



CENTER FOR HEALTH STATISTICS  
**DATA SUMMARY**

REPORT REGISTER NO. DS99-11000  
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*CALIFORNIA'S INFANT  
DEATH RATE  
1998*

## 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 1998, California had the lowest infant death rate ever recorded for the State. There were a total of 2,994 infant deaths and 521,265 live births among California residents for an infant death rate of 5.7 (**Table 1**). The 1998 infant death rate decreased 3.4 percent from the 1997 rate of 5.9 and has decreased 27.8 percent from the 1990 rate of 7.9. California's infant death rate for 1998 was lower than the preliminary rate for the United States (7.2).<sup>1</sup>

In the report, *Healthy People 2010 Objectives: Draft for Public Comment*, the U.S. Department of Health and Human Services established an infant death rate of 5.0 as a national objective to be met by the year 2010.<sup>2</sup> 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**. The rate for California's Black population increased to 13.7 in 1998, reversing a steady decline since 1992. The Black infant death rate was up 3.8 percent from a rate of 13.2 in 1997 but down 18.0 percent from the rate of 16.7 in 1990. The infant death rate decreased for California's Hispanic race/ethnic group, dropping 1.8 percent from 5.6 in 1997 to 5.5 in 1998 and was 25.7 percent lower than the 7.4 rate in 1990. The infant death rate also decreased for the White group dropping from 5.5 in 1997 to 5.1 in 1998 (7.3 percent) and from 7.4 in 1990 (31.1 percent).<sup>3</sup> The changes from 1997 to 1998 among the three race groups were not statistically significant ( $p < .05$ ).<sup>4</sup> 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 (1,351 deaths, 45.1 percent) and Whites (906 deaths, 30.3 percent).

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<sup>1</sup> National Vital Statistics System, National Vital Statistics Reports, *Births and Deaths: Preliminary Data for 1998*, DHHS Pub No.(PHS) 99-1120, October 5, 1999; Vol 47, No. 25.

<sup>2</sup> U.S. Department of Health and Human Services. *Healthy People 2010 Objectives: Draft for Public Comment*. September 1998.

<sup>3</sup> 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 1997-98 Birth Cohort Files.

<sup>4</sup> Kleinman, J., Infant Mortality. *Statistical Notes for Health Planners*. No. 2, National Center for Health Statistics, July 1976.

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## County Infant Death Rates

Infant death rates for 37 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 significantly from year to year. These 37 counties accounted for 98.6 percent of California's resident live births and 98.4 percent of the infant deaths in 1998.

In 1998, the county infant death rates varied from a high of 8.9 in Humboldt County to a low of 2.3 in Marin County. Fifteen counties had a lower rate in 1998 compared to 1997, and nineteen had a higher rate. For three counties the rate was unchanged from 1997 to 1998. Statistical tests applied to the 1998 and 1997 infant death rates in each county revealed Imperial County had a statistically significant increase, Santa Clara County had a statistically significant decrease ( $p < .05$ ),<sup>4</sup> and all others were not statistically significant.

**Table 3** also shows the infant death rates for the three city health departments. Berkeley's infant death rate decreased between 1997 and 1998 while the infant death rates for both Long Beach and Pasadena increased. The increase for Long Beach was statistically significant.

**TABLE 1  
NUMBER AND RATE OF INFANT DEATHS  
CALIFORNIA RESIDENTS, 1950-1998**

YEAR	NUMBER OF INFANT DEATHS	INFANT DEATH RATE <sup>1</sup>
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

<sup>1</sup> 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/ETHNICITY<sup>1</sup>**  
**CALIFORNIA 1990-1998**  
**(By Place of Residence)**

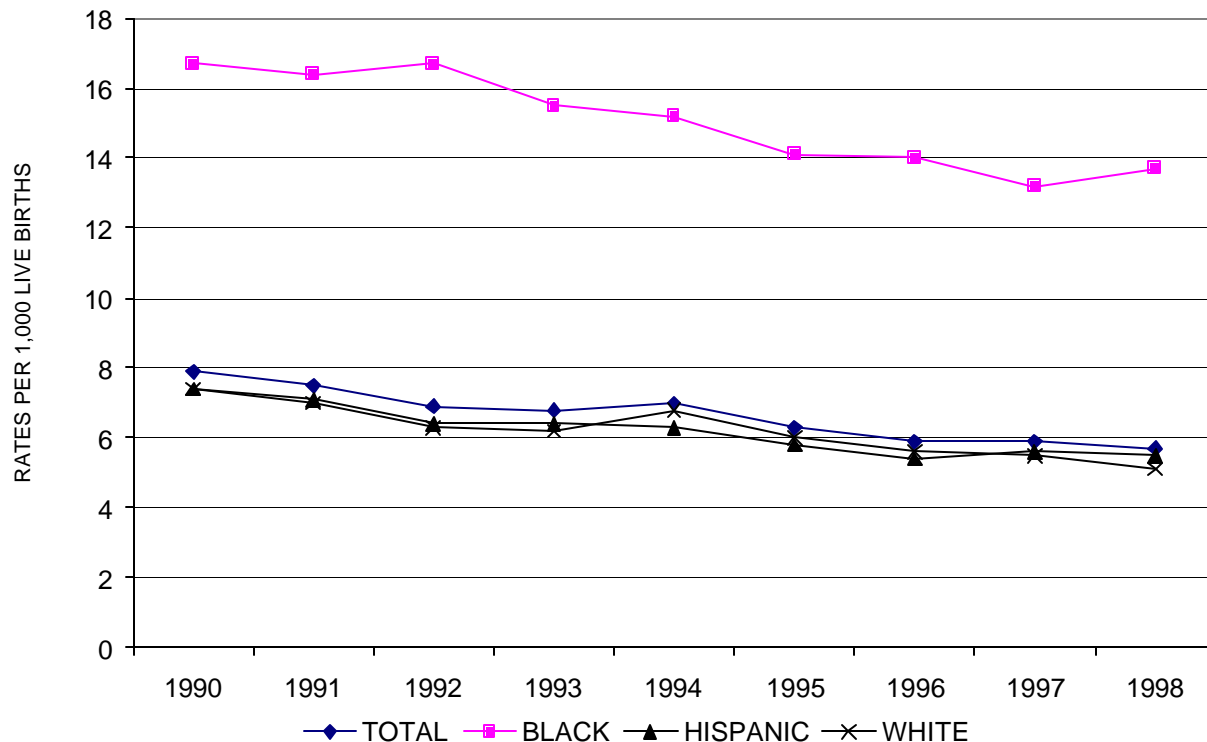
RACE/ ETHNICITY	INFANT DEATH RATES BY RACE/ETHNICITY <sup>1</sup>									INFANT DEATHS 1998
	1990	1991	1992	1993	1994	1995	1996	1997	1998	
TOTAL <sup>2</sup>	7.9	7.5	6.9	6.8	7.0	6.3	5.9	5.9	5.7	2,994
BLACK	16.7	16.4	16.7	15.5	15.2	14.1	14.0	13.2	13.7	481
HISPANIC	7.4	7.1	6.4	6.4	6.3	5.8	5.4	5.6	5.5	1,351
WHITE	7.4	7.0	6.3	6.2	6.8	6.0	5.6	5.5	5.1	906

<sup>1</sup> 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.

<sup>2</sup> Total includes all race groups (White, Black, Hispanic, Asian, Pacific Islander, American Indian, Other and Unknown race).

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

**FIGURE 1**  
**INFANT DEATH RATES BY RACE/ETHNICITY**  
**CALIFORNIA, 1990-1998**



Source: Table 2.

**TABLE 3**  
**INFANT DEATH RATES BY COUNTY OF RESIDENCE <sup>1</sup>**  
**CALIFORNIA, 1990-1998**

COUNTY	INFANT DEATHS PER 1,000 LIVE BIRTHS									INFANT DEATHS 1998
	1990	1991	1992	1993	1994	1995	1996	1997	1998	
CALIFORNIA	7.9	7.5	6.9	6.8	7.0	6.3	5.9	5.9	5.7	2,994
ALAMEDA	8.8	7.7	7.2	6.2	6.4	5.4	6.0	6.0	5.1	106
BERKELEY <sup>2</sup>	8.7	7.1	8.9	10.5	8.1	8.7	10.4	5.1	3.9 <sup>a</sup>	4
BUTTE	7.9	7.4	7.3	7.7	6.4	10.3	6.9	6.7	7.9	18
CONTRA COSTA	6.4	6.1	6.6	5.8	5.7	6.0	5.5	5.1	5.9	74
EL DORADO	8.5	3.6	7.9	4.5	8.9	3.5	6.0	1.8 <sup>a</sup>	3.6	6
FRESNO	8.5	9.6	9.5	7.4	9.3	8.3	7.9	8.4	6.5	93
HUMBOLDT	8.3	8.1	6.7	11.2	12.5	8.9	4.7	4.1	8.9	13
IMPERIAL	8.6	3.9	4.7	5.3	6.2	4.9	4.4	2.5	7.2	18
KERN	10.3	10.2	8.9	10.8	11.2	10.9	9.8	6.7	6.7	77
KINGS	12.3	7.9	7.8	6.5	9.0	6.1	11.5	5.8	7.9	17
LOS ANGELES	8.0	7.8	7.2	7.3	6.9	6.7	5.9	5.9	5.9	936
LONG BEACH <sup>2</sup>	8.7	8.7	4.9	8.2	9.3	8.1	4.9	4.4	7.1	60
PASADENA <sup>2</sup>	7.7	9.3	8.8	12.6	7.5	7.3	8.5	5.3	6.4	15
MADERA	3.3	4.1	6.0	8.0	8.2	7.0	6.5	4.0	6.3	13
MARIN	5.9	5.4	3.1	6.1	5.1	2.7	3.4	4.5	2.3	6
MENDOCINO	9.0	6.7	6.2	11.8	6.1	8.0	9.8	4.9 <sup>a</sup>	5.5	6
MERCED	7.6	9.7	7.3	5.9	7.2	8.2	7.2	6.9	6.2	22
MONTEREY	7.7	6.8	6.1	7.1	5.8	5.7	5.3	5.8	6.2	42
NAPA	6.7	5.2	2.6	7.0	6.0	5.5	4.6	3.3 <sup>a</sup>	3.4 <sup>a</sup>	5
ORANGE	7.8	6.1	5.4	5.9	6.0	5.6	4.4	4.4	4.4	205
PLACER	5.4	6.1	4.2	7.6	4.1	6.3	6.2	1.9 <sup>a</sup>	4.1	11
RIVERSIDE	8.8	8.8	8.4	7.6	8.4	7.1	6.4	6.0	7.5	175
SACRAMENTO	8.9	8.1	7.0	7.1	7.3	7.0	6.9	7.0	6.1	109
SAN BERNARDINO	9.9	9.3	8.6	7.9	7.9	7.7	7.1	8.3	7.5	213
SAN DIEGO	7.2	7.1	5.9	6.2	6.6	4.9	5.4	5.5	5.2	224
SAN FRANCISCO	7.2	6.5	7.2	5.0	8.2	4.3	4.8	4.5	5.0	41
SAN JOAQUIN	8.7	7.9	8.6	8.5	7.6	6.4	7.6	7.2	6.0	52
SAN LUIS OBISPO	8.6	4.3	6.8	7.5	7.1	3.8	4.4	6.0	5.9	14
SAN MATEO	6.1	6.4	5.2	4.0	3.2	5.1	4.0	5.1	4.3	44
SANTA BARBARA	6.7	7.4	5.0	6.4	5.0	6.7	3.7	4.5	5.7	33
SANTA CLARA	5.5	6.9	6.0	5.3	5.8	5.2	5.1	5.6	3.8	102
SANTA CRUZ	4.6	5.8	4.2	6.2	7.6	3.7	6.1	4.8	5.8	20
SHASTA	8.7	9.4	9.8	5.2	8.0	6.9	5.9	8.5	4.6	9
SOLANO	8.5	7.0	7.4	7.1	8.8	5.1	7.1	6.4	6.5	36
SONOMA	4.7	5.7	6.0	5.7	5.3	4.4	4.2	4.1	5.5	30
STANISLAUS	8.1	7.6	9.3	5.8	8.4	5.9	6.8	7.1	6.8	47
SUTTER	9.0	4.0	4.7	10.4	4.9	6.0	7.9	6.6	7.8	9
TULARE	7.7	6.8	6.2	5.8	7.1	5.7	6.1	6.1	6.8	47
VENTURA	7.6	6.9	5.8	5.5	4.8	5.4	5.0	7.5	5.6	65
YOLO	7.1	10.0	8.8	6.1	9.7	5.0	9.7	6.2	3.3	7

<sup>1</sup> Counties with 1,000 or more births in 1998.

<sup>2</sup> Berkeley, Long Beach and Pasadena are city health departments. City events are included in their respective county totals.

<sup>a</sup> Caution should be used when interpreting these rates because they are based on 5 or fewer events.

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