



CENTER FOR HEALTH STATISTICS
DATA SUMMARY
REPORT REGISTER NO. DS98-08000
(August 1998)

SUICIDE DEATHS
CALIFORNIA, 1980-1996

Introduction

This report presents suicide deaths in California for the years 1980 through 1996. Deaths due to suicide have historically been one of the leading causes of death in California as well as the United States. In recent years, more people have died from suicide than from homicide.^{1,2} Suicide is a complex behavior that is generally related to multiple risk factors. The majority of people who commit suicide normally have one or more diagnosable mental and/or substance abuse disorders.³ For many years, deaths due to suicide have predominantly affected White males, especially elderly White males.

In the 1960's and 1970's, the primary means used by California residents to commit suicide was poisoning by solids, liquids, or gases.⁴ From 1980 through 1996, the use of firearms was the primary method.⁵ During this period, over half of the suicide deaths among Californians involved the use of a firearm. National data reflect similar findings.

Due to the prevalence of suicide in our nation, the United States Public Health Service has established a number of health objectives pertaining to this mental disorder, which are published in *Healthy People 2000*.⁶ One of the objectives and other detailed suicide death data among California residents by sex, race/ethnicity, age, and county are presented in the following analyses.

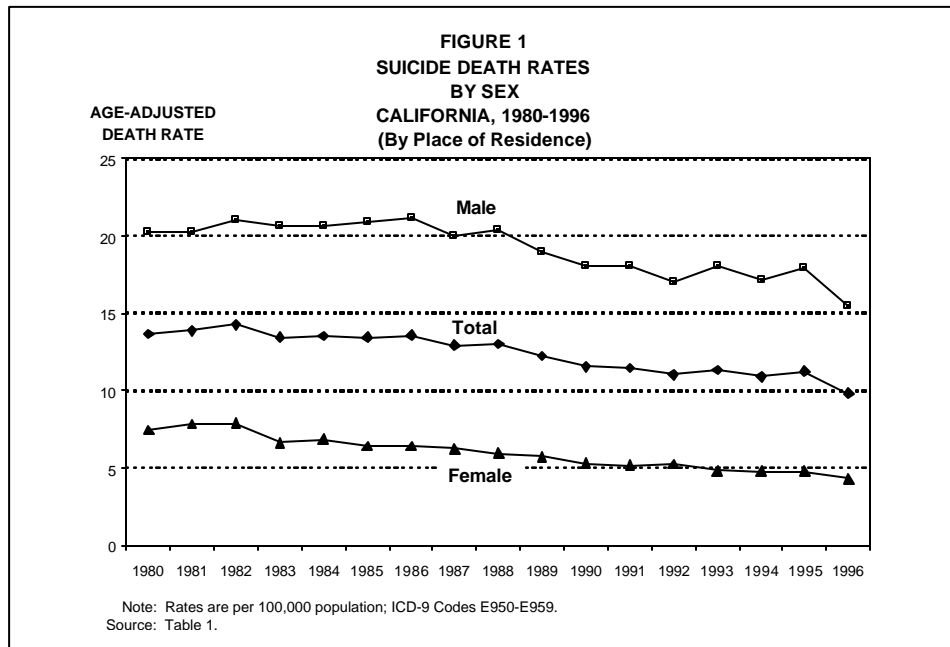
Suicide Deaths, Crude and Age-Adjusted Death Rates by Sex

As shown in Table 1 (page 5), the number of suicide deaths among California residents varied over the 17-year period from 1980 to 1996. The highest number of suicide deaths (3,989) occurred in 1988, while the lowest (3,408) occurred in 1996. Suicide deaths among males also peaked (3,079) in 1988, but the lowest number of deaths (2,489) occurred in 1980. The highest number of suicide deaths among females (1,048) occurred in 1982, and the lowest (745) in 1996. The suicide death ratio ranged from 2.5 male deaths for every female death during the early 1980's to 3.7 male deaths for every female death during the mid 1990's.

California's crude death rates due to suicide also varied from 1980 through 1996. The crude death rate in 1980 was 14.4 per 100,000 population and increased during the following two years to a peak of 15.1 in 1982. Over the subsequent 14 years, the rates showed a relatively constant decrease to a low of 10.5 in 1996. Suicide rates among males and females revealed a similar pattern, except the highest rate among males occurred in 1986 instead of 1982. The male suicide rate was 21.2 in 1980, peaked to a rate of 22.4 in 1986, and decreased to a low of 16.4 in 1996. The female suicide rate was 7.8 in 1980, peaked to a rate of 8.4 in 1982, and decreased to a low of 4.6 in 1996. Regression analysis showed the declines in the total crude rates, the male rates, and the female rates due to suicide were significant over the 17-year period. The male suicide rates were also considerably higher than the female suicide rates. The ratio of male to female suicide rates ranged from 2.6 to 1 during the early 1980's up to 3.7 to 1 during the 1990's, which is almost identical to the ratio of suicide deaths between males and females mentioned earlier.

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As illustrated in Figure 1, age-adjusted death rates due to suicides were relatively analogous to the crude death rates from 1980 through 1996. During this period, the age-adjusted death rates among males exhibited more variability from year to year than their female counterparts. The male age-adjusted death rate was 20.2 per 100,000 population in 1980, peaked to a high of 21.2 in 1986, and decreased to a low of 15.5 in 1996. The female age-adjusted death rate was 7.4 in 1980, peaked to a high of 7.9 in 1982, and decreased steadily to a low of 4.3 in 1996. The downward trends for both the male and female age-adjusted death rates, and the total age-adjusted death rates were significant from 1980 through 1996. There was also a distinct disparity between the male age-adjusted death rates and the female age-adjusted death rates. Over the seventeen-year period, the male age-adjusted death rate ranged from 2.6 to 3.7 times higher than the female age-adjusted death rate.



California met the year 2000 national health objective of no more than 10.5 age-adjusted suicide deaths per 100,000 population in 1996. Based on projections from 1980 through 1996, California's age-adjusted suicide death rate should be even lower by the year 2000.

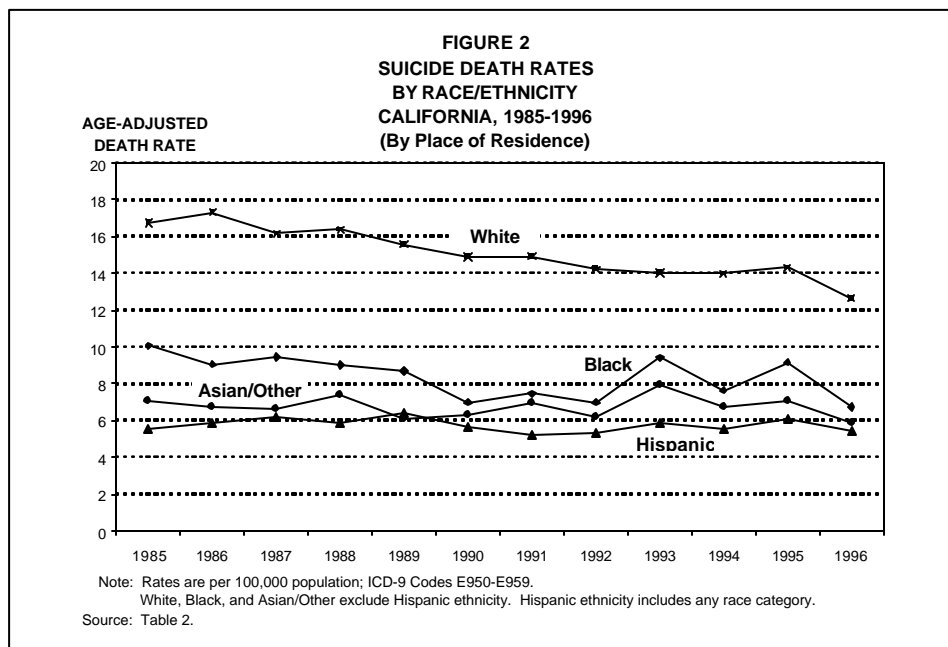
Suicide Deaths, Crude, and Age-Adjusted Death Rates by Race/Ethnicity

Table 2 (page 6) shows suicide death data by the four major race/ethnic groups from 1985 through 1996. During this period, Whites had the highest average number of deaths (2,989.8), which was 16.9, 14.9, and 7.2 times higher than the average number of deaths among Blacks (176.6), Asian/Other (200.5), and Hispanics (414.2).

Throughout the 12-year period, Whites also had the highest crude death rates due to suicide followed by Blacks, Asian/Other, and Hispanics. Their crude death rates were approximately two times higher than Blacks and Asian/Other, and approximately three times higher than Hispanics. The crude death rates among the four race/ethnic groups also peaked in different years, while the lowest crude death rates among three of the four race/ethnic groups all occurred in 1996. Hispanics were the exception because their lowest crude death rate occurred in 1991. The highest crude death rates per 100,000 population among Whites, Blacks, Asian/Other, and Hispanics and the year of occurrence were respectively 20.1 in 1986, 10.1 in 1985, 8.0 in 1993, and 5.8 in 1989. The lowest crude death rates among Whites, Blacks, and Asian/Other were respectively 15.0, 6.8, and 6.0 in 1996. The lowest crude death rate among Hispanics was 4.8 in 1991. From 1985 through 1996, regression analysis showed the crude death rates among Whites and Blacks decreased significantly, whereas the crude death rates among Asian/Other and Hispanics showed no significant trend.

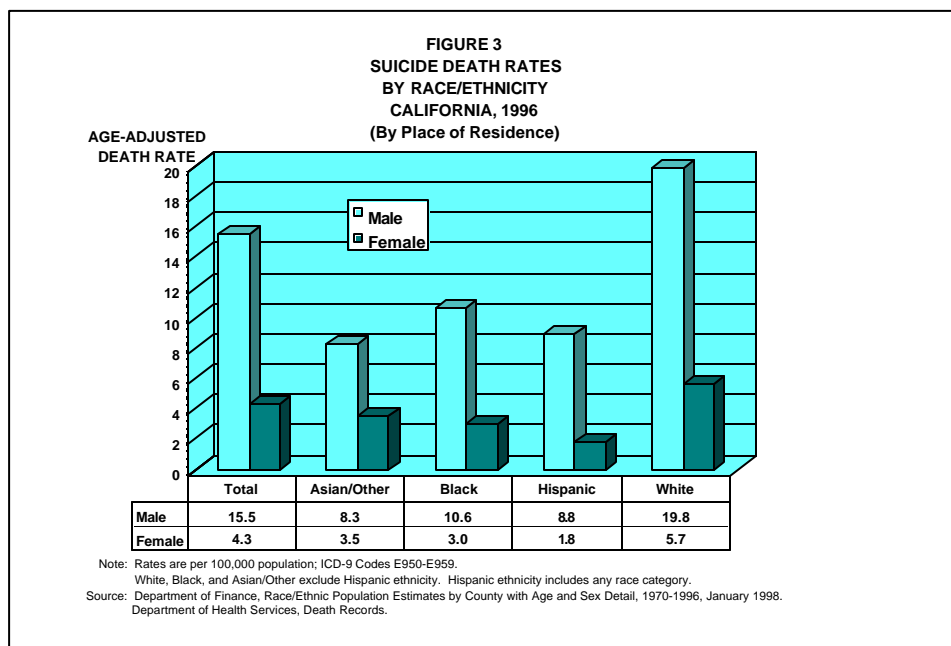
The age-adjusted death rates among Asian/Other, Blacks, and Hispanics were nearly identical to their crude death rates from 1985 through 1996. The age-adjusted death rates among Whites, however, were somewhat lower than their crude rates. The variation between the age-adjusted and crude death rates among Whites can be attributed to the disproportionately older age distribution within their population and the exceptionally high number of suicide deaths among the elderly compared to the population at risk.

As shown in Figure 2, Whites had considerably higher age-adjusted death rates than the other three race/ethnic groups from 1985 through 1996. The age-adjusted death rates among Whites were nearly two times higher than the age-adjusted death rates among Blacks, and over two times higher than the age-adjusted death rates among Asian/Other and Hispanics. Like the crude death rates, the age-adjusted death rates among Blacks, Asian/Other, and Hispanics varied from year to year, while the age-adjusted death rates among Whites showed a relatively constant decline. The White age-adjusted death rate was 16.7 per 100,000 population in 1985, peaked to a rate of 17.3 in 1986, and decreased to a low of 12.6 in 1996. The highest Black age-adjusted rate was 10.1 in 1985, and varied to a low of 6.7 in 1996. The Asian/Other age-adjusted death rate was 7.1 in 1985, peaked to a high of 7.9 in 1993, and varied to a low of 5.9 in 1996. The Hispanic age-adjusted death rate was 5.6 in 1985, peaked to a high of 6.4 in 1989, decreased to a low of 5.2 in 1991, and increased back up to 5.4 in 1996. Regression analysis showed the age-adjusted death rates among Whites declined significantly over the 12-year period. The age-adjusted death rates among Blacks, Asian/Other, and Hispanics showed no significant trend.



Age-Adjusted Suicide Death Rates by Age, Race/Ethnicity, and Sex, 1996

As illustrated in Figure 3, males had higher age-adjusted death rates than females in 1996, regardless of the race/ethnic group. The male age-adjusted death rates among Asian/Other, Blacks, Hispanics, and Whites were respectively 2.4, 3.5, 4.9, and 3.5 times higher than the age-adjusted death rates of their female counterparts. In



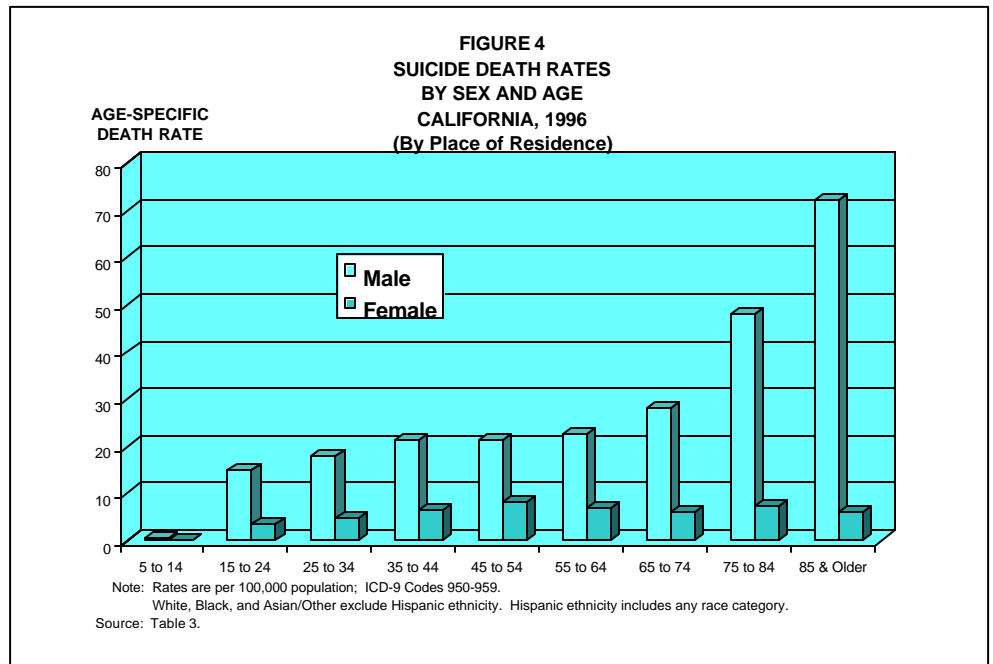
regard to the male age-adjusted death rates among the four race/ethnic groups, Whites had the highest age-adjusted death rate of 19.8 per 100,000 population. This age-adjusted death rate was significantly higher than the age-adjusted death rates among Asian/Other males (8.3), Black males (10.6), and Hispanic males (8.8). Like the male age-adjusted death rates, Whites also had the highest female age-adjusted death rate of 5.7. This age-adjusted death rate was significantly higher than Asian/Other females (3.5), Black females (3.0), and Hispanic females (1.8).

Age-Specific Suicide Death Rates

Table 3 (page 7) shows California's 1996 age-specific suicide death numbers and rates among the four race/ethnic groups by sex. California residents aged 35-44 had the greatest number of deaths due to suicide (761) followed by those aged 25-34 (626) and aged 45-54 (557). Of the four race/ethnic groups, Whites by far had the most suicide deaths in each of the eleven age groups. Analysis of suicide deaths by race/ethnicity and sex revealed that White males had the greatest number of suicide deaths (2,004), which was 58.8 percent of all suicide deaths (3,408) in California.

As shown in Figure 4, age-specific death rates among males were substantially higher than the age-specific death rates among females. The difference in the age-specific death rates between males and females ranged from a factor of 2.4 to 1 among decedents aged 5-14 all the way up to a factor of 11.7 to 1 among decedents aged 85 and older. The male age-specific death rates also showed a direct correlation with the age of the decedent, in that the age-specific death rates increased as the age of the decedent increased.

The lowest age-specific death rate (0.8 per 100,000 population) was among males aged 5-14, and the highest age-specified death rate (72.2) was among males aged 85 and over. The age-specific death rates among females showed a different pattern. Of the reliable age-specific death rates (rates with a relative standard error of less than or equal to 30 percent), the lowest age-specific death rate (3.4) was among females aged 15-24, and the highest age-specific rate (8.1) was among females aged 45-54.



Suicide Death Rates Among California Counties

Table 4 (page 8) shows the 1994-1996 three-year average crude and age-adjusted suicide rates for California and the 58 counties. Of the counties with reliable rates, the crude death rate varied from a high of 29.7 per 100,000 population in Lake County to a low of 8.6 in Santa Clara County, a difference in rates by a factor of more than 3 to 1. California's crude death rate was 11.4.

During the same period, reliable age-adjusted death rates ranged from a high of 25.3 per 100,000 population in Lake County to a low of 8.1 in Santa Clara County. California's age-adjusted death rate was 10.7.

Using three-year average rates, 20 of the 58 California counties have met the year 2000 national health objective of an age-adjusted suicide death rate of no more than 10.5 per 100,000 population.⁷

TABLE 1
DEATHS DUE TO SUICIDE
BY SEX
CALIFORNIA, 1980-1996
(By Place of Residence)

SEX	EVENT YEAR	DEATHS	POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
TOTAL							
	1996	3,408	32,383,811	10.5	9.8	9.5	10.2
	1995	3,823	32,062,912	11.9	11.3	10.9	11.6
	1994	3,690	31,790,557	11.6	10.9	10.5	11.2
	1993	3,818	31,515,753	12.1	11.3	11.0	11.7
	1992	3,700	31,186,559	11.9	11.0	10.7	11.4
	1991	3,765	30,563,276	12.3	11.5	11.1	11.9
	1990	3,735	29,942,397	12.5	11.5	11.2	11.9
	1989	3,832	29,142,106	13.1	12.2	11.8	12.6
	1988	3,989	28,393,094	14.0	13.0	12.6	13.4
	1987	3,870	27,716,860	14.0	12.9	12.5	13.3
	1986	3,960	27,052,291	14.6	13.6	13.1	14.0
	1985	3,782	26,402,633	14.3	13.4	13.0	13.9
	1984	3,690	25,816,294	14.3	13.5	13.1	14.0
	1983	3,635	25,336,301	14.3	13.4	13.0	13.9
	1982	3,752	24,805,011	15.1	14.3	13.8	14.7
	1981	3,554	24,277,674	14.6	13.9	13.4	14.3
	1980	3,429	23,780,068	14.4	13.6	13.2	14.1
MALE							
	1996	2,663	16,227,924	16.4	15.5	14.9	16.1
	1995	2,999	16,062,552	18.7	17.9	17.2	18.5
	1994	2,872	15,921,009	18.0	17.1	16.5	17.8
	1993	3,000	15,782,166	19.0	18.0	17.3	18.7
	1992	2,800	15,616,376	17.9	17.0	16.4	17.7
	1991	2,919	15,301,183	19.1	18.0	17.3	18.7
	1990	2,872	14,989,516	19.2	18.1	17.4	18.7
	1989	2,924	14,573,988	20.1	19.0	18.3	19.7
	1988	3,079	14,181,700	21.7	20.4	19.7	21.2
	1987	2,935	13,825,118	21.2	20.0	19.2	20.7
	1986	3,023	13,474,197	22.4	21.2	20.4	21.9
	1985	2,878	13,130,674	21.9	20.9	20.1	21.6
	1984	2,755	12,818,768	21.5	20.6	19.8	21.4
	1983	2,727	12,559,834	21.7	20.7	19.9	21.5
	1982	2,704	12,275,613	22.0	21.0	20.2	21.8
	1981	2,545	11,993,514	21.2	20.3	19.5	21.1
	1980	2,489	11,722,769	21.2	20.2	19.4	21.0
FEMALE							
	1996	745	16,155,887	4.6	4.3	4.0	4.6
	1995	824	16,000,360	5.1	4.8	4.4	5.1
	1994	818	15,869,548	5.2	4.8	4.4	5.1
	1993	818	15,733,587	5.2	4.8	4.5	5.2
	1992	900	15,570,183	5.8	5.2	4.9	5.6
	1991	846	15,262,093	5.5	5.2	4.8	5.5
	1990	863	14,952,881	5.8	5.3	4.9	5.7
	1989	908	14,568,118	6.2	5.7	5.3	6.1
	1988	910	14,211,394	6.4	5.9	5.5	6.3
	1987	935	13,891,742	6.7	6.2	5.8	6.6
	1986	937	13,578,094	6.9	6.4	6.0	6.8
	1985	904	13,271,959	6.8	6.4	6.0	6.9
	1984	935	12,997,526	7.2	6.9	6.4	7.3
	1983	908	12,776,467	7.1	6.6	6.2	7.1
	1982	1,048	12,529,398	8.4	7.9	7.4	8.4
	1981	1,009	12,284,160	8.2	7.8	7.3	8.3
	1980	940	12,057,299	7.8	7.4	6.9	7.9

Note: Rates are per 100,000 population; ICD-9 Codes E950-E959.

Source: State of California, Department of Finance, Race/Ethnic Population Estimates by County with Age and Sex Detail, 1970-1996, January 1998.

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

TABLE 2
DEATHS DUE TO SUICIDE
BY RACE/ETHNICITY
CALIFORNIA, 1985-1996
(By Place of Residence)

RACE/ ETHNICITY	EVENT YEAR	DEATHS	POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS LOWER	UPPER
ASIAN/OTHER							
	1996	219	3,645,998	6.0	5.9	5.1	6.7
	1995	248	3,530,931	7.0	7.0	6.2	7.9
	1994	235	3,429,125	6.9	6.7	5.9	7.6
	1993	267	3,323,013	8.0	7.9	6.9	8.8
	1992	199	3,209,399	6.2	6.2	5.3	7.1
	1991	216	3,068,424	7.0	7.0	6.0	7.9
	1990	185	2,930,570	6.3	6.2	5.3	7.2
	1989	171	2,774,167	6.2	6.1	5.2	7.0
	1988	197	2,616,586	7.5	7.4	6.4	8.5
	1987	162	2,465,134	6.6	6.7	5.6	7.7
	1986	156	2,313,141	6.7	6.7	5.7	7.8
	1985	151	2,158,886	7.0	7.1	5.9	8.2
BLACK							
	1996	154	2,275,401	6.8	6.7	5.7	7.8
	1995	205	2,250,502	9.1	9.2	7.9	10.4
	1994	168	2,232,841	7.5	7.6	6.5	8.8
	1993	204	2,214,376	9.2	9.4	8.1	10.7
	1992	152	2,192,451	6.9	7.0	5.9	8.1
	1991	157	2,147,691	7.3	7.5	6.3	8.7
	1990	148	2,105,207	7.0	7.0	5.8	8.1
	1989	179	2,061,823	8.7	8.7	7.4	10.0
	1988	186	2,024,779	9.2	9.0	7.7	10.3
	1987	194	1,992,361	9.7	9.5	8.1	10.8
	1986	178	1,958,844	9.1	9.1	7.7	10.4
	1985	194	1,923,209	10.1	10.1	8.6	11.5
HISPANIC							
	1996	460	9,330,740	4.9	5.4	4.9	5.9
	1995	503	9,100,994	5.5	6.0	5.5	6.6
	1994	462	8,882,966	5.2	5.5	5.0	6.0
	1993	473	8,658,118	5.5	5.8	5.3	6.4
	1992	422	8,421,133	5.0	5.4	4.8	5.9
	1991	389	8,097,870	4.8	5.2	4.6	5.7
	1990	403	7,774,789	5.2	5.6	5.0	6.2
	1989	433	7,419,574	5.8	6.4	5.8	7.0
	1988	391	7,077,579	5.5	5.9	5.3	6.5
	1987	382	6,754,398	5.7	6.2	5.6	6.9
	1986	341	6,428,436	5.3	5.8	5.2	6.5
	1985	311	6,103,662	5.1	5.6	4.9	6.2
WHITE							
	1996	2,575	17,131,672	15.0	12.6	12.1	13.2
	1995	2,867	17,180,485	16.7	14.3	13.7	14.9
	1994	2,825	17,245,625	16.4	14.0	13.4	14.5
	1993	2,874	17,320,246	16.6	14.0	13.5	14.6
	1992	2,927	17,363,576	16.9	14.2	13.7	14.8
	1991	3,003	17,249,291	17.4	14.9	14.3	15.5
	1990	2,999	17,131,831	17.5	14.9	14.3	15.4
	1989	3,049	16,886,542	18.1	15.6	15.0	16.1
	1988	3,215	16,674,150	19.3	16.4	15.8	17.0
	1987	3,132	16,504,967	19.0	16.1	15.6	16.7
	1986	3,285	16,351,870	20.1	17.3	16.7	17.9
	1985	3,126	16,216,876	19.3	16.7	16.1	17.4

Note: Rates are per 100,000 population; ICD-9 Codes E950-E959.

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

Source: State of California, Department of Finance, Race/Ethnic Population Estimates by County with Age and Sex Detail, 1970-1996, January 1998.

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

TABLE 3
DEATHS DUE TO SUICIDE
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 1996
(By Place of Residence)

RACE/ ETHNICITY	AGE GROUPS	1996 DEATHS			POPULATION			AGE-SPECIFIC DEATH RATE			95% CONFIDENCE LIMITS					
		TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	LOWER	UPPER	LOWER
TOTAL																
	Under 1	0	0	0	540,625	276,538	264,087	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	1 to 4	0	0	0	2,298,325	1,175,708	1,122,617	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	5 to 14	28	20	8	4,914,945	2,514,194	2,400,751	0.6	0.8	0.3 *	0.4	0.8	0.4	1.1	0.1	0.6
	15 to 24	399	330	69	4,217,867	2,198,841	2,019,026	9.5	15.0	3.4	8.5	10.4	13.4	16.6	2.6	4.2
	25 to 34	626	507	119	5,357,377	2,828,447	2,528,930	11.7	17.9	4.7	10.8	12.6	16.4	19.5	3.9	5.6
	35 to 44	761	590	171	5,401,744	2,741,290	2,660,454	14.1	21.5	6.4	13.1	15.1	19.8	23.3	5.5	7.4
	45 to 54	557	401	156	3,806,109	1,887,994	1,918,115	14.6	21.2	8.1	13.4	15.8	19.2	23.3	6.9	9.4
	55 to 64	345	259	86	2,359,866	1,146,990	1,212,876	14.6	22.6	7.1	13.1	16.2	19.8	25.3	5.6	8.6
	65 to 74	314	247	67	1,954,134	879,924	1,074,210	16.1	28.1	6.2	14.3	17.8	24.6	31.6	4.7	7.7
	75 to 84	274	223	51	1,161,701	465,740	695,961	23.6	47.9	7.3	20.8	26.4	41.6	54.2	5.3	9.3
	85 & Older	97	81	16	371,118	112,258	258,860	26.1	72.2	6.2	20.9	31.3	56.4	87.9	3.2	9.2
	Unknown	7	5	2												
	Total	3,408	2,663	745	32,383,811	16,227,924	16,155,887	10.5	16.4	4.6	10.2	10.9	15.8	17.0	4.3	4.9
ASIAN/OTHER																
	Under 1	0	0	0	60,717	31,247	29,470	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	1 to 4	0	0	0	254,397	131,069	123,328	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	5 to 14	6	5	1	564,354	288,489	275,865	1.1 *	1.7 *	0.4 *	0.2	1.9	0.2	3.3	0.0	1.1
	15 to 24	39	32	7	533,767	274,693	259,074	7.3	11.6	2.7 *	5.0	9.6	7.6	15.7	0.7	4.7
	25 to 34	56	42	14	599,056	301,165	297,891	9.3	13.9	4.7	6.9	11.8	9.7	18.2	2.2	7.2
	35 to 44	43	26	17	631,504	303,109	328,395	6.8	8.6	5.2	4.8	8.8	5.3	11.9	2.7	7.6
	45 to 54	20	14	6	438,067	207,939	230,128	4.6	6.7	2.6 *	2.6	6.6	3.2	10.3	0.5	4.7
	55 to 64	18	11	7	256,917	120,782	136,135	7.0	9.1 *	5.1 *	3.8	10.2	3.7	14.5	1.3	9.0
	65 to 74	23	10	13	188,491	81,782	106,709	12.2	12.2 *	12.2	7.2	17.2	4.6	19.8	5.6	18.8
	75 to 84	12	7	5	92,392	39,642	52,750	13.0	17.7 *	9.5 *	5.6	20.3	4.6	30.7	1.2	17.8
	85 & Older	2	1	1	26,336	11,231	15,105	7.6 *	8.9 *	6.6 *	0.0	18.1	0.0	26.4	0.0	19.6
	Unknown	0	0	0												
	Total	219	148	71	3,645,998	1,791,148	1,854,850	6.0	8.3	3.8	5.2	6.8	6.9	9.6	2.9	4.7
BLACK																
	Under 1	0	0	0	37,276	18,939	18,337	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	1 to 4	0	0	0	170,539	86,386	84,153	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	5 to 14	1	0	1	388,094	196,545	191,549	0.3 *	0.0 +	0.5 *	0.0	0.8	-	-	0.0	1.5
	15 to 24	25	21	4	345,698	182,527	163,171	7.2	11.5	2.5 *	4.4	10.1	6.6	16.4	0.0	4.9
	25 to 34	38	32	6	395,287	203,575	191,712	9.6	15.7	3.1 *	6.6	12.7	10.3	21.2	0.6	5.6
	35 to 44	50	41	9	371,892	180,097	191,795	13.4	22.8	4.7 *	9.7	17.2	15.8	29.7	1.6	7.8
	45 to 54	20	11	9	242,802	114,139	128,663	8.2	9.6 *	7.0 *	4.6	11.8	3.9	15.3	2.4	11.6
	55 to 64	11	8	3	152,306	71,336	80,970	7.2 *	11.2 *	3.7 *	3.0	11.5	3.4	19.0	0.0	7.9
	65 to 74	8	6	2	102,194	43,656	58,538	7.8 *	13.7 *	3.4 *	2.4	13.3	2.7	24.7	0.0	8.2
	75 to 84	1	1	0	53,430	19,675	33,755	1.9 *	5.1 *	0.0 +	0.0	5.5	0.0	15.0	-	-
	85 & Older	0	0	0	15,883	4,669	11,214	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	Unknown	0	0	0												
	Total	154	120	34	2,275,401	1,121,544	1,153,857	6.8	10.7	2.9	5.7	7.8	8.8	12.6	2.0	3.9
HISPANIC																
	Under 1	0	0	0	252,617	128,626	123,991	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	1 to 4	0	0	0	1,034,656	527,237	507,419	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	5 to 14	9	5	4	1,816,510	925,990	890,520	0.5 *	0.5 *	0.4 *	0.2	0.8	0.1	1.0	0.0	0.9
	15 to 24	128	107	21	1,436,639	749,483	687,156	8.9	14.3	3.1	7.4	10.5	11.6	17.0	1.7	4.4
	25 to 34	125	115	10	1,808,376	1,012,882	795,944	6.9	11.4	1.3 *	5.7	8.1	9.3	13.4	0.5	2.0
	35 to 44	99	84	15	1,372,005	720,340	651,665	7.2	11.7	2.3	5.8	8.6	9.2	14.2	1.1	3.5
	45 to 54	46	34	12	747,447	376,227	371,220	6.2	9.0	3.2	4.4	7.9	6.0	12.1	1.4	5.1
	55 to 64	27	25	2	416,154	200,126	216,028	6.5	12.5	0.9 *	4.0	8.9	7.6	17.4	0.0	2.2
	65 to 74	14	9	5	280,103	126,447	153,656	5.0	7.1 *	3.3 *	2.4	7.6	2.5	11.8	0.4	6.1
	75 to 84	7	7	0	122,130	48,089	74,041	5.7 *	14.6 *	0.0 +	1.5	10.0	3.8	25.3	-	-
	85 & Older	2	2	0	44,103	15,454	28,649	4.5 *	12.9 *	0.0 +	0.0	10.8	0.0	30.9	-	-
	Unknown	3	3	0												
	Total	460	391	69	9,330,740	4,830,901	4,499,839	4.9	8.1	1.5	4.5	5.4	7.3	8.9	1.2	1.9
WHITE																
	Under 1	0	0	0	190,015	97,726	92,289	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	1 to 4	0	0	0	838,733	431,016	407,717	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
	5 to 14	12	10	2	2,145,987	1,103,170	1,042,817	0.6	0.9 *	0.2 *	0.2	0.9	0.3	1.5	0.0	0.5
	15 to 24	207	170	37	1,901,763	992,138	909,625	10.9	17.1	4.1	9.4	12.4	14.6	19.7	2.8	5.4
	25 to 34	407	318	89	2,554,658	1,310,825	1,243,833	15.9	24.3	7.2	14.4	17.5	21.6	26.9	5.7	8.6
	35 to 44	569	439	130	3,026,343	1,537,744	1,488,599	18.8	28.5	8.7	17.3	20.3	25.9	31.2	7.2	10.2
	45 to 54	471	342	129	2,377,793	1,189,689	1,188,104	19.8	28.7	10.9	18.0	21.6	25.7	31.8	9.0	12.7
	55 to 64	289	215	74	1,534,489	754,746	779,743	18.8	28.5	9.5	16.7	21.0	24.7	32.3	7.3	11.7
	65 to 74	269	222	47	1,383,346	628,039	755,307	19.4	35.3	6.2	17.1	21.8	30.7	40.0	4.4	8.0
	75 to 84	254	208	46	893,749	358,334	535,415	28.4	58.0	8.6	24.9	31.9	50.2	65.9	6.1	11.1
	85 & Older	93	78	15	284,796	80,904	203,892	32.7	96.4	7.4	26.0	39.3	75.0	117.8	3.6	11.1
	Unknown	4	2	2												
	Total	2,575	2,004	571	17,131,672	8,484,331	8,647,341	15.0	23.6	6.6	14.5	15.6	22.6	24.7	6.1	7.1

Note: Rates are per 100,000 population; ICD-9 Codes E950-E959.
White, Black, and Asian/Other exclude Hispanic ethnicity. Hispanic includes any race category.

* Death rate unreliable, relative standard error is greater than 30%.
+ Standard error indeterminate, death rate based on no (zero) deaths
- Upper and lower limits at the 95% confidence level are indeterminate

Source: State of California, Department of Finance, Race/Ethnic Population Estimates by County with Age and Sex Detail, 1970-1996, January 1998.
State of California, Department of Health Services, Death Records.

TABLE 4
DEATHS DUE TO SUICIDE
CALIFORNIA COUNTIES. 1994-1996
(By Place of Residence)

COUNTY	1994-1996 DEATHS (AVERAGE)	PERCENT	1995 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS LOWER	UPPER
CALIFORNIA	3,640.3	100.0	32,062,912	11.4	10.7	10.3	11.0
ALAMEDA	139.7	3.8	1,347,739	10.4	9.5	7.9	11.1
ALPINE	0.0	0.0	1,185	0.0 +	0.0 +	-	-
AMADOR	4.7	0.1	32,572	14.3 *	15.3 *	0.8	29.8
BUTTE	33.3	0.9	196,108	17.0	13.8	8.5	19.0
CALAVERAS	6.0	0.2	36,907	16.3 *	12.0 *	1.7	22.4
COLUSA	2.0	0.1	17,799	11.2 *	11.5 *	0.0	27.7
CONTRA COSTA	85.3	2.3	867,315	9.8	8.9	6.9	10.8
DEL NORTE	6.0	0.2	27,597	21.7 *	18.9 *	2.7	35.1
EL DORADO	27.7	0.8	144,158	19.2	18.3	11.0	25.5
FRESNO	77.7	2.1	754,045	10.3	10.5	8.1	12.8
GLENN	1.7	a	26,523	6.3 *	7.4 *	0.0	18.6
HUMBOLDT	26.0	0.7	124,481	20.9	18.8	11.3	26.4
IMPERIAL	8.7	0.2	137,445	6.3 *	6.1 *	1.9	10.3
INYO	3.7	0.1	18,571	19.7 *	17.4 *	0.0	38.2
KERN	72.7	2.0	616,701	11.8	11.4	8.7	14.1
KINGS	10.7	0.3	114,902	9.3 *	9.4 *	3.6	15.1
LAKE	16.3	0.4	54,984	29.7	25.3	11.4	39.3
LASSEN	5.0	0.1	28,678	17.4 *	16.0	1.9	30.2
LOS ANGELES	909.7	25.0	9,352,192	9.7	9.5	8.8	10.1
MADERA	11.3	0.3	106,429	10.6	10.4 *	4.2	16.6
MARIN	38.3	1.1	238,981	16.0	12.9	8.5	17.3
MARIPOSA	1.0	a	15,903	6.3 *	3.6 *	0.0	11.3
MENDOCINO	16.0	0.4	84,269	19.0	16.3	7.7	24.8
MERCED	19.7	0.5	198,522	9.9	10.3	5.7	14.9
MODOC	2.7	0.1	10,064	26.5 *	24.2 *	0.0	58.3
MONO	1.3	a	10,624	12.6 *	9.8 *	0.0	26.7
MONTEREY	43.3	1.2	361,840	12.0	11.6	8.0	15.2
NAPA	15.7	0.4	117,735	13.3	10.6	4.9	16.3
NEVADA	12.7	0.3	86,506	14.6	14.3 *	5.3	23.4
ORANGE	235.7	6.5	2,614,851	9.0	8.6	7.4	9.7
PLACER	33.0	0.9	203,454	16.2	15.0	9.6	20.4
PLUMAS	5.0	0.1	20,484	24.4 *	18.7 *	0.0	37.7
RIVERSIDE	181.3	5.0	1,370,338	13.2	12.3	10.4	14.2
SACRAMENTO	153.0	4.2	1,117,748	13.7	12.6	10.5	14.7
SAN BENITO	3.0	0.1	42,604	7.0 *	7.1 *	0.0	15.4
SAN BERNARDINO	177.0	4.9	1,581,620	11.2	11.3	9.6	13.0
SAN DIEGO	351.3	9.7	2,669,280	13.2	12.3	11.0	13.7
SAN FRANCISCO	140.0	3.8	751,532	18.6	15.7	12.8	18.5
SAN JOAQUIN	58.0	1.6	524,611	11.1	10.7	7.8	13.5
SAN LUIS OBISPO	33.3	0.9	228,401	14.6	12.5	8.0	17.1
SAN MATEO	77.3	2.1	689,731	11.2	10.1	7.7	12.5
SANTA BARBARA	51.0	1.4	391,425	13.0	11.6	8.2	14.9
SANTA CLARA	137.3	3.8	1,603,340	8.6	8.1	6.7	9.5
SANTA CRUZ	33.7	0.9	241,510	13.9	12.4	8.0	16.8
SHASTA	36.7	1.0	160,877	22.8	21.4	14.1	28.8
SIERRA	0.3	a	3,410	9.8 *	2.3 *	0.0	10.2
SISKIYOU	9.7	0.3	44,616	21.7 *	18.1 *	5.4	30.8
SOLANO	36.0	1.0	370,556	9.7	9.6	6.4	12.8
SONOMA	67.0	1.8	419,459	16.0	14.5	10.8	18.3
STANISLAUS	48.3	1.3	413,806	11.7	11.3	8.0	14.6
SUTTER	9.7	0.3	73,721	13.1 *	12.0 *	4.0	20.1
TEHAMA	10.3	0.3	54,195	19.1 *	16.2 *	5.1	27.2
TRINITY	2.7	0.1	13,363	20.0 *	17.9 *	0.0	40.7
TULARE	35.0	1.0	349,860	10.0	9.9	6.5	13.3
TUOLUMNE	9.7	0.3	51,516	18.8 *	14.5 *	4.3	24.7
VENTURA	76.3	2.1	712,762	10.7	10.1	7.8	12.4
YOLO	17.7	0.5	150,812	11.7	11.5	6.0	17.0
YUBA	12.3	0.3	62,255	19.8	19.5	8.2	30.8

Note: Rates are per 100,000 population; ICD-9 Codes E950-E959.

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

* Death rate unreliable (relative standard error is greater than 30%).

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

- Upper and lower limits at the 95% confidence level are indeterminate.

**TABLE 5
POPULATION ESTIMATES
BY RACE/ETHNICITY, SEX, AND AGE
CALIFORNIA, 1996**

RACE/ ETHNICITY	TOTAL	AGE GROUPS										
		Under 1	1 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85 & Older
Total	32,383,811	540,625	2,298,325	4,914,945	4,217,867	5,357,377	5,401,744	3,806,109	2,359,866	1,954,134	1,161,701	371,118
Male	16,227,924	276,538	1,175,708	2,514,194	2,198,841	2,828,447	2,741,290	1,887,994	1,146,990	879,924	465,740	112,258
Female	16,155,887	264,087	1,122,617	2,400,751	2,019,026	2,528,930	2,660,454	1,918,115	1,212,876	1,074,210	695,961	258,860
Asian/Other	3,645,998	60,717	254,397	564,354	533,767	599,056	631,504	438,067	256,917	188,491	92,392	26,336
Male	1,791,148	31,247	131,069	288,489	274,693	301,165	303,109	207,939	120,782	81,782	39,642	11,231
Female	1,854,850	29,470	123,328	275,865	259,074	297,891	328,395	230,128	136,135	106,709	52,750	15,105
Black	2,275,401	37,276	170,539	388,094	345,698	395,287	371,892	242,802	152,306	102,194	53,430	15,883
Male	1,121,544	18,939	86,386	196,545	182,527	203,575	180,097	114,139	71,336	43,656	19,675	4,669
Female	1,153,857	18,337	84,153	191,549	163,171	191,712	191,795	128,663	80,970	58,538	33,755	11,214
Hispanic	9,330,740	252,617	1,034,656	1,816,510	1,436,639	1,808,376	1,372,005	747,447	416,154	280,103	122,130	44,103
Male	4,830,901	128,626	527,237	925,990	749,483	1,012,882	720,340	376,227	200,126	126,447	48,089	15,454
Female	4,499,839	123,991	507,419	890,520	687,156	795,494	651,665	371,220	216,028	153,656	74,041	28,649
White	17,131,672	190,015	838,733	2,145,987	1,901,763	2,554,658	3,026,343	2,377,793	1,534,489	1,383,346	893,749	284,796
Male	8,484,331	97,726	431,016	1,103,170	992,138	1,310,825	1,537,744	1,189,689	754,746	628,039	358,334	80,904
Female	8,647,341	92,289	407,717	1,042,817	909,625	1,243,833	1,488,599	1,188,104	779,743	755,307	535,415	203,892

Note: White, Black, and Asian/Other exclude Hispanic ethnicity. Hispanic includes any race category.

Source: State of California, Department of Finance, Race/Ethnic Population Estimates with Age and Sex Detail, 1970-1996, January 1998.

Notes

The suicide death data presented in this report include ICD-9 codes E950-E959. Suicides are believed to be underreported due to the difficulty in differentiating some suicides from accidents, and religious and societal sanctions that exist against suicides. Consequently, caution should be exercised when interpreting suicide data.

The term “significant” within the text indicates either statistically significant based on the slope of a least-squares line not equal to zero ($p < .05$) for regression analysis, or 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. Also, rates with a relative standard error (coefficient of variation) greater than 30 percent are indicated with an “*” (asterisk).

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, Japanese, Korean, Vietnamese, Other Pacific Islander, Samoan, Thai, and Laotian. Race/ethnic data are not presented for years prior to 1985 due to the unavailability of mutually exclusive data for Hispanics and Whites. 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.

The method used to analyze vital statistics data is also 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, on the other hand, show the actual rate of dying in a given population, but the age composition of that population is not taken into consideration. Therefore, the use of age-adjusted death rates becomes the preferred method for measuring death rates over time, and for comparing death rates between race/ethnic groups, sex, and geographic areas. The 1940 United States (standard million) population was used as the basis for age-adjusting in this report.

For a more complete explanation of the age-adjusting methodology see the *Healthy People 2000 Statistical Notes* publication.⁸ Detailed information on data quality and limitations as well as the formulas used to calculate vital statistics rates are presented in the appendix of the annual report, *Vital Statistics of California*.⁹ Another source of information is the Department of Health Services, Center for Health Statistics Home Page [www.dhs.ca.gov/org/hisp/chs/chsindex.htm].

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