



CENTER FOR HEALTH STATISTICS
DATA SUMMARY

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**CALIFORNIA'S INFANT
DEATH RATE
1999**

California's Infant Death Rate

The infant death rate (deaths among infants under one year old per 1,000 live births) continues to be one of the most widely used indicators of the overall health status of a community. In 1999, California had the lowest infant death rate ever recorded for the State. There were a total of 2,787 infant deaths and 518,073 live births among California residents for an infant death rate of 5.4 (**Table 1**). The 1999 infant death rate decreased 5.3 percent from the 1998 rate of 5.7 and has decreased 31.6 percent from the 1990 rate of 7.9. These decreases were statistically significant ($p < .05$).¹ California's infant death rate for 1999 was lower than the provisional rate for the United States (6.9).²

In the report *Healthy People 2010 Objective*, the U.S. Department of Health and Human Services set an infant death rate of 4.5 as the target national objective rate to be met by the year 2010.³ If the downward trend in infant death rates continues, California should meet this national objective.

The infant death rates by race/ethnicity are shown in **Table 2** and **Figure 1**. Between 1990 and 1999 the rates for the three race/ethnic groups shown have generally decreased. The rate for California's Black population was 12.9 in 1999, a decrease of 5.8 percent from the 1998 rate of 13.7 and a decrease of 22.8 percent from the 1990 rate of 16.7. The infant death rate decreased for California's Hispanic race/ethnic group, dropping 5.5 percent from 5.5 in 1998 to 5.2 in 1999 and was 29.7 percent lower than the 7.4 rate in 1990. The infant death rate also decreased for the White group dropping from 5.1 in 1998 to 4.8 in 1999 (5.9 percent) and from 7.4 in 1990 (35.1 percent).⁴ The changes from 1998 to 1999 among the three race groups were not statistically significant ($p < .05$).¹ Comparing the three race/ethnic groups, Whites and Hispanics continue to have infant death rates that are relatively similar and significantly below the rate for Blacks. However, most infant deaths do occur among Hispanics (1,297 deaths, 46.5 percent) and Whites (820 deaths, 29.4 percent).

¹ Kleinman, J., Infant Mortality. *Statistical Notes for Health Planners*. No. 2, National Center for Health Statistics, July 1976.

² National Vital Statistics System, National Vital Statistics Reports, *Births, Marriages, Divorces and Deaths: Provisional Data for November 1999*, DHHS Pub No.(PHS) 01-1120, October 31, 2000; Vol 48, No. 17.

³ U.S. Department of Health and Human Services. *Healthy People 2010 Objectives, Volume II, January 24-28, 2000*.

⁴ Race/ethnic-specific infant death rates were calculated based on the race/ethnicity of the mother. All mothers of Spanish/Hispanic origin regardless of race are included in the "Hispanic" group. Mothers included in the "White" and "Black" groups are therefore non-Hispanic. Reliable infant death rates for Asians, Pacific Islanders, and Native Americans will not be available until completion of the 1998-99 Birth Cohort Files.

This Data Summary was prepared by Sandy Ficenec, Center for Health Statistics, 304 S Street, P.O. Box 942732, Sacramento, CA 94234-7320, Telephone (916) 445-6355.

County Infant Death Rates

Infant death rates for 38 of California's 58 counties are shown on **Table 3**. Infant death rates cannot be examined for other counties because they have too few live births to calculate reliable infant death rates (a minimum of 1,000 live births is needed). Even in some of the medium and large counties, the infant death rate can vary substantially from year to year. These 38 counties accounted for 98.7 percent of California's resident live births and 99.0 percent of the infant deaths in 1999.

In 1999, the county infant death rates varied from a high of 7.6 in San Bernardino County to a low of 2.6 in Marin County. Twenty-two counties had a lower rate in 1999 compared to 1998, and fourteen had a higher rate. For two counties the rate was unchanged from 1998 to 1999. Statistical tests applied to the 1999 and 1998 infant death rates in each county revealed Butte County had a statistically significant decrease ($p < .05$),¹ and all others were not statistically significant.

Table 3 also shows the infant death rates for two city health departments. The infant death rate decreased between 1998 and 1999 for Long Beach and increased for Pasadena. These changes were not statistically significant.

**TABLE 1
NUMBER AND RATE OF INFANT DEATHS
CALIFORNIA RESIDENTS, 1950-1999**

YEAR	NUMBER OF INFANT DEATHS	INFANT DEATH RATE ¹
1999	2,787	5.4
1998	2,994	5.7
1997	3,091	5.9
1996	3,186	5.9
1995	3,478	6.3
1994	3,948	7.0
1993	3,970	6.8
1992	4,174	6.9
1991	4,596	7.5
1990	4,828	7.9
1980	4,451	11.1
1970	6,243	17.2
1960	8,663	23.3
1950	6,095	24.9

¹ Deaths under one year of age per 1,000 live births.
Source: State of California, Department of Health Services, Birth and Death Records.

TABLE 2
INFANT DEATH RATES BY RACE/ETHNICITY¹
CALIFORNIA 1990-1999
(By Place of Residence)

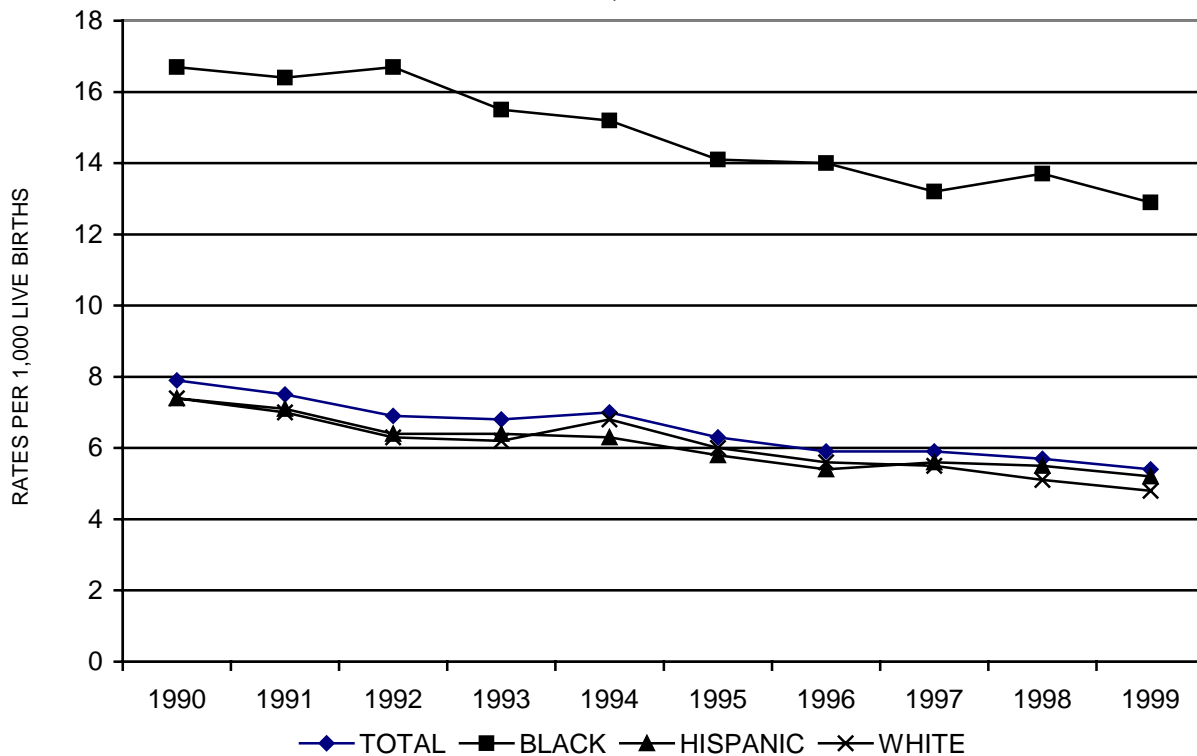
RACE/ ETHNICITY	INFANT DEATH RATES BY RACE/ETHNICITY ¹										INFANT DEATHS 1999
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
TOTAL ²	7.9	7.5	6.9	6.8	7.0	6.3	5.9	5.9	5.7	5.4	2,787
BLACK	16.7	16.4	16.7	15.5	15.2	14.1	14.0	13.2	13.7	12.9	439
HISPANIC	7.4	7.1	6.4	6.4	6.3	5.8	5.4	5.6	5.5	5.2	1,297
WHITE	7.4	7.0	6.3	6.2	6.8	6.0	5.6	5.5	5.1	4.8	820

¹ Race/ethnicity of mother. All mothers of Spanish/Hispanic origin regardless of race are included in the "Hispanic" group. Mothers in the "White" and "Black" groups are non-Hispanic.
² Total includes all race groups (White, Black, Hispanic, Asian, Pacific Islander, American Indian, Other and Unknown race).

Note: Rates are per 1,000 live births.

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

FIGURE 1
INFANT DEATH RATES BY RACE/ETHNICITY
CALIFORNIA, 1990-1999



Source: Table 2.

**TABLE 3
INFANT DEATH RATES BY COUNTY OF RESIDENCE ¹
CALIFORNIA, 1990-1999**

COUNTY	INFANT DEATHS PER 1,000 LIVE BIRTHS										INFANT DEATHS 1999
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
CALIFORNIA	7.9	7.5	6.9	6.8	7.0	6.3	5.9	5.9	5.7	5.4	2,787
ALAMEDA	8.8	7.7	7.2	6.2	6.4	5.4	6.0	6.0	5.1	5.3	109
BUTTE	7.9	7.4	7.3	7.7	6.4	10.3	6.9	6.7	7.9	3.1	7
CONTRA COSTA	6.4	6.1	6.6	5.8	5.7	6.0	5.5	5.1	5.9	5.2	66
EL DORADO	8.5	3.6	7.9	4.5	8.9	3.5	6.0	1.8 ^a	3.6	4.9	8
FRESNO	8.5	9.6	9.5	7.4	9.3	8.3	7.9	8.4	6.5	6.1	85
HUMBOLDT	8.3	8.1	6.7	11.2	12.5	8.9	4.7	4.1	8.9	4.1	6
IMPERIAL	8.6	3.9	4.7	5.3	6.2	4.9	4.4	2.5	7.2	4.9	12
KERN	10.3	10.2	8.9	10.8	11.2	10.9	9.8	6.7	6.7	6.9	78
KINGS	12.3	7.9	7.8	6.5	9.0	6.1	11.5	5.8	7.9	7.4	16
LOS ANGELES	8.0	7.8	7.2	7.3	6.9	6.7	5.9	5.9	5.9	5.4	841
LONG BEACH ²	8.7	8.7	4.9	8.2	9.3	8.1	4.9	4.4	7.1	6.1	52
PASADENA ²	7.7	9.3	8.8	12.6	7.5	7.3	8.5	5.3	6.4	7.1	17
MADERA	3.3	4.1	6.0	8.0	8.2	7.0	6.5	4.0	6.3	5.1	10
MARIN	5.9	5.4	3.1	6.1	5.1	2.7	3.4	4.5	2.3	2.6	7
MENDOCINO	9.0	6.7	6.2	11.8	6.1	8.0	9.8	4.9 ^a	5.5	4.0 ^a	4
MERCED	7.6	9.7	7.3	5.9	7.2	8.2	7.2	6.9	6.2	6.6	24
MONTEREY	7.7	6.8	6.1	7.1	5.8	5.7	5.3	5.8	6.2	4.8	32
NAPA	6.7	5.2	2.6	7.0	6.0	5.5	4.6	3.3 ^a	3.4 ^a	1.3 ^a	2
ORANGE	7.8	6.1	5.4	5.9	6.0	5.6	4.4	4.4	4.4	4.4	204
PLACER	5.4	6.1	4.2	7.6	4.1	6.3	6.2	1.9 ^a	4.1	6.1	18
RIVERSIDE	8.8	8.8	8.4	7.6	8.4	7.1	6.4	6.0	7.5	6.8	160
SACRAMENTO	8.9	8.1	7.0	7.1	7.3	7.0	6.9	7.0	6.1	6.2	110
SAN BERNARDINO	9.9	9.3	8.6	7.9	7.9	7.7	7.1	8.3	7.5	7.6	215
SAN DIEGO	7.2	7.1	5.9	6.2	6.6	4.9	5.4	5.5	5.2	5.2	225
SAN FRANCISCO	7.2	6.5	7.2	5.0	8.2	4.3	4.8	4.5	5.0	3.8	31
SAN JOAQUIN	8.7	7.9	8.6	8.5	7.6	6.4	7.6	7.2	6.0	4.6	41
SAN LUIS OBISPO	8.6	4.3	6.8	7.5	7.1	3.8	4.4	6.0	5.9	3.0	7
SAN MATEO	6.1	6.4	5.2	4.0	3.2	5.1	4.0	5.1	4.3	3.6	36
SANTA BARBARA	6.7	7.4	5.0	6.4	5.0	6.7	3.7	4.5	5.7	4.7	26
SANTA CLARA	5.5	6.9	6.0	5.3	5.8	5.2	5.1	5.6	3.8	4.8	127
SANTA CRUZ	4.6	5.8	4.2	6.2	7.6	3.7	6.1	4.8	5.8	4.9	17
SHASTA	8.7	9.4	9.8	5.2	8.0	6.9	5.9	8.5	4.6	6.0	11
SOLANO	8.5	7.0	7.4	7.1	8.8	5.1	7.1	6.4	6.5	5.6	31
SONOMA	4.7	5.7	6.0	5.7	5.3	4.4	4.2	4.1	5.5	5.9	32
STANISLAUS	8.1	7.6	9.3	5.8	8.4	5.9	6.8	7.1	6.8	7.0	50
SUTTER	9.0	4.0	4.7	10.4	4.9	6.0	7.9	6.6	7.8	3.5 ^a	4
TULARE	7.7	6.8	6.2	5.8	7.1	5.7	6.1	6.1	6.8	5.0	34
VENTURA	7.6	6.9	5.8	5.5	4.8	5.4	5.0	7.5	5.6	5.0	57
YOLO	7.1	10.0	8.8	6.1	9.7	5.0	9.7	6.2	3.3	3.7	8
YUBA	9.9	10.0	5.2	6.3	8.9	8.4	4.6	8.6	-	7.0	7

¹ Counties with 1,000 or more births in 1999.

² Long Beach and Pasadena are city health departments. City events are included in their respective county totals.

^a Caution should be used when interpreting these rates because they are based on 5 or fewer events.

- Fewer than 1,000 live births.

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