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## HIGHLIGHTS

- o Between 1970 and 1983 the homicide death rate in California for children under 15 fluctuated from a low of 1.56 in 1970 to a high of 2.78 in 1977. The overall upward trend in these rates between 1970 and 1983 was not found to be statistically significant.
- o The California homicide rate for children under 15 has consistently been higher than that of the United States since 1970.
- o Proportionately more infants who were victims of homicide had parents who were under 20 years of age than infants who died of causes other than homicide, or than infants who survived the first year of life.
- o Between 1970 and 1983 the homicide death rate for adults age 65 and over fluctuated from a low of 5.15 in 1971 to a high of 7.91 in 1980. The overall upward trend in these rates between 1970 and 1983 was not found to be statistically significant.
- o The California homicide rate for adults age 65 and over has consistently been higher than that of the United States since 1970.
- o The homicide rate for both children under 15 and adults age 65 and over is higher for urban counties than for rural counties, but the differences were not found to be statistically significant.

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## INTRODUCTION

The purpose of this report is to look at abuse, especially of children and the elderly. Currently very little statistical data are available for either child abuse or abuse of the elderly. However, by looking at homicides, the most serious result of abuse, we can make observations from these data. Although the reporting of deaths is considered to be complete, there has been some concern that homicides have been underreported on the death certificate when compared to homicide data from other reporting agencies. To alleviate this concern we undertook to compare data sources as a first step in preparing this report. The results of our assessment of the reliability of reported homicides on a sample of death certificates is presented in Appendix A.

### Trends in California

As shown in Figure 1 homicides among children under 15 years old have increased from 1970 to 1983, although not consistently between all years. As shown in Table 1, the 1982 rate of 2.55 homicides per 100,000 children under age 15 was the highest reported rate since 1977 (2.78). Using regression analysis<sup>1</sup> it was found that the slight upward trend in the child homicide rate shown in Figure 1 is not statistically significant<sup>2</sup>. Therefore we cannot say with confidence that there is an increasing trend in child homicides. The constant increase in child homicide rates between 1979 and 1982 reversed itself between 1982 and 1983; the rate in 1983 is lower than it has been since 1976.

Homicides among adults aged 65 and over have also increased from 1970 to 1983 (see Table 2). The 1980 rate of 7.91 homicides per 100,000 adults aged 65 and over was the highest reported since 1970. Regression analysis of the homicide death rates among these elderly victims indicates that, similar to child homicides, the slight upward trend in these rates from 1970 to 1983 is not statistically significant.<sup>3</sup>

The homicide death rate among the elderly showed an upward trend from 1971 to 1975, and except for the jump in 1980, a downward trend from 1975 to 1983. The 1983 rate of 5.72 was the lowest rate since 1972 (5.70).

Even though we cannot say with certainty that the homicide rate among California's children and elderly is going up, no one would dispute the fact that 270 homicides in 1983 among children and the elderly constitutes a serious social problem.

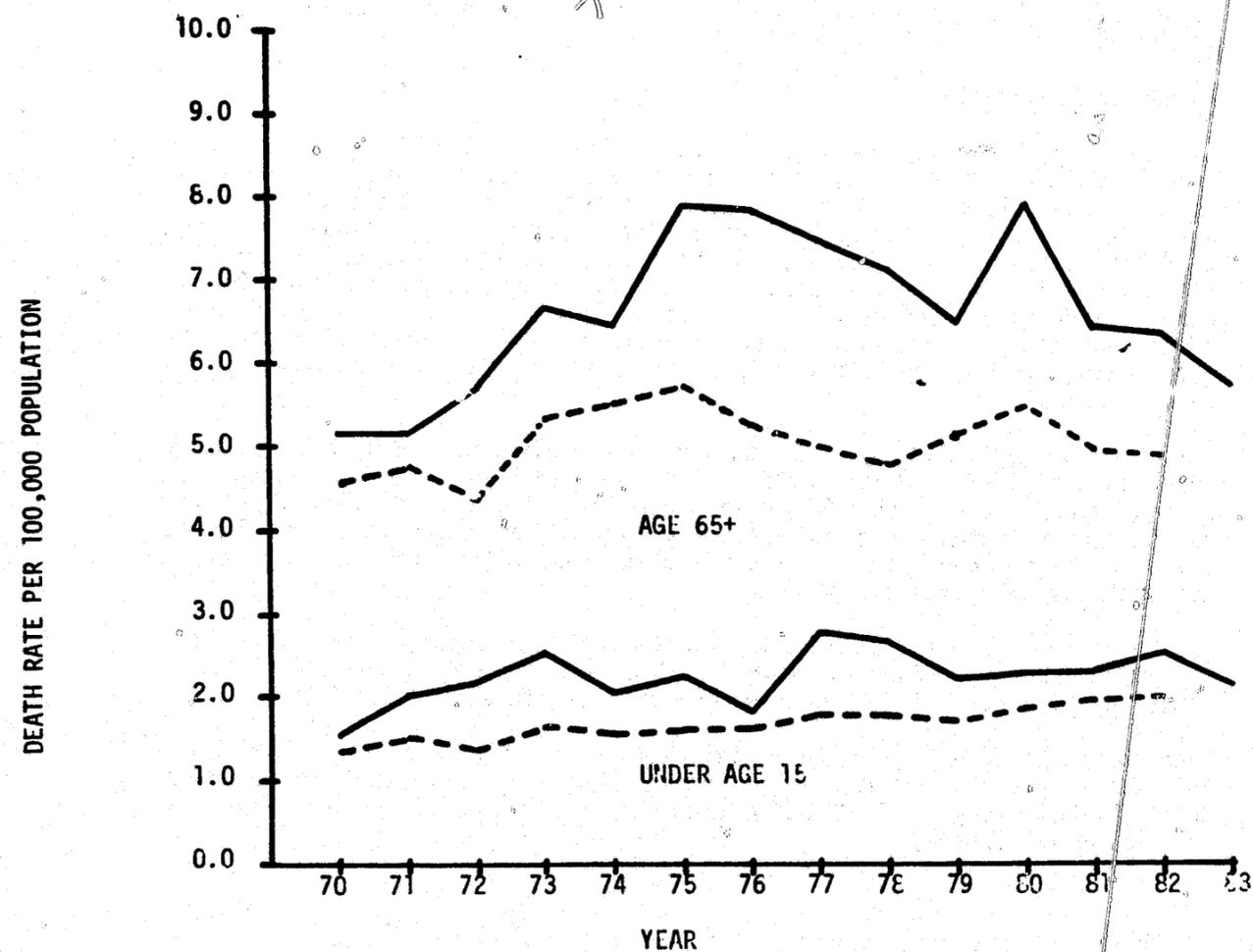
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<sup>1</sup> All statistical tests of the slopes (i.e., was the slope significantly different from zero) of the regression lines were made using the .05 level of significance.

<sup>2</sup> The  $r^2$  for the slope was 0.200.

<sup>3</sup> The  $r^2$  for the slope was 0.099.

**FIGURE 1**  
**DEATH RATES FROM HOMICIDE<sup>1</sup> AMONG CHILDREN AND OLDER PERSONS**  
**CALIFORNIA, 1970-1983**  
**UNITED STATES, 1970-1979**  
(By place of residence)



Legend:        CALIFORNIA  
          - - - - UNITED STATES

<sup>1</sup> ICDA 9TH Revision (960-969): 1979-1983  
ICDA 8TH Revision (960-969): 1970-1978

Source: United States, Bureau of the Census, Estimates of the Population of the United States.  
United States, Department of Health and Human Services, Vital Statistics of the United States.  
State of California, Department of Finance, Population Estimates and Projections.  
State of California, Department of Health Services, Death Record.

**TABLE 1**  
**REPORTED DEATHS AND DEATH RATES FROM HOMICIDE<sup>1</sup>**  
**FOR CHILDREN UNDER AGE 15**  
**CALIFORNIA, 1970-1983**  
(By place of residence)

YEAR	NUMBER OF DEATHS	POPULATION UNDER AGE 15 (July 1)	DEATH RATE PER 100,000 POPULATION
1983	118	5,492,500	2.15
1982	137	5,371,700	2.55
1981	122	5,269,000	2.32
1980	119	5,178,600	2.30
1979	115	5,183,161	2.22
1978	138	5,189,263	2.66
1977	144	5,179,774	2.78
1976	94	5,180,489	1.81
1975	118	5,211,082	2.26
1974	108	5,262,521	2.05
1973	135	5,321,471	2.54
1972	118	5,393,588	2.19
1971	110	5,447,582	2.02
1970	85	5,445,360	1.56

<sup>1</sup> ICDA 9th Revision (960-969): 1979-83 data.  
ICDA 8th Revision (960-969): 1970-78 data.

Source: State of California, Department of Health Services, Death Records.  
State of California, Department of Finance, Population Projections, Baseline 83 and County Population Estimates, Report 83 E-2 (1980-83 data); Population projections controlled to latest county estimates (1970-79).

TABLE 2  
REPORTED DEATHS AND DEATH RATES FROM HOMICIDE<sup>1</sup>  
AMONG OLDER PERSONS  
CALIFORNIA, 1970-1983  
(By place of residence)

YEAR	NUMBER OF DEATHS AGE 65+	POPULATION AGE 65+ (July 1)	DEATH RATE PER 100,000 POPULATION
1983	152	2,655,400	5.72
1982	163	2,573,800	6.33
1981	160	2,497,600	6.41
1980	192	2,426,700	7.91
1979	149	2,303,107	6.47
1978	158	2,223,146	7.11
1977	160	2,140,607	7.47
1976	162	2,068,866	7.83
1975	158	2,003,803	7.89
1974	125	1,939,735	6.44
1973	126	1,888,653	6.67
1972	105	1,843,610	5.70
1971	93	1,804,529	5.15
1970	91	1,762,351	5.16

<sup>1</sup> ICDA 9th Revision (960-969): 1979-82 data.  
ICDA 8th Revision (960-969): 1970-78 data.

Source: State of California, Department of Health Services, Death Records.  
State of California, Department of Finance, Population Projections, Baseline 83 and County Population Estimates, Report 83 E-2 (1980-83 data); Population projections controlled to latest county estimates (1970-79).

Trends: California Compared to the United States

The United States homicide rate for children under 15 has consistently been lower than that for California from 1970 to 1982 (Figure 1). Using regression analysis it was found that the increase in the United States homicide rate for children under 15 was statistically significant.<sup>4</sup>

The United States homicide rate for adults age 65 and over has also been consistently lower than that for California from 1970 to 1982 (Figure 1). Using regression analysis it was found that the increase in the United States homicide rate for adults age 65 and over was not statistically significant.<sup>5</sup>

Trends in Homicide by Race

As shown in Table 3 between 1970 and 1982 the number of homicides involving Black children increased from 28 homicides in 1970 to 35 homicides in 1982, although there were some fluctuations between years. During this period, children who were White Non-Spanish Surname showed an increase of 43 percent, from 44 to 63 homicides. White Spanish Surname showed the greatest change, increasing by 300 percent, from 8 homicides to 32 homicides.

As shown in Table 4 the changes in numbers of homicide victims for older persons differed from that of children among the races. Between 1970 and 1982, homicides involving older Black victims increased by 289 percent, from 9 homicides in 1970 to 35 in 1982. White Non-Spanish Surname homicide victims increased by 56 percent, from 73 homicides in 1970 to 114 in 1982. During this same time period White Spanish Surname homicide victims remained the same at 7 victims in both 1970 and 1982, although there was some fluctuation in the intervening years.

Homicides by Type of Assault

For children under 15, homicides are most often reported as an "Assault by Other and Unspecified Means". As shown in Table 5, "Assault by Firearms and Explosives" is the second most often reported type of assault and "Child Battering and Other Maltreatment" is third. Suicide is shown on this table for comparison purposes.

<sup>4</sup> The  $r^2$  for the slope was 0.879.

<sup>5</sup> The  $r^2$  for the slope was 0.077.

TABLE 3  
REPORTED DEATHS FROM HOMICIDE<sup>1</sup>  
FOR CHILDREN UNDER AGE 15  
BY RACE/ETHNICITY OF CHILD  
CALIFORNIA, 1970-1982  
(By place of residence)

YEAR	RACE/ETHNICITY				
	Black	White Non-Spanish Surname	White Spanish Surname	All Other	Unknown
1982	35	63	32	7	-
1981	38	51	28	5	-
1980	39	55	22	1	2
1979	31	59	21	4	-
1978	34	60	35	8	1
1977	44	68	28	4	-
1976	32	42	20	-	-
1975	42	53	23	-	-
1974	18	64	24	2	-
1973	37	70	27	1	-
1972	34	67	16	1	-
1971	35	61	10	4	-
1970	28	44	8	5	-

<sup>1</sup> ICDA 9th Revision (960-969): 1979-82 data.  
ICDA 8th Revision (960-969): 1970-78 data.

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

TABLE 4  
REPORTED DEATHS FROM HOMICIDE<sup>1</sup>  
BY RACE/ETHNICITY OF OLDER PERSONS (AGE 65+)  
CALIFORNIA, 1970-1982  
(By place of residence)

YEAR	RACE/ETHNICITY				
	Black	White Non-Spanish Surname	White Spanish Surname	All Other	Unknown
1982	35	114	7	7	-
1981	30	109	10	11	-
1980	20	147	11	14	-
1979	25	102	13	9	-
1978	23	121	9	5	-
1977	19	130	5	6	-
1976	21	125	12	4	-
1975	25	117	8	8	-
1974	15	93	6	11	-
1973	18	100	6	2	-
1972	13	77	10	5	-
1971	9	78	3	3	-
1970	9	73	7	2	-

<sup>1</sup> ICDA 9th Revision (960-969): 1979-82 data.  
ICDA 8th Revision (960-979): 1970-78 data.

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

TABLE 5  
REPORTED DEATHS FROM SUICIDE AND HOMICIDE  
BY AGE OF CHILD  
CALIFORNIA, 1983  
(By place of residence)

CAUSE OF DEATH (ICDA 9th Revision)	AGE OF CHILD				
	Total Under 15	Under 1	1-4	5-9	10-14
SUICIDE (950-959)	22	-	-	1	21
HOMICIDE (960-969)	118	22	44	19	33
Fight, Brawl, Rape (960)	-	-	-	-	-
Assault by Corrosive or Caustic Substance, Except Poisoning (961)	-	-	-	-	-
Assault by Poisoning (962)	-	-	-	-	-
Assault by Hanging and Strangulation (963)	10	3	3	2	2
Assault by Drowning (964)	-	-	-	-	-
Assault by Firearms and Explosives (965)	33	-	2	9	22
Assault by Cutting and Piercing Instrument (966)	13	-	4	2	7
Child Battering and Other Maltreatment (967)	26	6	17	3	-
Assault by Other and Un- specified Means (968)	34	13	17	3	1
Late Effects of Injury Purposely Inflicted (969)	2	-	1	-	1

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

TABLE 6  
REPORTED DEATHS FROM SUICIDE AND HOMICIDE  
AMONG OLDER PERSONS  
CALIFORNIA, 1983  
(By place of residence)

CAUSE OF DEATH (ICDA 9th Revision)	AGE			
	Total Age 65+	65-74	75-84	85+
SUICIDE (950-959)	722	364	278	80
HOMICIDE (960-969)	152	78	54	20
Fight, Brawl, Rape (960)	2	2	-	-
Assault by Corrosive or Caustic Substance Except Poisoning (961)	-	-	-	-
Assault by Poisoning (962)	1	1	-	-
Assault by Hanging and Strangulation (963)	32	11	16	5
Assault by Drowning (964)	1	1	-	-
Assault by Firearms and Explosives (965)	35	24	10	1
Assault by Cutting and Piercing Instrument (966)	39	20	12	7
Assault by Other and Un- specified Means (968)	40	18	16	6
Late Effects of Injury Purposely Inflicted (969)	2	1	-	1

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

For adults age 65 and over, homicides are again most often reported as an "Assault by Other and Unspecified Means" (see Table 6). "Assault by Cutting and Piercing Instrument" ranks second and "Assault by Firearms and Explosives third". In this age group, suicides are reported as a cause of death much more frequently than homicides. As a "preventable" cause of death, as opposed to death from natural causes or accidents, it is a much more serious problem in the 65 and over age group than are homicides. There were 722 suicides in 1983 as opposed to 152 homicides in the older age group.

Infant Homicides

A comparison of birth characteristics among infant (under one year old) homicide victims, infants who died from causes other than homicide, and infants who survived the first year of life was made using the California Birth Cohort Perinatal File (see Appendix B for a description of this file). The years 1979-1981 were combined to provide more stable estimates for comparison between categories. As shown in Table 7, a larger percentage of infants who were victims of infant homicide had mothers 15-19 years old compared to infants who died of causes other than homicide or infants who survived the first year. No mothers of homicide victims were over 34 years of age. Fathers of infant homicide victims were also more likely to be in the 15-19 year old age group (15.1 percent) than fathers of infants who died from causes other than homicide (6.5 percent) or fathers whose infant survived the first year of life (4.8 percent).

A smaller percentage of mothers of homicide victims had no previous live births (38.4 percent) compared to mothers of infants who died from causes other than homicide (40.3 percent) or mothers of infants who survived the first year (43.2 percent). Mothers of infant homicide victims were slightly more likely to have had one other child previously than mothers of infants in the other two categories. However, a much lower percentage of mothers of homicide victims reported having had three or more previous live births (6.8 percent) compared to mothers whose infants died of causes other than homicide (12.6 percent) or mothers of infants who survived the first year (10.5 percent).

Infants who are victims of homicide exhibit a lower incidence of reported congenital anomalies than those infants who survive the first year of life. No congenital anomalies were reported among infant homicides. Among infants who died from other causes, 2.3 percent were reported to have one or more congenital anomalies, and infants who survived the first year of life reported only 0.01 percent with one or more congenital anomalies.

Infant homicide victims show a higher percentage (15.1 percent) of low birthweight (under 2,500 grams) than do infants who survived the first year of life (5.4 percent). This may be an effect of the larger percent of teenage mothers in this group, who are known to have a higher incidence of low birthweight babies. Infants who died from causes other than homicide had, by far, the highest percentage of low birthweight (55.4 percent), low birthweight being a contributory cause of death for this group.

TABLE 7  
COMPARISON OF BIRTH CHARACTERISTICS  
AMONG INFANTS UNDER ONE YEAR OLD  
CALIFORNIA, 1979-1981  
(By place of occurrence)

CHARACTERISTICS	INFANT HOMICIDE DEATHS (n=73)	INFANT DEATHS EXCLUDING HOMICIDE (n=12,761)	LIVE BIRTHS EXCLUDING DEATHS (n=1,190,578)
<b>AGE OF MOTHER</b>	Percent of Infants by Age of Mother		
Total	100.0%	100.0%	100.0%
10-14	1.7	0.3	0.2
15-19	28.8	18.3	13.6
20-24	32.9	32.9	33.0
25-29	21.9	26.0	30.6
30-34	8.2	14.8	16.9
35+	-	6.1	5.5
Unknown	6.8	1.9	0.04
<b>AGE OF FATHER</b>	Percent of Infants by Age of Father		
Total	100.0%	100.0%	100.0%
10-14	-	0.02	0.01
15-19	15.1	6.5	4.8
20-24	27.4	26.7	24.2
25-29	19.2	26.3	30.7
30-34	17.8	18.7	22.4
35+	8.2	14.1	14.7
Unknown	12.3	7.6	3.1
<b>PREVIOUS LIVE BIRTHS</b>	Percent of Infants by Previous Live Births		
None	38.4%	40.3%	43.2%
1	32.9	29.9	30.4
2	11.0	14.4	14.2
3 or more	6.8	12.6	10.5
Unknown	11.0	3.7	1.7
	Percent of Infants with Congenital Anomalies		
	-	2.3%	0.01%
	Percent of Infants with Low Birthweight		
	15.1%	55.4%	5.4%

Source: State of California, Department of Health Services Birth Cohort Files.

The picture that emerges from the Birth Cohort File of the average infant homicide victim, as compared to other infants, is that the child is more likely to have a teenage mother and father; is more likely to be the second child; is less likely to have more than one older sibling; and less likely to have any reported congenital anomalies.

**Geographic Clusters**

We wanted to look at the geographic location of child homicide victims and elderly homicide victims to determine if they occurred at a significantly higher rate in some areas than others. Since many counties had no homicides in 1980 it was decided to combine them into urban and rural counties and compare these two categories. If 50 percent or more of a county's population lived in rural areas, that county was listed as rural.

Table 8 shows that the homicide rate for both age groups was higher in urban counties than it was in rural counties; however, statistical tests showed that the urban/rural differences were not statistically significant. Table 9 lists homicides for children and older persons by counties considered to be urban and rural.

**TABLE 8  
HOMICIDE RATE FOR URBAN  
AND RURAL COUNTIES  
FOR CHILDREN UNDER 15  
AND OLDER PERSONS  
CALIFORNIA, 1980  
(By place of residence)**

COUNTY	AGE	
	Under 15	65 and Over
Urban	2.31	8.02
Rural	2.15	6.10

Source: State of California, Department of Health Services, Death Records.  
State of California, Department of Finance, State Census Data Center, Summary Tape File 1.

**TABLE 9  
POPULATION AND HOMICIDES FOR CHILDREN UNDER AGE 15  
AND THE ELDERLY AGE 65 AND OVER  
CALIFORNIA COUNTIES, 1980  
(By place of residence)**

URBAN COUNTIES	POPULATION UNDER 15	HOMICIDES UNDER 15	POPULATION 65 AND OVER	HOMICIDES 65 AND OVER	RURAL COUNTIES <sup>1</sup>	POPULATION UNDER 15	HOMICIDES UNDER 15	POPULATION 65 AND OVER	HOMICIDES 65 AND OVER
Total Urban	5,015,099	116	2,332,232	187	Total Rural	139,669	3	82,018	5
Alameda	222,618	3	114,206	18	Alpine	217	-	58	-
Butte	28,746	-	22,251	1	Amador	3,547	-	3,129	-
Contra Costa	144,017	1	80,844	2	Calaveras	3,974	-	3,326	-
Fresno	124,502	1	51,797	7	Colusa	2,972	-	1,690	-
Humboldt	22,384	-	11,103	3	Del Norte	4,234	-	2,208	-
Imperial	26,101	-	8,330	1	El Dorado	17,936	-	8,498	-
Kern	101,787	5	39,227	3	Glenn	5,110	-	2,866	1
Kings	20,043	1	6,370	-	Inyo	3,698	-	2,778	-
Los Angeles	1,648,035	46	743,005	80	Lake	6,432	-	7,960	-
Marin	39,074	1	21,513	1	Lassen	4,807	-	1,932	-
Merced	35,961	1	11,526	2	Madera	16,859	-	6,789	-
Monterey	67,774	-	26,750	1	Mariposa	2,039	-	1,718	-
Napa	18,991	-	15,028	2	Mendocino	15,445	-	7,922	-
Orange	417,376	10	160,913	4	Modoc	1,938	-	1,200	-
Placer	25,510	-	13,097	-	Hono	1,671	-	365	-
Riverside	150,327	4	88,737	7	Nevada	10,438	-	7,877	1
Sacramento	189,577	4	74,489	6	Plumas	3,799	-	1,990	1
San Bernardino	221,598	5	89,056	5	San Benito	6,790	-	2,509	-
San Diego	384,136	11	191,744	13	Sierra	610	-	442	-
San Francisco	82,807	2	104,285	17	Siskiyou	8,978	-	5,155	1
San Joaquin	81,868	3	39,341	7	Tehama	8,608	3	5,606	-
San Luis Obispo	27,145	2	20,805	-	Trinity	2,720	-	1,324	1
San Mateo	109,254	1	62,048	2	Tuolumne	6,846	-	4,674	-
Santa Barbara	57,244	2	33,774	-					
Santa Clara	284,937	4	86,633	3					
Santa Cruz	36,658	1	24,898	-					
Shasta	26,709	1	12,834	1					
Solano	59,019	-	17,932	2					
Sonoma	63,265	3	40,528	-					
Stanislaus	84,468	-	29,183	1					
Sutter	12,205	-	5,389	1					
Tulare	85,426	2	26,325	1					
Ventura	133,489	2	43,801	2					
Yolo	22,478	-	9,849	-					
Yuba	12,592	-	4,821	2					

<sup>1</sup> Counties with 50 percent or more of the population residing in rural areas.

Source: State of California, Department of Finance, State Census Data Center, Summary Tape File 1.  
State of California, Department of Health Services, Death Records.

## APPENDIX A

### Quality of the Data

We compared homicides reported on the vital statistics death certificate to homicides reported by the police department. Since it was not possible to compare these two reporting systems for the whole State, we selected Sacramento County for our test county. There were 86 total homicides reported on the death certificate which occurred in Sacramento County in 1982.

Permission was obtained from the Homicide Bureaus of both the County of Sacramento and the City of Sacramento to compare each of the 86 homicides as reported on the death certificate to those reported by the Homicide Bureaus. The County of Sacramento Homicide Bureau reported 34 homicides. Each of these reported homicides were matched to a death certificate. The 52 remaining death certificates were then matched against the City of Sacramento Homicide Bureau records.

There were 47 homicides reported by the Sacramento City Homicide Bureau. We were able to find a matching death certificate for 43 of these cases. We then had nine remaining death certificates for which a matching homicide bureau record was not found.

The Sacramento City Homicide Bureau provided us with two valuable clues which helped to resolve the non-matches.

1. Homicides occurring in the prison system are not investigated by either county or city homicide bureaus, and
2. The county coroner may shed some light on these cases as all death certificates indicating that violence was involved must be signed by the coroner.

Five of the nine unmatched homicide death certificates (see Table 10) occurred in Folsom Prison and therefore would not have shown up on either the city or the county homicide records, leaving four unmatched death certificates.

A call to the County Coroner's Office provided us with additional information for two of the unmatched death certificates. These were cases in which several aliases were used by the homicide victim. When these were sorted out we were able to eliminate two homicide bureau non-matches and two death certificate non-matches at the same time.

We were now left with two non-matched death certificates and two non-matched homicide bureau records. On further investigation, one of the death certificates showed that the homicide victim had been assaulted in another county although the actual death occurred in Sacramento County. The homicide death certificates were selected by the county in which the death occurred. However, police investigations of homicides are dictated by the county in which the assault takes place. Cases where both the assault and the death occur in the same county do not present a problem. For one of the homicide

bureau cases, however, it was found that the death had not occurred in Sacramento County and therefore the matching death certificate had not been selected for this test. This case was later matched to the death certificate from the county in which the death occurred (Yolo County).

The remaining non-matched death certificate was confirmed by the coroner's office as a definite homicide and a homicide report number was obtained. When this report number was checked against city homicide records it was found to have been overlooked on the first search as it was the same very common surname as another homicide case.

The last city homicide victim for which we had no death certificate proved to be the most difficult to locate. Not only was this a case involving an alias but it also had not been coded as a homicide on the death certificate. Since this case had been under investigation as a possible homicide it was coded on the death certificate as an Unspecified Accident (928.9). This case has subsequently been determined to be a homicide and is therefore included in this study.

Although it took considerable investigation, we were able to match (or account for) all the homicide deaths in the vital statistics death certificate file with the records of both county and city police departments.

At the same time we were matching homicide cases we also looked at the coding of sex, race and age for agreement between the different record keeping systems. Table 11 shows the race, sex and age distribution of the homicide victims in this study based upon information from both the death certificate and the homicide bureau records. Neither the county nor the city homicide bureaus systematically collected race information until 1983. Where race was coded there was agreement on Black and White in all cases. In some instances the homicide bureau had more detailed race information than had been reported on the death certificate. Sex and age, on the other hand, were always recorded systematically by all sources and were in complete agreement as this information is shared among the coroner, who signs the death certificate, and the homicide bureaus.

Statewide homicide data are available from the Department of Justice which publishes statistics on willful homicide crimes by sex, age and race. These data for 1980 are shown in Table 12. For comparison 1980 data obtained from Department of Health Services death certificates are shown in Table 13. When comparing the two sources of homicide data, it is important to keep in mind that the Department of Justice reports "willful homicides" only. The crime of willful homicide is defined by the Uniform Crime Reporting (UCR) program of the Federal Bureau of Investigation as the, "willful (nonnegligent) killing of one human being by another." Attempted murder, justifiable homicide and manslaughter by negligence are excluded from Department of Justice data.

Since deaths reported as homicide on the death certificate (ICD Code 960-969) make no distinction as to the legal classification of homicides, there is no way to separate willful from non-willful homicides for a more exact comparison with Department of Justice data. An overall comparison of these two sets of data does reveal that the death records show a larger number of homicides reported for 1980 (3,473) than those reported by the Department of Justice.

TABLE 10  
UNMATCHED HOMICIDE DEATHS  
SACRAMENTO COUNTY, 1982  
(By place of residence)

CASE NUMBER	RESOLUTION
	Death Certificates with No Matching Homicide Bureau Record
1	Homicide occurred in Folsom Prison <sup>1</sup>
2	" " " "
3	" " " "
4	" " " "
5	" " " "
6	Death occurred in Sacramento County but place of injury was Sutter County <sup>2</sup>
7	Alias for case No. 11
8	Alias for case No. 10
9	Missed on first match
	Homicide Bureau Records With No Matching Death Certificates
10	Alias for case No. 8
11	Alias for case No. 7
12	Death occurred in Yolo County but place of injury was Sacramento County <sup>2</sup>
13	Not coded as homicide on death certificate

<sup>1</sup> Homicides occurring in prisons are not investigated by city or county police departments

<sup>2</sup> Selection of cases was by place of death rather than place of injury. Homicide investigations are based on county or city of injury.

TABLE 11  
HOMICIDES BY RACE, SEX, AND AGE  
SACRAMENTO COUNTY, 1982  
(By place of occurrence)

RACE AND SEX	Total	AGE											
		Under 1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and Over
All Races	87 <sup>a</sup>	2	2	1	-	19	30	15	9	5	2	2	-
Male	71	1	-	1	-	16	25	14	7	4	2	1	-
Female	16	1	2	-	-	3	5	1	2	1	-	-	-
Black	23	1	-	-	-	7	8	3	3	-	-	1	-
Male	22	1	-	-	-	6	8	3	3	-	-	-	-
Female	1	-	-	-	-	1	-	-	-	-	-	-	-
Hispanic	11	-	-	-	-	3	1	4	2	1	-	-	-
Male	10	-	-	-	-	3	1	3	2	1	-	-	-
Female	1	-	-	-	-	-	-	1	-	-	-	-	-
White	49	1	2	1	-	9	19	8	3	4	2	-	-
Male	37	-	-	1	-	7	14	8	2	3	2	-	-
Female	12	1	2	-	-	2	5	-	1	1	-	-	-
Other <sup>1</sup>	4	-	-	-	-	-	2	-	-	-	1	-	-
Male	2	-	-	-	-	-	2	-	-	-	-	-	-
Female	2	-	-	-	-	-	-	-	1	-	1	-	-

<sup>1</sup> Other consists of 1 American Indian, 1 East Indian, 1 Vietnamese and 1 Chinese.

<sup>a</sup> One additional case was added which has been coded as an accident on the death certificate rather than a homicide.

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

TABLE 12  
WILLFUL HOMICIDE CRIMES  
SEX AND AGE OF VICTIM DISTRIBUTED BY RACE/ETHNIC GROUP  
CALIFORNIA, 1980

SEX AND AGE OF VICTIM	TOTAL		RACE/ETHNIC GROUP OF VICTIM									
			White (Not Hispanic)		Hispanic		Black		All Other		Unknown	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL .....	3,405	100.0	1,283	100.0	890	100.0	872	100.0	163	100.0	17	100.0
0-14 .....	110	3.2	57	4.4	18	1.8	33	3.4	2	1.4	0	-
15-19 .....	425	12.5	115	9.0	187	18.9	109	11.2	13	9.1	1	-
20-24 .....	850	19.1	181	14.9	232	23.4	206	21.2	21	14.7	0	-
25-29 .....	579	17.0	173	13.5	195	19.7	177	18.2	32	22.4	2	-
30-34 .....	437	12.8	162	12.6	115	11.6	145	14.9	14	9.8	1	-
35-39 .....	274	8.0	99	7.7	77	7.8	83	8.5	15	10.5	0	-
40-44 .....	209	5.9	85	6.6	41	4.1	64	6.6	11	7.7	0	-
45-49 .....	151	4.4	67	5.2	41	4.1	35	3.6	8	5.6	0	-
50-54 .....	144	4.2	76	5.9	21	2.1	40	4.1	7	4.9	0	-
55-59 .....	357	10.5	232	18.1	36	3.6	72	7.4	17	11.9	0	-
Unknown .....	77	2.3	26	2.0	27	2.7	8	0.8	3	2.1	13	-
Male .....	2,709	100.0	898	100.0	898	100.0	796	100.0	103	100.0	14	100.0
0-14 .....	59	2.2	30	3.3	9	1.0	19	2.4	1	1.0	0	-
15-19 .....	350	12.9	70	7.8	175	19.5	93	11.7	11	10.7	1	-
20-24 .....	521	19.2	128	14.3	213	23.7	188	21.1	12	11.7	0	-
25-29 .....	479	17.7	127	14.1	181	20.2	144	18.1	26	25.2	1	-
30-34 .....	357	13.2	122	13.6	105	11.7	119	14.9	10	9.7	1	-
35-39 .....	223	8.2	77	8.6	67	7.5	71	8.9	8	7.8	0	-
40-44 .....	160	5.9	63	7.0	35	4.0	55	6.9	6	5.8	0	-
45-49 .....	123	4.5	51	5.7	35	3.9	31	3.9	6	5.8	0	-
50-54 .....	122	4.5	60	6.7	21	2.3	34	4.3	7	6.8	0	-
55-59 .....	252	9.3	152	16.9	31	3.5	56	7.0	13	12.6	0	-
Unknown .....	63	2.3	18	2.0	25	2.8	6	0.8	3	2.9	11	-
Female .....	696	100.0	385	100.0	92	100.0	176	100.0	40	100.0	3	100.0
0-14 .....	51	7.3	27	7.0	9	9.8	14	8.0	1	-	0	-
15-19 .....	75	10.8	45	11.7	12	13.0	16	9.1	2	-	0	-
20-24 .....	129	18.5	63	16.4	19	20.7	38	21.6	9	-	0	-
25-29 .....	100	14.4	46	11.9	14	15.2	33	18.8	6	-	1	-
30-34 .....	80	11.5	40	10.4	10	10.9	26	14.8	4	-	0	-
35-39 .....	51	7.3	22	5.7	10	10.9	12	6.8	7	-	0	-
40-44 .....	41	5.9	22	5.7	5	5.4	9	5.1	5	-	0	-
45-49 .....	28	4.0	18	4.2	6	6.5	4	2.3	2	-	0	-
50-54 .....	22	3.2	18	4.2	0	0.0	6	3.4	0	-	0	-
55-59 .....	105	15.1	60	20.8	5	5.4	16	9.1	4	-	0	-
Unknown .....	14	2.0	8	2.1	2	2.2	2	1.1	0	-	2	-

Notes: Percents may not add to 100.0 because of rounding.  
Percent distributions are not calculated when the base number is less than 50.

Source: State of California, Department of Justice.

TABLE 13  
REPORTED DEATHS FROM HOMICIDE  
BY SEX, AGE AND RACE/ETHNIC GROUP OF VICTIM  
CALIFORNIA, 1980  
(By place of occurrence)

SEX AND AGE OF VICTIM	TOTAL		RACE/ETHNIC GROUP OF VICTIM									
	Number	Percent	Black		White (Non-Spanish)		White (Spanish)		All Other		Unknown	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL	3,473	100.0	972	100.0	1,363	100.0	1,017	100.0	113	100.0	8	a
0-14	119	3.4	39	4.0	56	4.1	23	2.3	1	0.9	-	-
15-19	457	13.2	119	12.2	137	10.1	188	18.5	11	9.7	2	a
20-24	673	19.4	209	21.5	207	15.2	243	23.9	12	10.6	2	a
25-29	585	16.8	173	17.8	194	14.2	190	18.7	28	24.8	-	-
30-34	453	13.0	141	14.5	166	12.2	135	13.3	9	8.0	2	a
35-39	281	8.1	77	7.9	114	8.4	76	7.5	14	12.4	-	-
40-44	210	6.0	64	6.6	96	7.0	42	4.1	8	7.1	-	-
45-49	164	4.7	42	4.3	70	5.1	46	4.5	6	5.3	-	-
50-54	142	4.1	43	4.4	73	5.4	22	2.2	4	3.5	-	-
55-99	370	10.7	63	6.5	240	17.6	46	4.5	20	17.7	1	a
100+	1	b	-	-	1	0.1	-	-	-	-	-	-
Unknown	18	0.5	2	0.2	9	0.7	6	0.6	-	-	1	a
MALE	2,802	100.0	807	100.0	1,001	100.0	910	100.0	80	100.0	4	a
0-14	66	2.4	21	2.6	31	3.1	13	1.4	1	1.3	-	-
15-19	375	13.4	104	12.9	93	9.3	170	18.7	7	8.8	1	a
20-24	552	19.7	173	21.4	151	15.1	220	24.2	7	8.8	1	a
25-29	484	17.3	142	17.6	148	14.8	172	18.9	22	27.5	-	-
30-34	380	13.6	117	14.5	133	13.3	124	13.6	6	7.5	-	-
35-39	238	8.5	67	8.3	95	9.5	68	7.5	8	10.0	-	-
40-44	166	5.9	54	6.7	70	7.0	38	4.2	4	5.0	-	-
45-49	138	4.9	39	4.8	55	5.5	39	4.3	5	6.3	-	-
50-54	121	4.3	37	4.6	58	5.8	22	2.4	4	5.0	-	-
55-99	270	9.6	51	6.3	164	16.4	38	4.2	16	20.0	1	a
100+	-	-	-	-	-	-	-	-	-	-	-	-
Unknown	12	0.4	2	0.2	3	0.3	6	0.7	-	-	1	a
FEMALE	671	100.0	165	100.0	362	100.0	107	100.0	33	a	4	a
0-14	53	7.9	18	10.9	25	6.9	10	9.3	-	-	-	-
15-19	82	12.2	15	9.1	44	12.2	18	16.8	4	a	1	a
20-24	121	18.0	36	21.8	56	15.5	23	21.5	5	a	1	a
25-29	101	15.1	31	18.8	46	12.7	18	16.8	6	a	-	-
30-34	73	10.9	24	14.5	33	9.1	11	10.3	3	a	2	a
35-39	43	6.4	10	6.1	19	5.2	8	7.5	6	a	-	-
40-44	44	6.6	10	6.1	26	7.2	4	3.7	4	a	-	-
45-49	26	3.9	3	1.8	15	4.1	7	6.5	1	a	-	-
50-54	21	3.1	6	3.6	15	4.1	-	-	-	-	-	-
55-99	100	14.9	12	7.3	76	21.0	8	7.5	4	a	-	-
100+	1	0.1	-	-	1	0.3	-	-	-	-	-	-
Unknown	6	0.9	-	-	6	1.7	-	-	-	-	-	-

a Percents are not calculated for base less than 50.

b Percent less than 0.050.

Note: Percents are rounded independently and may not add to totals.

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

## APPENDIX B

### Selection of Spanish Surname

In order to make a comparison over time by race, as shown in Tables 3 and 4; we linked the 1980 Spanish Surname tape with the 1970-1982 merged death file. Spanish surnames contained on the tape were matched with those on the merged death file and an indicator was added so that homicide deaths having a Spanish surname could be selected. A comparison over the 13 year period from 1970-1982 was then possible using consistent race categories. The Spanish Surname tape containing 12,497 names is the same as was used by the 1980 census to designate Spanish Surname.

### Birth Cohort

The California Birth Cohort Perinatal File is a computer file which contains data on California's births, infant and fetal deaths. The Birth Cohort File contains records from three basic sources: (1) live birth records of all births occurring in California for a given calendar year, (2) records of fetal deaths occurring in California during the same calendar year, and (3) death records for all infants born during the calendar year who were under one year of age at time of death. A "Birth Cohort" consist of all registered live births and fetal deaths for a given calendar year; perinatal data concerning each cohort are obtained from fetal and infant death records. Each "record" in the Birth Cohort Perinatal File is a composite of the live birth, linked infant death (if child dies within the first year of life), and fetal death records. Linkage is done annually, and currently involves approximately 430,000 live births 4,500 infant deaths and 3,500 fetal deaths. Presently, there are 19 years of linked records, data years 1960 and 1965 through 1982.

TABLE 14  
REPORTED DEATHS FROM HOMICIDE<sup>1</sup>  
BY AGE OF CHILD  
CALIFORNIA, 1970-1983  
(By place of residence)

YEAR	AGE OF CHILD				
	Total Under 15	Under 1	1-4	5-9	10-14
1983	118	22	44	19	33
1982	137	40	43	21	33
1981	122	27	37	16	42
1980	119	23	37	17	42
1979	115	21	42	17	35
1978	138	26	47	19	46
1977	144	31	40	30	43
1976	94	15	45	9	25
1975	118	25	39	12	42
1974	108	28	39	18	23
1973	135	25	59	12	39
1972	118	28	44	19	27
1971	110	23	45	16	26
1970	85	21	35	10	19

<sup>1</sup> ICDA 9th Revision (960-969): 1979-83 data.  
ICDA 8th Revision (960-969): 1970-78 data.

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

TABLE 15  
REPORTED DEATHS FROM HOMICIDE<sup>1</sup>  
AMONG OLDER PERSON BY AGE  
CALIFORNIA, 1970-1983  
(By place of residence)

YEAR	AGE			
	Total 65+	65-74	75-84	85+
1983	152	78	54	20
1982	163	96	51	16
1981	160	88	47	25
1980	192	114	59	19
1979	149	93	43	13
1978	158	98	42	18
1977	160	97	45	18
1976	162	92	50	20
1975	158	102	45	11
1974	125	76	37	12
1973	126	77	36	13
1972	105	65	35	5
1971	93	53	31	9
1970	91	54	28	9

<sup>1</sup> ICDA 9th Revision (960-969): 1979-83 data.  
ICDA 8th Revision (960-979): 1970-78 data.

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

TABLE 16  
REPORTED DEATHS, POPULATION AND DEATH RATES FROM HOMICIDE<sup>1</sup>  
FOR CHILDREN UNDER AGE 15  
UNITED STATES, 1970-1982  
(By place of residence)

YEAR	NUMBER OF DEATHS	POPULATION UNDER AGE 15	DEATH RATE PER 100,000 POPULATION
1982	1,023	51,387,000	1.99
1981	998	51,264,000	1.95
1980	944	51,289,000	1.84
1979	878	51,455,000	1.71
1978	927	51,955,000	1.78
1977	942	52,598,000	1.79
1976	868	53,376,000	1.63
1975	877	54,361,000	1.61
1974	857	55,203,000	1.55
1973	925	56,160,000	1.65
1972	774	57,047,000	1.36
1971	869	57,734,000	1.51
1970	768	57,938,000	1.33

<sup>1</sup> ICDA 9th Revision (960-969): 1979-83 data.  
ICDA 8th Revision (960-969): 1970-78 data.

Source: U.S. Department of Health and Human Services, National Center for Health Statistics, Vital Statistics of the United States, Vol. 2, Part A, each year, 1970-1979 and Statistical Resources Bureau, 1980-1982.

U.S. Bureau of the Census, Estimates of the Population of the United States, Series P-25, No. 917, for 1970-1979 and Series P-25, No. 949, for 1980-1983.

TABLE 17  
REPORTED DEATHS, POPULATION AND DEATH RATES FROM HOMICIDE<sup>1</sup>  
AMONG OLDER PERSONS  
UNITED STATES, 1970-1982  
(By place of residence)

YEAR	NUMBER OF DEATHS	POPULATION AGE 65+	DEATH RATE PER 100,000 POPULATION
1982	1,314	26,826,000	4.90
1981	1,307	26,256,000	4.98
1980	1,409	25,713,000	5.48
1979	1,285	25,134,000	5.11
1978	1,162	24,502,000	4.74
1977	1,182	23,892,000	4.95
1976	1,215	23,278,000	5.22
1975	1,288	22,696,000	5.68
1974	1,207	22,061,000	5.47
1973	1,139	21,525,000	5.29
1972	914	21,020,000	4.35
1971	974	20,561,000	4.74
1970	971	20,107,000	4.56

<sup>1</sup> ICDA 9th Revision (960-969): 1979-82 data.  
ICDA 8th Revision (960-969): 1970-78 data.

Source: U.S. Department of Health and Human Services, National Center for Health Statistics, Vital Statistics of the United States, Vol. 2, Part A, each year, 1970-1979 and Statistical Resources Bureau, 1980-1982.

U.S. Bureau of the Census, Estimates of the Population of the United States, Series P-25, No. 917, for 1970-1979 and Series P-25, No. 949, for 1980-1983.

**END**