.3	126.1	207.2
85 & Older	77	18	59	24,128	7,218	16,910	319.1	249.4 *	348.9	247.8	390.4	134.2	364.6	259.9	437.9
<b>Total</b>	<b>317</b>	<b>119</b>	<b>198</b>	<b>2,397,288</b>	<b>1,180,793</b>	<b>1,216,495</b>	<b>13.2</b>	<b>10.1</b>	<b>16.3</b>	<b>11.8</b>	<b>14.7</b>	<b>8.3</b>	<b>11.9</b>	<b>14.0</b>	<b>18.5</b>
<b>Age-Adjusted</b>							<b>18.6</b>	<b>16.5</b>	<b>19.7</b>	<b>16.5</b>	<b>20.7</b>	<b>13.3</b>	<b>19.6</b>	<b>16.9</b>	<b>22.4</b>
<b>HISPANIC</b>															
Under 1	0	0	0	265,727	135,553	130,174	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	972,443	496,688	475,755	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,487,194	1,271,424	1,215,770	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	2,211,661	1,170,782	1,040,879	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	5	2	3	2,282,378	1,215,342	1,067,036	0.2 *	0.2 *	0.3 *	0.0	0.4	0.0	0.4	0.0	0.6
35 to 44	9	7	2	1,872,178	969,722	902,456	0.5 *	0.7 *	0.2 *	0.2	0.8	0.2	1.3	0.0	0.5
45 to 54	21	15	6	1,159,100	572,129	586,971	1.8	2.6 *	1.0 *	1.0	2.6	1.3	3.9	0.2	1.8
55 to 64	35	23	12	595,540	279,290	316,250	5.9	8.2	3.8 *	3.9	7.8	4.9	11.6	1.6	5.9
65 to 74	68	30	38	344,493	151,957	192,536	19.7	19.7	19.7	15.0	24.4	12.7	26.8	13.5	26.0
75 to 84	96	38	58	180,074	74,189	105,885	53.3	51.2	54.8	42.6	64.0	34.9	67.5	40.7	68.9
85 & Older	99	28	71	54,755	19,164	35,591	180.8	146.1	199.5	145.2	216.4	92.0	200.2	153.1	245.9
<b>Total</b>	<b>333</b>	<b>143</b>	<b>190</b>	<b>12,425,543</b>	<b>6,356,240</b>	<b>6,069,303</b>	<b>2.7</b>	<b>2.2</b>	<b>3.1</b>	<b>2.4</b>	<b>3.0</b>	<b>1.9</b>	<b>2.6</b>	<b>2.7</b>	<b>3.6</b>
<b>Age-Adjusted</b>							<b>7.4</b>	<b>7.1</b>	<b>7.4</b>	<b>6.5</b>	<b>8.2</b>	<b>5.8</b>	<b>8.3</b>	<b>6.3</b>	<b>8.5</b>
<b>WHITE</b>															
Under 1	0	0	0	168,928	86,181	82,747	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	608,995	311,436	297,559	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	1,786,666	918,847	867,819	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	1,831,860	947,345	884,515	0.1 *	0.0 +	0.1 *	0.0	0.2	-	-	0.0	0.3
25 to 34	5	3	2	1,885,206	961,929	923,277	0.3 *	0.3 *	0.2 *	0.0	0.5	0.0	0.7	0.0	0.5
35 to 44	10	9	1	2,579,091	1,318,760	1,260,331	0.4 *	0.7 *	0.1 *	0.1	0.6	0.2	1.1	0.0	0.2
45 to 54	33	19	14	2,633,665	1,323,757	1,309,908	1.3	1.4	1.1 *	0.8	1.7	0.8	2.1	0.5	1.6
55 to 64	97	63	34	1,933,678	952,538	981,140	5.0	6.6	3.5	4.0	6.0	5.0	8.2	2.3	4.6
65 to 74	205	111	94	1,259,989	594,985	665,004	16.3	18.7	14.1	14.0	18.5	15.2	22.1	11.3	17.0
75 to 84	549	223	326	1,003,097	416,813	586,284	54.7	53.5	55.6	50.2	59.3	46.5	60.5	49.6	61.6
85 & Older	810	239	571	404,890	134,702	270,188	200.1	177.4	211.3	186.3	213.8	154.9	199.9	194.0	228.7
<b>Total</b>	<b>1,710</b>	<b>667</b>	<b>1,043</b>	<b>16,096,065</b>	<b>7,967,293</b>	<b>8,128,772</b>	<b>10.6</b>	<b>8.4</b>	<b>12.8</b>	<b>10.1</b>	<b>11.1</b>	<b>7.7</b>	<b>9.0</b>	<b>12.1</b>	<b>13.6</b>
<b>Age-Adjusted</b>							<b>7.3</b>	<b>7.3</b>	<b>7.2</b>	<b>7.0</b>	<b>7.7</b>	<b>6.8</b>	<b>7.9</b>	<b>6.8</b>	<b>7.7</b>

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

White, Black, and Asian exclude Hispanic ethnicity. Hispanic includes any race category.

The year 2000 U.S. standard population is used for age-adjusted rates.

<sup>1</sup> Includes deaths for American Indian (14), Pacific Islander (6), and Two or More Races (8) which are not individually shown due to unreliable rates..

\* 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, Race/Ethnic Population with Age and Sex Detail, 2000-2050. May 2004.  
State of California, Department of Health Services, Death Records.

**TABLE 2**  
**HYPERTENSION 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
<b>TOTAL<sup>1</sup></b>															
Under 1	1	1	0	516,411	263,488	252,923	0.2 *	0.4 *	0.0 +	0.0	0.6	0.0	1.1	-	-
1 to 4	0	0	0	1,976,342	1,010,549	965,793	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,412,306	2,773,346	2,638,960	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	2	0	2	5,045,468	2,631,609	2,413,859	0.0 *	0.0 +	0.1 *	0.0	0.1	-	-	0.0	0.2
25 to 34	7	6	1	5,288,247	2,724,113	2,564,134	0.1 *	0.2 *	0.0 *	0.0	0.2	0.0	0.4	0.0	0.1
35 to 44	41	28	13	5,607,549	2,846,141	2,761,408	0.7	1.0	0.5 *	0.5	1.0	0.6	1.3	0.2	0.7
45 to 54	91	56	35	4,679,130	2,308,857	2,370,273	1.9	2.4	1.5	1.5	2.3	1.8	3.1	1.0	2.0
55 to 64	168	87	81	2,962,280	1,429,870	1,532,410	5.7	6.1	5.3	4.8	6.5	4.8	7.4	4.1	6.4
65 to 74	326	147	179	1,954,020	896,870	1,057,150	16.7	16.4	16.9	14.9	18.5	13.7	19.0	14.5	19.4
75 to 84	721	305	416	1,383,065	571,663	811,402	52.1	53.4	51.3	48.3	55.9	47.4	59.3	46.3	56.2
85 & Older	973	281	692	513,989	171,306	342,683	189.3	164.0	201.9	177.4	201.2	144.9	183.2	186.9	217.0
<b>Total</b>	<b>2,330</b>	<b>911</b>	<b>1,419</b>	<b>35,338,807</b>	<b>17,627,812</b>	<b>17,710,995</b>	<b>6.6</b>	<b>5.2</b>	<b>8.0</b>	<b>6.3</b>	<b>6.9</b>	<b>4.8</b>	<b>5.5</b>	<b>7.6</b>	<b>8.4</b>
<b>Age-Adjusted</b>							<b>7.3</b>	<b>7.1</b>	<b>7.3</b>	<b>7.0</b>	<b>7.6</b>	<b>6.6</b>	<b>7.5</b>	<b>6.9</b>	<b>7.7</b>
<b>ASIAN</b>															
Under 1	0	0	0	45,926	23,458	22,468	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	178,330	91,534	86,796	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	507,351	262,076	245,275	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	557,144	284,561	272,583	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	2	2	0	644,621	313,918	330,703	0.3 *	0.6 *	0.0 +	0.0	0.7	0.0	1.5	-	-
35 to 44	1	1	0	659,156	314,894	344,262	0.2 *	0.3 *	0.0 +	0.0	0.4	0.0	0.9	-	-
45 to 54	5	4	1	578,796	268,890	309,906	0.9 *	1.5 *	0.3 *	0.1	1.6	0.0	2.9	0.0	1.0
55 to 64	15	13	2	337,662	157,274	180,388	4.4 *	8.3 *	1.1 *	2.2	6.7	3.8	12.8	0.0	2.6
65 to 74	30	16	14	233,048	101,009	132,039	12.9	15.8 *	10.6 *	8.3	17.5	8.1	23.6	5.0	16.2
75 to 84	66	21	45	137,756	58,678	79,078	47.9	35.8	56.9	36.4	59.5	20.5	51.1	40.3	73.5
85 & Older	79	22	57	41,956	16,705	25,251	188.3	131.7	225.7	146.8	229.8	76.7	186.7	167.1	284.3
<b>Total</b>	<b>198</b>	<b>79</b>	<b>119</b>	<b>3,921,746</b>	<b>1,892,997</b>	<b>2,028,749</b>	<b>5.0</b>	<b>4.2</b>	<b>5.9</b>	<b>4.3</b>	<b>5.8</b>	<b>3.3</b>	<b>5.1</b>	<b>4.8</b>	<b>6.9</b>
<b>Age-Adjusted</b>							<b>6.5</b>	<b>5.8</b>	<b>6.9</b>	<b>5.6</b>	<b>7.4</b>	<b>4.5</b>	<b>7.0</b>	<b>5.7</b>	<b>8.1</b>
<b>BLACK</b>															
Under 1	0	0	0	27,144	13,839	13,305	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	126,271	64,316	61,955	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	411,254	209,155	202,099	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	358,775	185,649	173,126	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	2	2	0	327,826	161,945	165,881	0.6 *	1.2 *	0.0 +	0.0	1.5	0.0	2.9	-	-
35 to 44	19	13	6	395,874	197,451	198,423	4.8	6.6 *	3.0 *	2.6	7.0	3.0	10.2	0.6	5.4
45 to 54	33	16	17	304,136	147,575	156,561	10.9	10.8 *	10.9 *	7.1	14.6	5.5	16.2	5.7	16.0
55 to 64	35	14	21	179,445	83,390	96,055	19.5	16.8 *	21.9	13.0	26.0	8.0	25.6	12.5	31.2
65 to 74	63	23	40	113,055	51,054	62,001	55.7	45.1	64.5	42.0	69.5	26.6	63.5	44.5	84.5
75 to 84	79	33	46	62,587	24,248	38,339	126.2	136.1	120.0	98.4	154.1	89.7	182.5	85.3	154.7
85 & Older	72	18	54	23,307	6,933	16,374	308.9	259.6 *	329.8	237.6	380.3	139.7	379.6	241.8	417.8
<b>Total</b>	<b>303</b>	<b>119</b>	<b>184</b>	<b>2,329,674</b>	<b>1,145,555</b>	<b>1,184,119</b>	<b>13.0</b>	<b>10.4</b>	<b>15.5</b>	<b>11.5</b>	<b>14.5</b>	<b>8.5</b>	<b>12.3</b>	<b>13.3</b>	<b>17.8</b>
<b>Age-Adjusted</b>							<b>18.2</b>	<b>17.3</b>	<b>18.6</b>	<b>16.1</b>	<b>20.2</b>	<b>14.0</b>	<b>20.6</b>	<b>15.9</b>	<b>21.3</b>
<b>HISPANIC</b>															
Under 1	1	1	0	256,278	130,761	125,517	0.4 *	0.8 *	0.0 +	0.0	1.2	0.0	2.3	-	-
1 to 4	0	0	0	950,953	485,542	465,411	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,449,592	1,252,436	1,197,156	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	2,147,131	1,140,661	1,006,470	0.0 *	0.0 +	0.1 *	0.0	0.1	-	-	0.0	0.3
25 to 34	3	2	1	2,222,788	1,182,208	1,040,580	0.1 *	0.2 *	0.1 *	0.0	0.3	0.0	0.4	0.0	0.3
35 to 44	9	7	2	1,788,037	924,255	863,782	0.5 *	0.8 *	0.2 *	0.2	0.8	0.2	1.3	0.0	0.6
45 to 54	8	5	3	1,086,080	535,046	551,034	0.7 *	0.9 *	0.5 *	0.2	1.2	0.1	1.8	0.0	1.2
55 to 64	37	17	20	554,789	259,751	295,038	6.7	6.5 *	6.8	4.5	8.8	3.4	9.7	3.8	9.7
65 to 74	54	20	34	330,157	145,276	184,881	16.4	13.8	18.4	12.0	20.7	7.7	19.8	12.2	24.6
75 to 84	96	38	58	167,231	68,658	98,573	57.4	55.3	58.8	45.9	68.9	37.7	72.9	43.7	74.0
85 & Older	75	24	51	49,930	17,160	32,770	150.2	139.9	155.6	116.2	184.2	83.9	195.8	112.9	198.3
<b>Total</b>	<b>284</b>	<b>114</b>	<b>170</b>	<b>12,002,966</b>	<b>6,141,754</b>	<b>5,861,212</b>	<b>2.4</b>	<b>1.9</b>	<b>2.9</b>	<b>2.1</b>	<b>2.6</b>	<b>1.5</b>	<b>2.2</b>	<b>2.5</b>	<b>3.3</b>
<b>Age-Adjusted</b>							<b>6.8</b>	<b>6.4</b>	<b>7.0</b>	<b>6.0</b>	<b>7.6</b>	<b>5.1</b>	<b>7.7</b>	<b>5.9</b>	<b>8.1</b>
<b>WHITE</b>															
Under 1	0	0	0	150,846	76,936	73,910	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	613,463	314,208	299,255	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	1,819,031	935,673	883,358	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	1,802,388	930,873	871,515	0.1 *	0.0 +	0.1 *	0.0	0.2	-	-	0.0	0.3
25 to 34	0	0	0	1,956,447	999,574	956,873	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
35 to 44	12	7	5	2,625,877	1,342,353	1,283,524	0.5 *	0.5 *	0.4 *	0.2	0.7	0.1	0.9	0.0	0.7
45 to 54	44	30	14	2,599,031	1,304,396	1,294,635	1.7	2.3	1.1 *	1.2	2.2	1.5	3.1	0.5	1.6
55 to 64	75	41	34	1,825,358	898,529	926,829	4.1	4.6	3.7	3.2	5.0	3.2	6.0	2.4	4.9
65 to 74	177	86	91	1,242,058	582,927	659,131	14.3	14.8	13.8	12.2	16.3	11.6	17.9	11.0	16.6
75 to 84	478	211	267	996,270	411,887	584,383	48.0	51.2	45.7	43.7	52.3	44.3	58.1	40.2	51.2
85 & Older	744	217	527	391,271	127,805	263,466	190.1	169.8	200.0	176.5	203.8	147.2	192.4	182.9	217.1
<b>Total</b>	<b>1,531</b>	<b>592</b>	<b>939</b>	<b>16,022,040</b>	<b>7,925,161</b>	<b>8,096,879</b>	<b>9.6</b>	<b>7.5</b>	<b>11.6</b>	<b>9.1</b>	<b>10.0</b>	<b>6.9</b>	<b>8.1</b>	<b>10.9</b>	<b>12.3</b>
<b>Age-Adjusted</b>							<b>6.7</b>	<b>6.7</b>	<b>6.6</b>	<b>6.4</b>	<b>7.0</b>	<b>6.2</b>	<b>7.2</b>	<b>6.2</b>	<b>7.0</b>

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

White, Black, and Asian exclude Hispanic ethnicity. Hispanic includes any race category.

The year 2000 U.S. standard population is used for age-adjusted rates.

<sup>1</sup> Includes deaths for American Indian (10), Pacific Islander (1), and Two or More Races (3) which are not individually shown due to unreliable rates..

\* 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, Race/Ethnic Population with Age and Sex Detail, 2000-2050. May 2004.  
State of California, Department of Health Services, Death Records.

**TABLE 3**  
**HYPERTENSION 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
<b>TOTAL<sup>1</sup></b>															
Under 1	0	0	0	518,927	264,741	254,186	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	1,960,105	1,002,866	957,239	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,377,327	2,755,213	2,622,114	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	7	5	2	4,956,819	2,584,393	2,372,426	0.1 *	0.2 *	0.1 *	0.0	0.2	0.0	0.4	0.0	0.2
25 to 34	13	5	8	5,284,524	2,720,908	2,563,616	0.2 *	0.2 *	0.3 *	0.1	0.4	0.0	0.3	0.1	0.5
35 to 44	45	28	17	5,566,274	2,820,571	2,745,703	0.8	1.0	0.6 *	0.6	1.0	0.6	1.4	0.3	0.9
45 to 54	99	59	40	4,552,753	2,244,282	2,308,471	2.2	2.6	1.7	1.7	2.6	2.0	3.3	1.2	2.3
55 to 64	186	90	96	2,774,474	1,337,024	1,437,450	6.7	6.7	6.7	5.7	7.7	5.3	8.1	5.3	8.0
65 to 74	323	162	161	1,920,122	876,170	1,043,952	16.8	18.5	15.4	15.0	18.7	15.6	21.3	13.0	17.8
75 to 84	752	294	458	1,341,150	551,924	789,226	56.1	53.3	58.0	52.1	60.1	47.2	59.4	52.7	63.3
85 & Older	923	290	633	477,265	155,766	321,499	193.4	186.2	196.9	180.9	205.9	164.7	207.6	181.6	212.2
Total	2,348	933	1,415	34,729,740	17,313,858	17,415,882	6.8	5.4	6.1	6.5	7.0	5.0	5.7	7.7	8.5
Age-Adjusted							7.7	7.7	7.6	7.4	8.0	7.2	8.1	7.2	8.0
<b>ASIAN</b>															
Under 1	0	0	0	47,353	24,180	23,173	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	175,354	90,196	85,158	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	506,076	261,333	244,743	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	558,118	283,682	274,436	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	1	1	0	652,150	316,603	335,547	0.2 *	0.3 *	0.0 +	0.0	0.5	0.0	0.9	-	-
35 to 44	2	2	0	654,655	311,736	342,919	0.3 *	0.6 *	0.0 +	0.0	0.7	0.0	1.5	-	-
45 to 54	10	5	5	559,132	259,407	299,725	1.8 *	1.9 *	1.7 *	0.7	2.9	0.2	3.6	0.2	3.1
55 to 64	13	4	9	317,844	147,600	170,244	4.1 *	2.7 *	5.3 *	1.9	6.3	0.1	5.4	1.8	8.7
65 to 74	43	13	30	226,106	97,488	128,618	19.0	13.3 *	23.3	13.3	24.7	6.1	20.6	15.0	31.7
75 to 84	62	28	34	127,700	54,562	73,138	48.6	51.3	46.5	36.5	60.6	32.3	70.3	30.9	62.1
85 & Older	54	19	35	36,199	14,378	21,821	149.2	132.1	160.4	109.4	189.0	72.7	191.6	107.3	213.5
Total	185	72	113	3,860,687	1,861,165	1,999,522	4.8	3.9	5.7	4.1	5.5	3.0	4.8	4.6	6.7
Age-Adjusted							6.4	5.9	6.8	5.5	7.4	4.5	7.3	5.5	8.1
<b>BLACK</b>															
Under 1	0	0	0	28,498	14,527	13,971	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	129,558	65,928	63,630	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	405,206	205,997	199,209	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	341,761	176,140	165,621	0.3 *	0.0 +	0.6 *	0.0	0.9	-	-	0.0	1.8
25 to 34	5	2	3	328,784	162,827	165,957	1.5 *	1.2 *	1.8 *	0.2	2.9	0.0	2.9	0.0	3.9
35 to 44	14	8	6	390,384	194,372	196,012	3.6 *	4.1 *	3.1 *	1.7	5.5	1.3	7.0	0.6	5.5
45 to 54	31	19	12	289,801	140,000	149,801	10.7	13.6	8.0 *	6.9	14.5	7.5	19.7	3.5	12.5
55 to 64	50	26	24	170,354	79,371	90,983	29.4	32.8	26.4	21.2	37.5	20.2	45.3	15.8	36.9
65 to 74	48	27	21	108,917	48,723	60,194	44.1	55.4	34.9	31.6	56.5	34.5	76.3	20.0	49.8
75 to 84	84	34	50	60,927	23,448	37,479	137.9	145.0	133.4	108.4	167.4	96.3	193.7	96.4	170.4
85 & Older	69	25	44	21,657	6,331	15,326	318.6	394.9	287.1	243.4	393.8	240.1	549.7	202.3	371.9
Total	302	141	161	2,275,847	1,117,664	1,158,183	13.3	12.6	13.9	11.8	14.8	10.5	14.7	11.8	16.0
Age-Adjusted							18.9	21.8	16.9	16.7	21.0	18.0	25.6	14.3	19.6
<b>HISPANIC</b>															
Under 1	0	0	0	253,961	129,573	124,388	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	938,287	479,043	459,244	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,385,392	1,219,250	1,166,142	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	2	1	1	2,090,373	1,113,138	977,235	0.1 *	0.1 *	0.1 *	0.0	0.2	0.0	0.3	0.0	0.3
25 to 34	2	1	1	2,148,856	1,142,461	1,006,395	0.1 *	0.1 *	0.1 *	0.0	0.2	0.0	0.3	0.0	0.3
35 to 44	4	4	0	1,698,401	876,555	821,846	0.2 *	0.5 *	0.0 +	0.0	0.5	0.0	0.9	-	-
45 to 54	18	12	6	1,013,711	498,885	514,826	1.8 *	2.4 *	1.2 *	1.0	2.6	1.0	3.8	0.2	2.1
55 to 64	29	10	19	515,325	240,811	274,514	5.6	4.2 *	6.9	3.6	7.7	1.6	6.7	3.8	10.0
65 to 74	47	23	24	315,002	138,023	176,979	14.9	16.7	13.6	10.7	19.2	9.9	23.5	8.1	19.0
75 to 84	88	36	52	153,901	62,845	91,056	57.2	57.3	57.1	45.2	69.1	38.6	76.0	41.6	72.6
85 & Older	88	26	62	44,732	15,161	29,571	196.7	171.5	209.7	155.6	237.8	105.6	237.4	157.5	261.9
Total	278	113	165	11,557,941	5,915,745	5,642,196	2.4	1.9	2.9	2.1	2.7	1.6	2.3	2.5	3.4
Age-Adjusted							7.4	7.1	7.5	6.5	8.3	5.7	8.5	6.3	8.7
<b>WHITE</b>															
Under 1	0	0	0	153,306	78,168	75,138	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	624,482	320,442	304,040	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	1,862,124	957,903	904,221	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	4	4	0	1,796,019	926,636	869,383	0.2 *	0.4 *	0.0 +	0.0	0.4	0.0	0.9	-	-
25 to 34	3	1	2	2,022,119	1,034,396	987,723	0.1 *	0.1 *	0.2 *	0.0	0.3	0.0	0.3	0.0	0.5
35 to 44	24	14	10	2,687,568	1,372,319	1,315,249	0.9	1.0 *	0.8 *	0.5	1.3	0.5	1.6	0.3	1.2
45 to 54	39	22	17	2,585,433	1,296,139	1,289,294	1.5	1.7	1.3 *	1.0	2.0	1.0	2.4	0.7	1.9
55 to 64	93	49	44	1,711,671	840,997	870,674	5.4	5.8	5.1	4.3	6.5	4.2	7.5	3.6	6.5
65 to 74	182	97	85	1,236,729	576,477	660,252	14.7	16.8	12.9	12.6	16.9	13.5	20.2	10.1	15.6
75 to 84	514	195	319	981,305	403,775	577,530	52.4	48.3	55.2	47.9	56.9	41.5	55.1	49.2	61.3
85 & Older	711	220	491	368,575	117,768	250,807	192.9	186.8	195.8	178.7	207.1	162.1	211.5	178.5	213.1
Total	1,570	602	968	16,029,331	7,925,020	8,104,311	9.8	7.6	11.9	9.3	10.3	7.0	8.2	11.2	12.7
Age-Adjusted							7.2	7.1	7.1	6.8	7.5	6.6	7.7	6.7	7.6

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

White, Black, and Asian exclude Hispanic ethnicity. Hispanic includes any race category.

The year 2000 U.S. standard population is used for age-adjusted rates.

<sup>1</sup> Includes deaths for American Indian (7) and Pacific Islander (6) which are not individually shown due to unreliable rates.

\* 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, Race/Ethnic Population with Age and Sex Detail, 2000-2050. May 2004.  
State of California, Department of Health Services, Death Records.

TABLE 4  
HYPERTENSION 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
<b>TOTAL<sup>1</sup></b>															
Under 1	1	1	0	491,073	251,541	239,532	0.2 *	0.4 *	0.0 +	0.0	0.6	0.0	1.2	-	-
1 to 4	0	0	0	1,990,873	1,018,496	972,377	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	5,310,526	2,720,715	2,589,811	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	4	1	3	4,860,696	2,532,547	2,328,149	0.1 *	0.0 *	0.1 *	0.0	0.2	0.0	0.1	0.0	0.3
25 to 34	7	3	4	5,245,273	2,702,010	2,543,263	0.1 *	0.1 *	0.2 *	0.0	0.2	0.0	0.2	0.0	0.3
35 to 44	36	22	14	5,499,218	2,780,657	2,718,561	0.7	0.8	0.5 *	0.4	0.9	0.5	1.1	0.2	0.8
45 to 54	74	47	27	4,376,695	2,156,077	2,220,618	1.7	2.2	1.2	1.3	2.1	1.6	2.8	0.8	1.7
55 to 64	133	77	56	2,641,560	1,270,830	1,370,730	5.0	6.1	4.1	4.2	5.9	4.7	7.4	3.0	5.2
65 to 74	272	145	127	1,894,010	858,793	1,035,217	14.4	16.9	12.3	12.7	16.1	14.1	19.6	10.1	14.4
75 to 84	659	261	398	1,294,989	530,932	764,057	50.9	49.2	52.1	47.0	54.8	43.2	55.1	47.0	57.2
85 & Older	834	234	600	438,285	139,496	298,789	190.3	167.7	200.8	177.4	203.2	146.3	189.2	184.7	216.9
Total	2,020	791	1,229	34,043,198	16,962,094	17,081,104	5.9	4.7	7.2	5.7	6.2	4.3	5.0	6.8	7.6
Age-Adjusted							7.0	6.9	6.9	6.7	7.3	6.4	7.4	6.5	7.3
<b>ASIAN</b>															
Under 1	0	0	0	42,844	21,965	20,879	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	177,521	91,373	86,148	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	498,621	257,574	241,047	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	552,160	279,314	272,846	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	0	0	0	642,906	311,655	331,251	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
35 to 44	3	2	1	639,658	302,953	336,705	0.5 *	0.7 *	0.3 *	0.0	1.0	0.0	1.6	0.0	0.9
45 to 54	8	6	2	528,556	245,171	283,385	1.5 *	2.4 *	0.7 *	0.5	2.6	0.5	4.4	0.0	1.7
55 to 64	7	4	3	300,494	138,840	161,654	2.3 *	2.9 *	1.9 *	0.6	4.1	0.1	5.7	0.0	4.0
65 to 74	25	14	11	217,029	93,082	123,947	11.5	15.0 *	8.9 *	7.0	16.0	7.2	22.9	3.6	14.1
75 to 84	55	22	33	116,423	49,861	66,562	47.2	44.1	49.6	34.8	59.7	25.7	62.6	32.7	66.5
85 & Older	44	13	31	30,080	12,023	18,057	146.3	108.1 *	171.7	103.1	189.5	49.3	166.9	111.2	232.1
Total	142	61	81	3,746,292	1,803,811	1,942,481	3.8	3.4	4.2	3.2	4.4	2.5	4.2	3.3	5.1
Age-Adjusted							5.6	5.3	5.8	4.7	6.6	3.9	6.7	4.5	7.1
<b>BLACK</b>															
Under 1	0	0	0	29,741	15,112	14,629	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	132,430	67,365	65,065	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	397,484	201,951	195,533	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	1	0	1	326,641	167,718	158,923	0.3 *	0.0 +	0.6 *	0.0	0.9	-	-	0.0	1.9
25 to 34	1	0	1	331,100	165,044	166,056	0.3 *	0.0 +	0.6 *	0.0	0.9	-	-	0.0	1.8
35 to 44	15	9	6	383,161	190,459	192,702	3.9 *	4.7 *	3.1 *	1.9	5.9	1.6	7.8	0.6	5.6
45 to 54	29	17	12	274,820	132,042	142,778	10.6	12.9 *	8.4 *	6.7	14.4	6.8	19.0	3.6	13.2
55 to 64	40	21	19	164,079	76,569	87,510	24.4	27.4	21.7	16.8	31.9	15.7	39.2	11.9	31.5
65 to 74	50	32	18	105,017	46,402	58,615	47.6	69.0	30.7 *	34.4	60.8	45.1	92.9	16.5	44.9
75 to 84	84	37	47	58,654	22,382	36,272	143.2	165.3	129.6	112.6	173.8	112.0	218.6	92.5	166.6
85 & Older	74	16	58	19,689	5,604	14,085	375.8	285.5 *	411.8	290.2	461.5	145.6	425.4	305.8	517.8
Total	294	132	162	2,222,816	1,090,648	1,132,168	13.2	12.1	14.3	11.7	14.7	10.0	14.2	12.1	16.5
Age-Adjusted							19.7	21.3	17.9	17.4	22.0	17.4	25.1	15.2	20.7
<b>HISPANIC</b>															
Under 1	1	1	0	237,496	121,585	115,911	0.4 *	0.8 *	0.0 +	0.0	1.2	0.0	2.4	-	-
1 to 4	0	0	0	948,679	484,068	464,611	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	2,299,957	1,175,384	1,124,573	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	3	1	2	2,027,816	1,080,868	946,948	0.1 *	0.1 *	0.2 *	0.0	0.3	0.0	0.3	0.0	0.5
25 to 34	2	1	1	2,060,173	1,095,849	964,324	0.1 *	0.1 *	0.1 *	0.0	0.2	0.0	0.3	0.0	0.3
35 to 44	9	8	1	1,604,089	826,047	778,042	0.6 *	1.0 *	0.1 *	0.2	0.9	0.3	1.6	0.0	0.4
45 to 54	7	6	1	941,053	462,923	478,130	0.7 *	1.3 *	0.2 *	0.2	1.3	0.3	2.3	0.0	0.6
55 to 64	30	21	9	481,558	224,626	256,932	6.2	9.3	3.5 *	4.0	8.5	5.4	13.3	1.2	5.8
65 to 74	42	20	22	300,409	131,275	169,134	14.0	15.2	13.0	9.8	18.2	8.6	21.9	7.6	18.4
75 to 84	60	28	32	141,486	57,595	83,891	42.4	48.6	38.1	31.7	53.1	30.6	66.6	24.9	51.4
85 & Older	68	23	45	40,269	13,429	26,840	168.9	171.3	167.7	128.7	209.0	101.3	241.3	118.7	216.6
Total	222	109	113	11,082,985	5,673,649	5,409,336	2.0	1.9	2.1	1.7	2.3	1.6	2.3	1.7	2.5
Age-Adjusted							6.2	7.0	5.6	5.4	7.1	5.6	8.5	4.5	6.6
<b>WHITE</b>															
Under 1	0	0	0	155,299	79,680	75,619	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
1 to 4	0	0	0	644,970	331,193	313,777	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 to 14	0	0	0	1,904,163	979,233	924,930	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 to 24	0	0	0	1,794,122	925,355	868,767	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
25 to 34	3	1	2	2,083,017	1,066,877	1,016,140	0.1 *	0.1 *	0.2 *	0.0	0.3	0.0	0.3	0.0	0.5
35 to 44	9	3	6	2,742,427	1,398,317	1,344,110	0.3 *	0.2 *	0.4 *	0.1	0.5	0.0	0.5	0.1	0.8
45 to 54	28	18	10	2,535,616	1,269,871	1,265,745	1.1	1.4 *	0.8 *	0.7	1.5	0.8	2.1	0.3	1.3
55 to 64	53	29	24	1,641,307	804,962	836,345	3.2	3.6	2.9	2.4	4.1	2.3	4.9	1.7	4.0
65 to 74	151	78	73	1,240,624	573,721	666,903	12.2	13.6	10.9	10.2	14.1	10.6	16.6	8.4	13.5
75 to 84	458	174	284	962,896	394,629	568,267	47.6	44.1	50.0	43.2	51.9	37.5	50.6	44.2	55.8
85 & Older	643	179	464	343,548	106,876	236,672	187.2	167.5	196.1	172.7	201.6	142.9	192.0	178.2	213.9
Total	1,345	482	863	16,047,989	7,930,714	8,117,275	8.4	6.1	10.6	7.9	8.8	5.5	6.6	9.9	11.3
Age-Adjusted							6.3	6.0	6.5	6.0	6.7	5.5	6.6	6.0	6.9

Note : Rates are per 100,000 population. ICD-10 codes I10 and I12.  
 \* Death rate unreliable, relative standard error is greater than or equal to 23 percent  
 White, Black, and Asian exclude Hispanic ethnicity. Hispanic includes any race category.  
 + Standard error indeterminate, death rate based on no (zero) deaths.  
 The year 2000 U.S. standard population is used for age-adjusted rates.  
 - Confidence limit is not calculated for no (zero) deaths.  
<sup>1</sup> Includes deaths for American Indian (9), Pacific Islander (6), and Two or More Races (2) which are not individually shown due to unreliable rates.

Source : State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2050. May 2004.  
 State of California, Department of Health Services, Death Records.

TABLE 5  
HYPERTENSION DEATHS  
CALIFORNIA, 2001-2003  
(By Place of Residence)

COUNTY	2001-2003 DEATHS (Average)	PERCENT	2002 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	2,418.7	100.0	35,338,807	6.8	7.6	7.3	7.9
ALAMEDA	110.3	4.6	1,488,074	7.4	8.7	7.0	10.3
ALPINE	0.0	0.0	1,292	0.0 +	0.0 +	-	-
AMADOR	0.7	a	36,637	1.8 *	1.5 *	0.0	5.2
BUTTE	32.3	1.3	209,770	15.4	11.9	7.7	16.0
CALAVERAS	3.3	0.1	42,524	7.8 *	6.8 *	0.0	14.1
COLUSA	2.7	0.1	19,635	13.6 *	15.2 *	0.0	33.5
CONTRA COSTA	67.3	2.8	989,807	6.8	7.1	5.4	8.8
DEL NORTE	1.3	0.1	27,982	4.8 *	4.8 *	0.0	13.1
EL DORADO	8.7	0.4	165,463	5.2 *	5.7 *	1.9	9.5
FRESNO <sup>1</sup>	71.7	3.0	836,207	8.6	10.7	8.2	13.1
GLENN	2.3	0.1	26,969	8.7 *	7.9 *	0.0	17.9
HUMBOLDT	6.3	0.3	128,492	4.9 *	4.9 *	1.1	8.7
IMPERIAL	7.0	0.3	149,360	4.7 *	6.7 *	1.7	11.7
INYO	1.7	0.1	18,456	9.0 *	5.0 *	0.0	12.7
KERN	45.0	1.9	697,856	6.4	7.5	5.3	9.7
KINGS	6.3	0.3	135,123	4.7 *	7.9 *	1.7	14.1
LAKE	5.7	0.2	61,352	9.2 *	6.9 *	1.1	12.6
LASSEN	1.0	a	34,129	2.9 *	3.6 *	0.0	10.8
LOS ANGELES	695.7	28.8	9,889,170	7.0	7.9	7.3	8.4
MADERA	11.0	0.5	129,585	8.5 *	8.7 *	3.6	13.9
MARIN	13.7	0.6	250,179	5.5 *	4.3 *	2.0	6.7
MARIPOSA	0.0	0.0	17,589	0.0 +	0.0 +	-	-
MENDOCINO	8.0	0.3	88,353	9.1 *	8.6 *	2.6	14.6
MERCED	15.0	0.6	223,904	6.7 *	10.0 *	4.9	15.1
MODOC	0.3	a	9,400	3.5 *	4.4 *	0.0	19.2
MONO	0.0	0.0	13,441	0.0 +	0.0 +	-	-
MONTEREY	24.7	1.0	413,819	6.0	7.4	4.5	10.3
NAPA	6.3	0.3	128,966	4.9 *	3.3 *	0.7	5.8
NEVADA	7.3	0.3	96,045	7.6 *	5.8 *	1.6	9.9
ORANGE	170.3	7.0	2,959,646	5.8	7.0	6.0	8.1
PLACER	18.0	0.7	273,338	6.6 *	6.0 *	3.2	8.7
PLUMAS	2.7	0.1	21,117	12.6 *	9.3 *	0.0	20.9
RIVERSIDE	111.3	4.6	1,682,408	6.6	6.7	5.5	8.0
SACRAMENTO	89.3	3.7	1,302,647	6.9	7.5	5.9	9.1
SAN BENITO	2.3	0.1	55,955	4.2 *	6.7 *	0.0	15.4
SAN BERNARDINO <sup>1</sup>	126.0	5.2	1,816,398	6.9	10.4	8.6	12.3
SAN DIEGO	226.0	9.3	2,944,585	7.7	8.6	7.5	9.7
SAN FRANCISCO <sup>1</sup>	42.3	1.8	788,292	5.4	4.7	3.2	6.1
SAN JOAQUIN	40.0	1.7	607,896	6.6	8.3	5.7	10.8
SAN LUIS OBISPO	19.3	0.8	255,449	7.6	6.3	3.5	9.1
SAN MATEO	43.3	1.8	711,793	6.1	5.7	4.0	7.4
SANTA BARBARA	28.0	1.2	408,471	6.9	6.5	4.1	8.9
SANTA CLARA	95.7	4.0	1,717,059	5.6	7.0	5.6	8.4
SANTA CRUZ	20.0	0.8	259,164	7.7	8.5	4.7	12.2
SHASTA	14.7	0.6	172,130	8.5 *	5.6 *	2.7	8.6
SIERRA	0.0	0.0	3,524	0.0 +	0.0 +	-	-
SISKIYOU	4.3	0.2	44,628	9.7 *	6.5 *	0.4	12.7
SOLANO	32.7	1.4	411,498	7.9	8.5	5.5	11.4
SONOMA	32.0	1.3	470,723	6.8	5.6	3.7	7.6
STANISLAUS	30.0	1.2	477,919	6.3	7.3	4.6	9.9
SUTTER	5.0	0.2	82,696	6.0 *	6.3 *	0.8	11.9
TEHAMA	3.7	0.2	57,649	6.4 *	4.8 *	0.0	9.8
TRINITY	0.7	a	13,271	5.0 *	3.4 *	0.0	11.7
TULARE	32.7	1.4	383,164	8.5	11.6	7.6	15.5
TUOLUMNE	5.0	0.2	56,545	8.8 *	6.5 *	0.7	12.2
VENTURA	51.3	2.1	788,282	6.5	7.4	5.3	9.4
YOLO	11.0	0.5	180,193	6.1 *	8.2 *	3.4	13.1
YUBA	5.3	0.2	62,788	8.5 *	10.8 *	1.6	20.1

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

The year 2000 U.S. standard population is used for age-adjusted rates.

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

+ Standard error indeterminate, death rate based on no (zero) deaths.

<sup>1</sup> County age-adjusted rate is significantly different from California age-adjusted rate.

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

- Confidence limit is not calculated for no (zero) deaths.

Source : State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2050. May 2004.  
State of California, Department of Health Services, Death Records.