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DATA SUMMARY
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**UNINTENTIONAL
 INJURY DEATHS
 CALIFORNIA, 1980-1996**

Introduction

Unintentional injuries are a subset of a more general group of injuries referred to as External Causes of Injury, which includes not only unintentional injuries, but self-inflicted injuries and homicide as well. This report addresses the number and rates of death caused by unintentional injuries in California from 1980 to 1996.

Unintentional injuries have been consistently ranked among the leading causes of death both in the United States and California. In 1996 unintentional injuries ranked fifth nationally causing 94,948 deaths¹, and sixth in California with 9,217 deaths². These deaths represented 4.1 percent of all deaths for both California and the United States. For persons aged 1 to 44, unintentional injuries were the leading cause of death in the United States, and for every one of those deaths there were numerous non-fatalities resulting from unintentional injuries.³ Many prevention programs have been developed at the state, local, and national levels, as well as by the private sector, to reduce the amount of debilitation and death caused by these injuries. For these intervention efforts to be most effective, consideration must be given to those segments of the population at the greatest risk of death from unintentional injuries, as well as to make a determination as to which types of injuries are of the greatest concern. Unlike most deaths caused by internal disease processes, unintentional injuries claim a greater proportion of young lives especially among males.

**TABLE 1
 DEATHS DUE TO UNINTENTIONAL INJURIES
 BY MAJOR CAUSES AND SEX
 CALIFORNIA, 1996
 (By Place of Residence)**

CAUSE OF DEATH	ICD-9 CODES	TOTAL		MALE		FEMALE	
		DEATHS	PERCENT	DEATHS	PERCENT	DEATHS	PERCENT
MOTOR VEHICLES	E810-E825	4,143	44.9	2,827	30.7	1,316	14.2
POISONING	E850-E869	1,960	21.3	1,485	16.1	475	5.2
FALLS	E880-E888	1,076	11.7	598	6.5	478	5.2
DROWNING/SUBMERSION	E830,E832,E910	494	5.4	369	4.0	125	1.4
RESIDUAL	E800-E949	1,544	16.7	1,070	11.6	474	5.1
TOTAL		9,217	100.0	6,349	68.9	2,868	31.1

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

The major causes of accidental death are shown in **Table 1**. Of the 9,217 unintentional injury deaths that occurred among California residents in 1996, 83.3 percent were due to four causes: motor vehicle accidents, poisoning, falls, and drowning/submersion, with motor vehicles accounting for 44.9 percent of the total deaths. For each of the four causes, the number of deaths for males far exceeded the number of deaths for females. For a further discussion of the numbers, rates, and types of injuries, the reader is referred to resources prepared by the Epidemiology and Prevention for Injury Control (EPIC) Branch of the California Department of Health Services⁴.

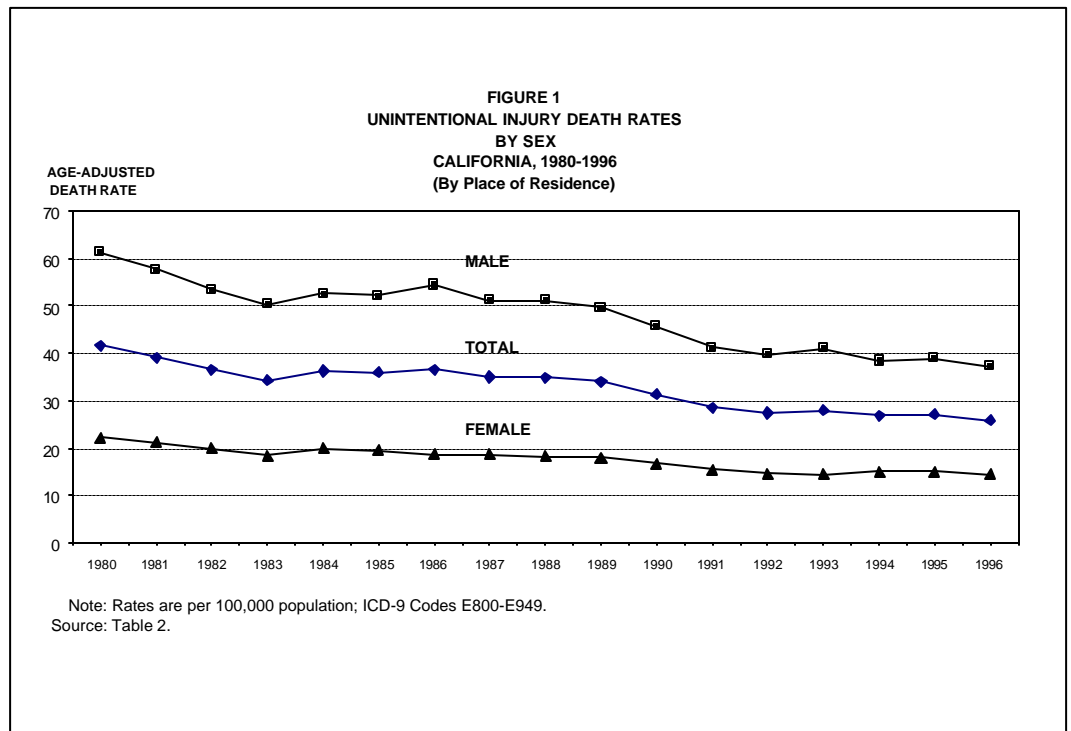
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Unintentional Injury Deaths, Crude and Age-Adjusted Death Rates by Sex 1980-1996

As shown in **Table 2** (page 5), the total number of unintentional injury deaths among California residents fluctuated between 1980 and 1996 with an overall decrease of 14.1% for the 17 year period. The highest total number of deaths (10,817) occurred in 1986 and the lowest (9,217) occurred in 1996. For males, the highest number of deaths (7,771) occurred in 1986. The number of male deaths in 1980 (7,613) declined to a low of 6,349 in 1996. The highest number of deaths for females (3,119) occurred in 1980, and the lowest number of deaths among females (2,717) occurred in 1993. The data also show that the number of male deaths were more than twice the number of female deaths in each of the 17 years of this study.

The overall crude rate for unintentional injuries, shown on **Table 2** (page 5), declined 36.8 percent from 1980 to 1996. The highest crude rate occurred in 1980 with 45.1 deaths per 100,000 population and the lowest (28.5) occurred in 1996. For males, the highest crude rate (64.9) occurred in 1980 and the lowest (39.1) in 1996. For females, the highest rate (25.9) occurred in 1980 and the lowest rate (17.3) occurred in 1993. Regression analysis revealed that the overall decline in crude rates as well as the declines in crude rates among both males and females over the 17-year period were significant.

Figure 1 shows that there was a declining trend in overall age-adjusted death rates from a high of 41.6 unintentional injury deaths per 100,000 in 1980 to a low of 25.9 in 1996. **Table 2** (page 5) shows that the highest age-adjusted rates for males and females occurred in 1980 with 61.3 and 22.2 respective deaths per 100,000 population. The lowest age-adjusted rates for males and females occurred in 1996 with 37.2 and 14.5 respective deaths per 100,000 population. For females, the age-adjusted rate of 14.5 also occurred in 1993. The age-adjusted rates significantly declined for males (39.3 percent) as well as for females (34.7 percent) from 1980 to 1996.

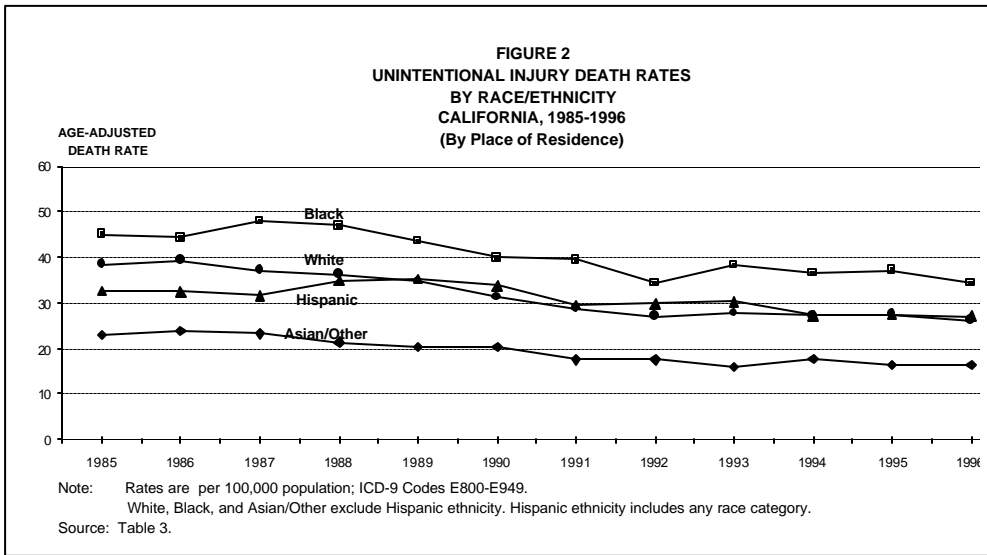


The U.S. Public Health Service has established a number of health objectives pertaining to unintentional injuries which are published in *Healthy People 2000*. Since 1991, California has met the year 2000 national health objective with an age-adjusted rate of less than 29.3 unintentional injury deaths per 100,000 population⁵.

Unintentional Injury Deaths, Crude and Age-Adjusted Death Rates by Race/Ethnicity, 1985-1996

Table 3 (page 6) shows unintentional injury deaths by the four major race/ethnic groups from 1985 to 1996. The highest number of deaths in each group over the 12 year period were: Asian/Other (623), Black (965), Hispanic (2,607), and White (7,333). The respective lowest number of deaths among these groups were: 491, 774, 1,922, and 5,475. The number of deaths among Whites far exceeded the number of deaths that occurred among each of the other three race/ethnic groups.

Table 3 also shows the crude rates for the four race/ethnic groups. The highest crude rate for Asian/Others (24.0 per 100,000 population) occurred in 1986. In 1993 Asian/Others showed the lowest crude rate (16.5) among the four race/ethnic groups. In 1987, Blacks experienced the highest crude death rate (48.4) among the four race/ethnic groups, with their lowest rate (34.8) occurring in 1996. Hispanics experienced their highest crude rate (34.5) in 1989 and their lowest (25.0) in 1996. The highest crude rate for Whites (44.8) occurred in 1986 and their lowest (32.0) occurred in 1994 and again in 1996. The decline in crude rates for all four race/ethnic groups between 1985 and 1996 was shown by regression analysis to be significant.



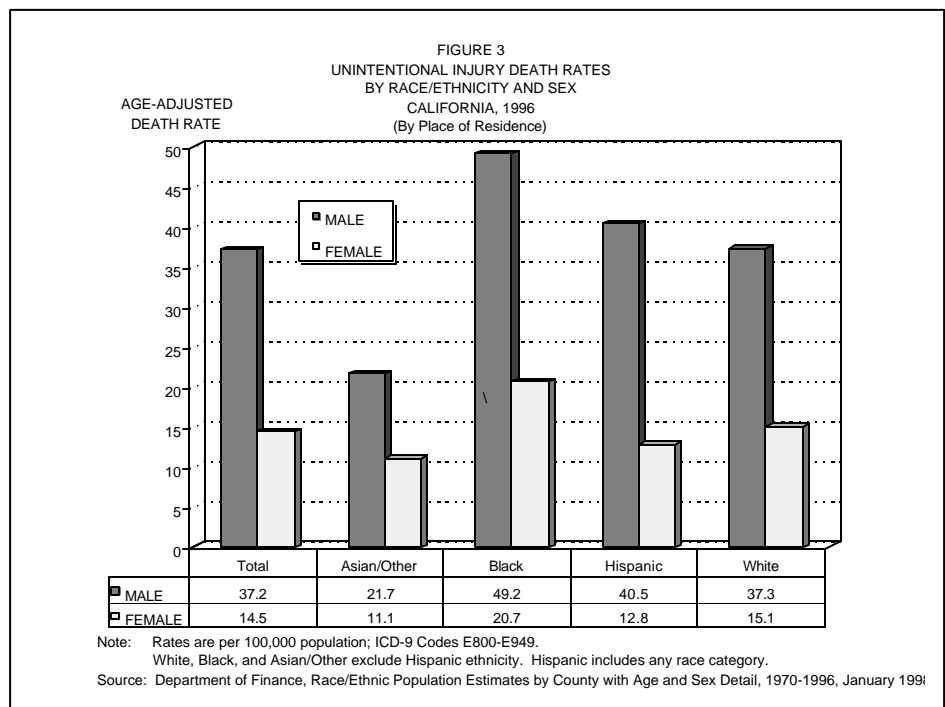
Analysis of the trend data in **Figure 2** reveals fluctuations, with an otherwise overall decrease in age-adjusted unintentional injury death rates by race/ethnicity from 1985-1986. Blacks had the highest age-adjusted death rates for all years and Asian/Others had the lowest. Asian/Other rates peaked in 1986 with 23.8 deaths per 100,000 population and declined to 16.4 in 1995 and 1996. In addition, the lowest rate for Asian/Others occurred in 1993 at 15.9. Black rates peaked in 1987 with 47.9 deaths per 100,000 population, and then declined to a low of 34.3 in

1996. Hispanic rates rose from 32.6 in 1985 to their peak of 35.3 in 1989, then declined to their low of 27.0 in 1996. The White age-adjusted rate rose from 38.4 in 1985 to their peak of 39.4 in 1986 and then declined to their low of 26.2 in 1996. The declines in age-adjusted rates among all four race/ethnic groups was shown by regression analysis to be significant.

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

Figure 3 shows the age-adjusted unintentional injury death rates for 1996 by race/ethnicity and sex. The highest death rate occurred among Black males with a rate of 49.2 deaths per 100,000 population. The lowest age-adjusted death rate occurred among Asian/Other females with a rate of 11.1 deaths per 100,000 population.

A striking difference is noted when comparing unintentional injury death rates by sex. The overall age-adjusted death rate for males is 2.6 times greater than for females. Also, a comparison of the age-adjusted rates among the four race/ethnic groups show that males have an age-adjusted death rate that is two to three times higher than the death rate of their female race/ethnic counterparts. Of the four race/ethnic groups, the age-adjusted death rates for Black males far exceeded the age-adjusted death rates for males of the other three groups. Likewise the rates among Black females far exceeded the age-adjusted death rates of their female counterparts. The difference in rates between the sexes as well as the difference in rates among Blacks compared to the other race/ethnic groups, were statistically significant.



Age-Specific Unintentional Injury Death Rates by Age and Race/Ethnicity, 1996

Figure 4 shows the age-specific death rates of the four race/ethnic groups for 1996. Detailed information that corresponds with **Figure 4** can be found from the data on **Table 4** (page 7). The data show that from birth to age 14, from 25 to 54, and from 65 to 74, Blacks had the highest age-specific unintentional injury death rates. The rate for Blacks was lowest in the 85 and older age group. Hispanics had the highest rates in the 15 to 24 and 55 to 64 year age groups, and the lowest in the 75 to 84 year age group. From birth to age 4 and from 15 to 64, Asian/Others had the lowest age-specific death rates, but had the highest age-specific deaths rate in the 75 to 84 year age group. Whites had the lowest overall age-specific death rate in the 5 to 14 year age group with a rate of 5.3 per 100,000 population, but by far had the highest age-specific death rate of 181.5 in the 85 and over age group.

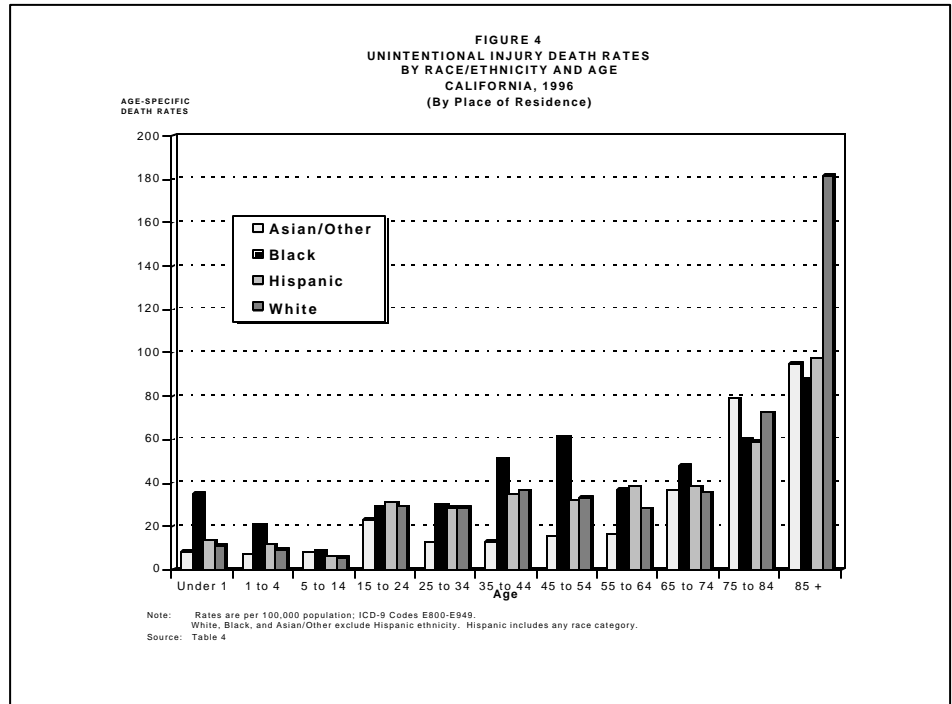


Table 4 also reveals that the total number of deaths for males exceeded the total number of deaths for females in every age group except 85 and older.

To quantify the potential amount of life that was lost in California prior to age 75, the years of potential life lost (YPLL-75)⁶ was calculated for the year 1996. In that year, over two million (2,179,302) years of potential life were lost among California residents due to all causes of death. Of that number, 287,828 years representing 13.2 percent of California's loss were due to unintentional injuries. The loss of potential years of life due to unintentional injuries was shared among the four race/ethnic groups as follows: Asian/Other 20,337 years, Black 28,304 years, Hispanic 92,302 years and White 146,885 years.

Unintentional Injury Death Rates Among California Counties

Table 5 (page 8) shows the three-year average number of deaths, crude death rates, and age-adjusted death rates due to unintentional injuries for the 58 California counties from 1994 to 1996. The three-year average was used to reduce the large fluctuations in death rates that are inherent among counties with a small number of events and/or population.

The highest average number of unintentional injury deaths occurred among residents of Los Angeles County with 2,309.0 deaths, followed by San Diego County (651.7) and Orange County (558.0). The lowest number was recorded in Alpine County with an average of 0.7 deaths.

Of the counties with reliable crude rates, the crude death rate varied from a high of 59.6 per 100,000 population in Calaveras County to a low of 19.8 in Santa Clara County, a difference of 3 to 1. California's overall crude death rate due to unintentional injuries was 28.9.

Counties with reliable age-adjusted death rates ranged from a high of 53.7 per 100,000 population in Madera County to a low of 18.0 in Santa Clara County.

Of California's 58 counties with reliable age-adjusted rates, 19 met the Healthy People 2000 national health objective of no more than 29.3 deaths due to unintentional injuries per 100,000 population. California as a whole also met this objective with an age-adjusted death rate of 26.6 per 100,000 population.

TABLE 2
DEATHS DUE TO UNINTENTIONAL INJURIES
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	9,217	32,383,811	28.5	25.9	25.4	26.5
	1995	9,372	32,062,912	29.2	27.0	26.5	27.6
	1994	9,233	31,790,557	29.0	26.8	26.2	27.4
	1993	9,536	31,515,753	30.3	27.9	27.3	28.5
	1992	9,251	31,186,559	29.7	27.4	26.8	28.0
	1991	9,420	30,563,276	30.8	28.5	27.9	29.1
	1990	10,170	29,942,397	34.0	31.4	30.7	32.0
	1989	10,791	29,142,106	37.0	34.0	33.3	34.6
	1988	10,788	28,393,094	38.0	34.9	34.2	35.6
	1987	10,583	27,716,860	38.2	35.0	34.3	35.7
	1986	10,817	27,052,291	40.0	36.6	35.9	37.3
	1985	10,380	26,402,633	39.3	35.9	35.2	36.7
	1984	10,218	25,816,294	39.6	36.3	35.6	37.0
	1983	9,448	25,336,301	37.3	34.3	33.6	35.0
	1982	9,836	24,805,011	39.7	36.6	35.9	37.4
	1981	10,319	24,277,674	42.5	39.2	38.5	40.0
	1980	10,732	23,780,068	45.1	41.6	40.8	42.4
MALE							
	1996	6,349	16,227,924	39.1	37.2	36.2	38.1
	1995	6,525	16,062,552	40.6	38.9	37.9	39.9
	1994	6,421	15,921,009	40.3	38.4	37.4	39.4
	1993	6,819	15,782,166	43.2	41.1	40.1	42.1
	1992	6,526	15,616,376	41.8	39.8	38.8	40.8
	1991	6,622	15,301,183	43.3	41.3	40.3	42.3
	1990	7,218	14,989,516	48.2	45.6	44.6	46.7
	1989	7,683	14,573,988	52.7	49.7	48.6	50.8
	1988	7,689	14,181,700	54.2	51.2	50.1	52.4
	1987	7,524	13,825,118	54.4	51.2	50.0	52.4
	1986	7,771	13,474,197	57.7	54.4	53.1	55.6
	1985	7,299	13,130,674	55.6	52.2	51.0	53.5
	1984	7,163	12,818,768	55.9	52.7	51.4	53.9
	1983	6,668	12,559,834	53.1	50.3	49.1	51.6
	1982	6,896	12,275,613	56.2	53.5	52.2	54.8
	1981	7,305	11,993,514	60.9	57.7	56.3	59.0
	1980	7,613	11,772,769	64.9	61.3	59.9	62.7
FEMALE							
	1996	2,868	16,155,887	17.8	14.5	14.0	15.1
	1995	2,847	16,000,360	17.8	15.0	14.4	15.6
	1994	2,812	15,869,548	17.7	15.1	14.5	15.7
	1993	2,717	15,773,587	17.3	14.5	13.9	15.1
	1992	2,725	15,570,183	17.5	14.7	14.1	15.3
	1991	2,798	15,262,093	18.3	15.5	14.9	16.1
	1990	2,952	14,952,881	19.7	16.8	16.1	17.4
	1989	3,108	14,568,118	21.3	18.1	17.4	18.7
	1988	3,099	14,211,394	21.8	18.3	17.6	19.0
	1987	3,059	13,891,742	22.0	18.6	17.9	19.3
	1986	3,046	13,578,094	22.4	18.6	17.9	19.3
	1985	3,081	13,271,959	23.2	19.6	18.9	20.4
	1984	3,055	12,997,526	23.5	20.0	19.2	20.7
	1983	2,780	12,776,467	21.8	18.4	17.7	19.2
	1982	2,940	12,529,398	23.5	19.9	19.1	20.7
	1981	3,014	12,284,160	24.5	21.2	20.4	22.0
	1980	3,119	12,057,299	25.9	22.2	21.4	23.0

Note : Rates are per 100,000 population; ICD-9 Codes E800-E949.

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 UNINTENTIONAL INJURIES
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	619	3,645,998	17.0	16.4	15.0	17.7
	1995	606	3,530,931	17.2	16.4	15.1	17.7
	1994	623	3,429,125	18.2	17.7	16.3	19.1
	1993	547	3,323,013	16.5	15.9	14.5	17.2
	1992	581	3,209,399	18.1	17.6	16.4	18.9
	1991	550	3,068,424	17.9	17.6	16.4	18.9
	1990	604	2,930,570	20.6	20.3	18.7	22.0
	1989	572	2,774,167	20.6	20.4	18.8	22.1
	1988	562	2,616,586	21.5	21.3	19.6	23.0
	1987	574	2,465,134	23.3	23.3	21.4	25.2
	1986	555	2,313,141	24.0	23.8	21.9	25.7
	1985	491	2,158,886	22.7	23.0	21.0	25.1
BLACK							
	1996	792	2,275,401	34.8	34.3	31.9	36.7
	1995	846	2,250,502	37.6	37.2	34.7	39.7
	1994	821	2,232,841	36.8	36.6	34.1	39.2
	1993	852	2,214,376	38.5	38.3	35.7	40.8
	1992	774	2,192,451	35.3	34.4	31.9	36.8
	1991	867	2,147,691	40.4	39.5	36.9	42.2
	1990	850	2,105,207	40.4	39.9	37.2	42.7
	1989	919	2,061,823	44.6	43.6	40.7	46.4
	1988	951	2,024,779	47.0	46.9	43.9	49.9
	1987	965	1,992,361	48.4	47.9	44.9	50.9
	1986	873	1,958,844	44.6	44.4	41.5	47.3
	1985	873	1,923,209	45.4	45.1	42.1	48.2
HISPANIC							
	1996	2,331	9,330,740	25.0	27.0	25.8	28.1
	1995	2,352	9,100,994	25.8	27.5	26.4	28.7
	1994	2,274	8,882,966	25.6	27.2	26.0	28.4
	1993	2,504	8,658,118	28.9	30.3	29.1	31.6
	1992	2,420	8,421,133	28.7	29.9	28.6	31.1
	1991	2,308	8,097,870	28.5	29.5	28.2	30.7
	1990	2,607	7,774,789	33.5	33.8	32.4	35.2
	1989	2,559	7,419,574	34.5	35.3	33.8	36.7
	1988	2,368	7,077,579	33.5	34.8	33.3	36.3
	1987	2,080	6,754,398	30.8	31.6	30.2	33.0
	1986	2,056	6,428,436	32.0	32.4	30.9	33.9
	1985	1,922	6,103,662	31.5	32.6	31.0	34.1
WHITE							
	1996	5,475	17,131,672	32.0	26.2	25.5	27.0
	1995	5,568	17,180,485	32.4	27.5	26.7	28.3
	1994	5,515	17,245,625	32.0	27.2	26.4	28.0
	1993	5,633	17,320,246	32.5	27.8	27.0	28.6
	1992	5,476	17,363,576	31.5	27.1	26.4	27.9
	1991	5,695	17,249,291	33.0	28.8	28.0	29.6
	1990	6,109	17,131,831	35.7	31.3	30.5	32.2
	1989	6,741	16,886,542	39.9	34.8	33.9	35.7
	1988	6,907	16,674,150	41.4	36.3	35.4	37.2
	1987	6,964	16,504,967	42.2	37.2	36.2	38.1
	1986	7,333	16,351,870	44.8	39.4	38.5	40.4
	1985	7,094	16,216,876	43.7	38.4	37.4	39.3

Note : Rates are per 100,000 population; ICD-9 Codes E800-E949.

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 4
DEATHS DUE TO UNINTENTIONAL INJURIES
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 LOWER UPPER	MALE LOWER UPPER	FEMALE LOWER UPPER			
TOTAL																
	Under 1	72	37	35	540,625	276,538	264,087	13.3	13.4	13.3	10.2	16.4	9.1	17.7	8.9	17.6
	1 to 4	247	144	103	2,296,325	1,175,706	1,122,617	10.7	12.2	9.2	9.4	12.1	10.2	14.2	7.4	10.9
	5 to 14	299	193	106	4,914,945	2,514,194	2,400,751	6.1	7.7	4.4	5.4	6.8	6.6	9.8	3.6	6.3
	15 to 24	1,213	928	285	4,217,867	2,198,841	2,019,026	28.8	42.2	14.1	27.1	30.4	39.5	44.9	12.6	15.8
	25 to 34	1,439	1,108	331	5,357,377	2,829,447	2,528,930	25.9	39.2	13.1	25.5	28.2	36.9	41.5	11.7	14.5
	35 to 44	1,859	1,397	461	5,401,744	2,741,290	2,660,454	34.4	51.0	17.3	32.8	36.0	48.3	53.6	15.7	18.9
	45 to 54	1,241	936	305	3,806,109	1,887,994	1,918,115	32.6	49.6	15.9	30.8	34.4	46.4	52.8	14.1	17.7
	55 to 64	687	471	216	2,359,866	1,146,990	1,212,876	29.1	41.1	17.8	26.9	31.3	37.4	44.8	15.4	20.2
	65 to 74	713	440	273	1,954,134	879,924	1,074,210	36.5	50.0	25.4	33.8	39.2	45.3	54.7	22.4	28.4
	75 to 84	825	430	395	1,161,701	465,740	696,961	71.0	92.3	56.8	66.2	75.9	83.6	101.1	51.2	62.4
	85 & Older	599	243	356	371,118	112,259	259,860	161.4	216.5	137.5	149.5	174.3	199.2	243.7	123.2	151.9
	Unknown	24	22	2												
	Total	9,217	6,349	2,868	32,383,811	16,227,924	16,156,887	28.5	39.1	17.8	27.9	29.0	38.2	40.1	17.1	18.4
ASIAN/OTHER																
	Under 1	5	5	0	60,717	31,247	29,470	8.2	16.0	0.0	1.0	15.5	2.0	30.0	-	-
	1 to 4	18	9	9	254,397	131,069	123,328	7.1	6.9	7.3	3.8	10.3	2.4	11.4	2.6	12.1
	5 to 14	43	29	14	564,354	288,489	275,865	7.6	10.1	5.1	5.3	9.9	6.4	13.7	2.4	7.7
	15 to 24	124	98	26	533,767	274,693	259,074	23.2	35.7	10.0	19.1	27.3	28.6	42.7	6.2	13.9
	25 to 34	75	54	21	599,066	301,166	297,891	12.5	17.9	7.0	9.7	15.4	13.1	22.7	4.0	10.1
	35 to 44	80	47	33	631,504	303,109	328,395	12.7	15.5	10.0	9.9	15.4	11.1	19.9	6.6	13.5
	45 to 64	65	39	27	439,067	207,939	230,128	15.1	18.8	11.7	11.4	18.7	12.9	24.6	7.3	16.2
	65 to 74	42	26	16	256,917	120,782	136,135	16.3	21.5	11.8	11.4	21.3	13.3	29.8	6.0	17.5
	75 to 84	69	31	37	188,491	81,782	106,709	36.1	37.9	34.7	27.5	44.7	24.6	51.2	23.5	45.8
	85 & Older	73	36	37	92,392	39,642	52,750	79.0	90.8	70.1	60.9	97.1	61.1	120.5	47.5	92.7
	Unknown	25	17	8	26,336	11,231	15,105	94.9	151.4	53.0	57.7	132.1	79.4	223.3	16.3	89.7
	Total	619	391	228	3,645,998	1,791,148	1,854,850	17.0	21.8	12.3	15.6	18.3	19.7	24.0	10.7	13.9
BLACK																
	Under 1	13	6	7	37,276	18,939	18,337	34.9	31.7	38.2	15.9	53.8	6.3	57.0	9.9	66.5
	1 to 4	35	16	19	170,539	86,386	84,153	20.5	18.5	22.6	13.7	27.3	9.4	27.6	12.4	32.7
	5 to 14	33	23	10	388,094	196,545	191,549	8.5	11.7	5.2	5.6	11.4	6.9	15.5	2.0	8.5
	15 to 24	100	69	31	345,698	162,527	183,171	28.9	37.8	19.0	23.3	34.6	28.9	46.7	12.3	25.7
	25 to 34	119	86	32	395,297	203,575	191,712	29.9	42.2	16.7	24.5	35.2	33.3	51.2	10.9	22.5
	35 to 44	191	118	73	371,892	180,097	191,795	51.4	65.5	38.1	44.1	58.6	53.7	77.3	29.3	46.8
	45 to 54	149	116	33	242,802	114,139	128,663	61.4	101.6	25.6	51.5	71.2	83.1	120.1	16.9	34.4
	55 to 64	66	44	12	162,306	71,336	80,970	36.8	61.7	14.8	27.1	46.4	43.5	79.9	6.4	23.2
	65 to 74	49	34	15	102,194	43,656	58,538	47.9	77.9	25.6	34.5	61.4	51.7	104.1	12.7	39.6
	75 to 84	32	18	14	63,430	19,675	33,755	59.9	91.5	41.6	39.1	80.6	49.2	133.8	19.7	63.2
	85 & Older	14	7	7	15,883	4,669	11,214	88.1	149.9	62.4	42.0	134.3	38.9	261.0	16.2	108.7
	Unknown	2	2	0												
	Total	792	539	253	2,275,401	1,121,544	1,153,857	34.8	48.1	21.9	32.4	37.2	44.0	52.1	19.2	24.6
HISPANIC																
	Under 1	33	16	17	252,617	129,626	123,991	13.1	12.4	13.7	8.6	17.5	6.3	19.5	7.2	20.2
	1 to 4	117	74	43	1,034,666	527,237	507,419	11.3	14.0	8.5	9.3	13.4	10.8	17.2	5.9	11.0
	5 to 14	109	65	44	1,816,510	925,990	890,520	6.0	7.0	4.9	4.9	7.1	5.3	8.7	3.5	6.4
	15 to 24	443	353	90	1,436,639	749,483	687,156	30.8	47.1	13.1	28.0	33.7	42.2	52.0	10.4	15.9
	25 to 34	518	424	94	1,808,376	1,012,882	795,494	28.6	41.9	11.8	26.2	31.1	37.9	45.8	9.4	14.2
	35 to 44	477	403	74	1,372,005	720,340	651,666	34.8	55.9	14.4	31.6	37.9	50.5	61.4	8.8	13.9
	45 to 64	239	187	52	747,447	376,227	371,220	32.0	49.7	14.0	27.9	36.0	42.6	56.8	10.2	17.8
	65 to 74	158	111	47	416,154	200,126	216,028	38.0	55.5	21.8	32.0	43.9	45.1	65.8	15.5	28.0
	75 to 84	107	79	28	290,103	126,447	163,656	38.2	62.5	18.2	31.0	45.4	48.7	75.3	11.5	25.0
	85 & Older	72	37	35	122,130	48,089	74,041	69.0	76.9	47.3	45.3	72.6	62.1	101.7	31.6	62.9
	Unknown	43	20	23	44,103	15,454	28,649	97.5	129.4	80.3	68.4	126.6	72.7	186.1	47.5	113.1
	Total	2,331	1,784	547	9,330,740	4,830,901	4,499,839	25.0	36.9	12.2	24.0	26.0	35.2	38.6	11.1	13.2
WHITE																
	Under 1	21	10	11	190,015	97,726	92,289	11.1	10.2	11.9	6.3	15.8	3.9	16.6	4.9	19.0
	1 to 4	77	45	32	938,733	431,016	407,717	9.2	10.4	7.9	7.1	11.2	7.4	13.5	5.1	10.6
	5 to 14	114	76	38	2,145,987	1,103,170	1,042,817	5.3	6.9	3.6	4.3	6.3	5.3	9.4	2.5	4.9
	15 to 24	545	408	138	1,901,763	992,138	909,626	28.7	41.1	15.2	26.3	31.1	37.1	45.1	12.6	17.7
	25 to 34	729	544	184	2,554,658	1,310,825	1,243,833	29.5	41.5	14.8	25.4	30.6	38.0	45.0	12.7	16.9
	35 to 44	1,110	829	281	3,026,343	1,537,744	1,488,599	36.7	53.9	18.9	34.5	38.8	50.2	57.6	16.7	21.1
	45 to 64	787	584	193	2,377,793	1,189,689	1,188,104	33.1	49.9	16.2	30.8	35.4	45.9	53.9	14.0	18.5
	65 to 74	431	290	141	1,534,409	754,746	779,743	28.1	38.4	18.1	25.4	30.7	34.0	42.8	15.1	21.1
	75 to 84	499	296	193	1,383,346	628,039	755,307	35.3	47.1	25.5	32.2	38.5	41.8	52.5	21.9	29.2
	85 & Older	649	339	309	693,749	360,334	333,415	72.5	94.6	57.7	66.9	78.1	84.5	104.7	51.3	64.1
	Unknown	517	199	318	284,796	60,904	203,892	181.5	246.0	166.0	165.9	197.2	211.8	280.1	138.8	173.1
	Total	5,475	3,635	1,840	17,131,672	8,484,331	8,647,341	32.0	42.8	21.3	31.1	32.8	41.5	44.2	20.3	22.3

Note : Rates are per 100,000 population; ICD-9 Codes E800-E949.

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

* Death rate unreliable, relative standard error is greater than 23%.

+ Standard error indeterminate, rates 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 5
DEATHS DUE TO UNINTENTIONAL INJURIES
BY COUNTY
CALIFORNIA, 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	9,274.0	100.0	32,062,912	28.9	26.6	26.0	27.2
ALAMEDA	361.3	3.9	1,347,739	26.8	24.0	21.4	26.6
ALPINE	0.7	a	1,185	56.3 *	54.1 *	0.0	185.8
AMADOR	11.7	0.1	32,572	35.8 *	27.5 *	8.7	46.3
BUTTE	88.7	1.0	196,108	45.2	38.7	29.6	47.8
CALAVERAS	22.0	0.2	36,907	59.6	55.6 *	29.4	81.7
COLUSA	8.3	0.1	17,799	46.8 *	48.6 *	14.6	82.7
CONTRA COSTA	216.3	2.3	867,315	24.9	22.7	19.5	26.0
DEL NORTE	12.7	0.1	27,597	45.9 *	46.1 *	19.8	72.4
EL DORADO	55.7	0.6	144,158	38.6	35.3	25.3	45.3
FRESNO	329.7	3.6	754,045	43.7	42.7	37.9	47.4
GLENN	13.3	0.1	26,523	50.3 *	38.5 *	15.3	61.7
HUMBOLDT	62.0	0.7	124,481	49.8	47.4	35.1	59.7
IMPERIAL	63.0	0.7	137,445	45.8	40.3	29.5	51.0
INYO	11.7	0.1	18,571	62.8 *	48.0 *	14.7	81.4
KERN	260.7	2.8	616,701	42.3	41.4	36.2	46.6
KINGS	44.0	0.5	114,902	38.3	37.5	26.1	48.8
LAKE	32.7	0.4	54,984	59.4	46.8	27.6	66.0
LASSEN	8.3	0.1	28,678	29.1 *	25.3 *	7.6	42.9
LOS ANGELES	2,309.0	24.9	9,352,192	24.7	23.4	22.4	24.4
MADERA	59.3	0.6	106,429	55.7	53.7	39.5	67.9
MARIN	56.3	0.6	238,981	23.6	18.8	13.3	24.3
MARIPOSA	9.0	0.1	15,903	56.6 *	54.3 *	13.2	95.3
MENDOCINO	44.7	0.5	84,269	53.0	47.5	32.5	62.5
MERCED	79.0	0.9	198,522	39.8	38.8	30.0	47.7
MODOC	6.7	a	10,064	66.2 *	60.1 *	8.1	112.1
MONO	4.7	a	10,624	43.9 *	46.7 *	1.8	91.7
MONTEREY	122.3	1.3	361,840	33.8	31.7	25.8	37.6
NAPA	37.3	0.4	117,735	31.7	23.0	14.4	31.6
NEVADA	33.3	0.4	86,506	38.5	33.9	20.8	47.1
ORANGE	558.0	6.0	2,614,851	21.3	19.4	17.7	21.0
PLACER	57.3	0.6	203,454	28.2	25.5	18.3	32.7
PLUMAS	12.0	0.1	20,484	58.6 *	53.8 *	19.7	88.0
RIVERSIDE	512.0	5.5	1,370,338	37.4	34.9	31.7	38.1
SACRAMENTO	329.0	3.5	1,117,748	29.4	27.5	24.3	30.6
SAN BENITO	17.7	0.2	42,604	41.5 *	38.0 *	19.5	56.4
SAN BERNARDINO	469.7	5.1	1,581,620	29.7	29.3	26.5	32.0
SAN DIEGO	651.7	7.0	2,669,280	24.4	22.2	20.4	24.0
SAN FRANCISCO	313.0	3.4	751,532	41.6	33.1	29.0	37.2
SAN JOAQUIN	206.3	2.2	524,611	39.3	37.2	31.9	42.4
SAN LUIS OBISPO	78.3	0.8	228,401	34.3	29.1	22.2	36.1
SAN MATEO	147.7	1.6	689,731	21.4	18.4	15.2	21.6
SANTA BARBARA	124.3	1.3	391,425	31.8	26.8	21.8	31.8
SANTA CLARA	317.7	3.4	1,603,340	19.8	18.0	15.9	20.1
SANTA CRUZ	65.3	0.7	241,510	27.1	23.7	17.6	29.8
SHASTA	76.7	0.8	160,877	47.7	42.4	32.0	52.8
SIERRA	2.0	a	3,410	58.7 *	67.6 *	0.0	174.3
SISKIYOU	24.0	0.3	44,616	53.8	48.4	27.0	69.8
SOLANO	102.0	1.1	370,556	27.5	26.6	21.3	31.9
SONOMA	127.0	1.4	419,459	30.3	26.9	21.8	32.0
STANISLAUS	184.0	2.0	413,806	44.5	41.4	35.1	47.7
SUTTER	30.0	0.3	73,721	40.7	37.4	23.4	51.5
TEHAMA	24.0	0.3	54,195	44.3	39.9	22.2	57.6
TRINITY	11.3	0.1	13,363	84.8 *	79.1 *	27.8	130.5
TULARE	169.7	1.8	349,860	48.5	47.2	39.9	54.6
TUOLUMNE	27.0	0.3	51,516	52.4	40.2	23.1	57.3
VENTURA	200.7	2.2	712,762	28.2	24.7	21.1	28.3
YOLO	43.3	0.5	150,812	28.7	25.9	17.8	33.9
YUBA	28.0	0.3	62,255	45.0	45.7	28.1	63.2

Note : Rates are per 100,000 population; ICD-9 Codes E800-E949.

* Death rate is unreliable (relative standard error is greater than 23%).

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

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.

Notes:

The unintentional injury death data presented in this report include ICD-9 codes E800-E949.

The term “significant” throughout this report 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 must 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 were 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) equal to or greater than 23% are considered unreliable and were marked with an asterisk (“*”). Also, three-year averages were used in Table 5 to increase the reliability of the rates derived from small numbers, and to reduce the year-to-year variability inherent among these rates.

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/Other⁷.

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 risk of dying in a given population, but the age composition of that population is not taken into consideration. Therefore the use of age-adjusted 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 publication⁸. 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 in California*⁹. Another source of information is the Department of Health Services, Center for Health Statistics Home Page [www.dhs.ca.gov].

The Years of Potential Life Lost (YPLL) is an index that conveys the potential number of years of life that are lost to decedents that did not complete a life span of 75 years. This index is particularly useful for research involving premature death due to injury because persons in the younger age groups are prominently represented. The YPLL is calculated by defining the midpoint of each age group, subtracting the midpoint from 75, and multiplying the difference by the number of decedents in each age group. The total number of years lost is obtained by adding the YPLL calculation of all the age groups from birth to age 75.

References:

1. Centers for Disease Control and Prevention. *National Vital Statistics Report*, November 10, 1998/ Volume 47, Number 9 p. 26.
2. Ficenec S. *Advance Report: California Vital Statistics, 1996*. Center for Health Statistics, California Department of Health Services, February 1998.
3. National Center for Injury Prevention and Control [<http://www.cdc.gov/ncipc/duip/duip.htm>].
4. Injury Surveillance and Epidemiology Section, 601 N. 7th Street, Sacramento, CA 94234-7320
5. U.S. Department of Health and Human Services. *Healthy People 2000*. Washington, D.C.: Public Health Service, DHHS Publication No. (PHS) 91-50212, September 1991.
6. National Center for Health Statistics. *Health, United States, 1996-97 and Injury Chartbook*. Hyattsville, Maryland: 1997.
7. Hahn RA, Mulinare J, Teutsch SM. *Inconsistencies in Coding Race and Ethnicity Between Birth and Death in U.S. Infants*. The Journal of the American Medical Association, Vol. 267, No.2, January 1992.
8. Curtin LR, Klein RJ. Direct Standardization (Age-Adjusted Death Rates). *Healthy People 2000 Statistical Notes*. National Center for Health Statistics, DHHS Pub. No. (PHS) 95-1237, March 1995; No. 6 Revised.
9. Riedmiller K, Harms C. *Vital Statistics of California, 1996*. Center for Health Statistics, California Department of Health Services, September 1998.