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DATA
SUMMARY
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This Data
Summary is
one of a
series of
Infant
Mortality
Reports.

Highlights

- **The 2000 infant mortality rate in California was unchanged from the 1999 rate of 5.4.**
- **California's infant mortality rate of 5.4 was below the U.S. preliminary rate of 6.9.**
- **The non-Hispanic Black infant mortality rate remained more than twice as high as the non-Hispanic White and Hispanic rates.**

CALIFORNIA'S INFANT MORTALITY RATE, 2000

By Sandy Ficenec

Introduction

The infant mortality rate (deaths among infants under one year old per 1,000 live births) continues to be one of the most widely used indicators of overall health status of a community. In the report Healthy People 2010 Objectives, the United States Department of Health and Human Services set an infant mortality rate of 4.5 as the target national objective rate to be met by the year 2010.¹ If California's infant mortality rate continues to decline at the rate it did during the last decade, California could meet the 2010 national objective.

California's Infant Mortality Rate

In 2000, there were a total of 2,884 infant deaths and 531,285 live births among California residents for an infant mortality rate of 5.4. Although the 2000 infant mortality rate was unchanged from 1999, the number of deaths increased slightly from 1999 (**Table 1**). During the decade between 1990 and 2000 the rate dropped 31.6 percent from 7.9 in 1990 to 5.4 in 1999 and 2000. California's infant mortality rate for 2000 was lower than the preliminary rate for the United States (6.9).²

California's Infant Mortality Rates By Race/Ethnicity³

Table 2 and **Figure 1** show the infant mortality rates by race/ethnicity.³ Between 1991 and 2000 the rates for the three race/ethnic groups have generally decreased. The rate for California's non-Hispanic Black population was 12.8 in 2000, a decrease of 0.8 percent from the 1999 rate of 12.9 and a decrease of 22 percent from the 1991 rate of 16.4. The infant mortality rate increased for California's Hispanic race/ethnic group, up 1.9 percent from 5.2 in 1999 to 5.3 in 2000 but was 25.4 percent lower than the 7.1 rate in 1991. The infant mortality rate for the non-Hispanic White group was unchanged from 4.8 in 1999 and down 31.4 percent from the 1991 rate of 7.0. The changes from 1999 to 2000 among the three race groups were not statistically significant

¹ U.S. Department of Health and Human Services, *Healthy People 2010 Objectives*, Volume II, January 2001.

² National Vital Statistics Reports, *Deaths: Preliminary Data for 2000*, DHHS Pub No. (PHS) 2001-1129, October 9, 2001; Vol. 49, No. 12.

³ In 2000, new race collection methods cause a slight discontinuity between White and Black infant mortality rates. See methodological Approach for details.

Reports from prior periods are available on this subject.

($p < .05$).⁴ Comparing the three race/ethnic groups, Non-Hispanic Whites and Hispanics continued to have mortality rates that were relatively similar and significantly below the rate for non-Hispanic Blacks. However, most infant deaths occurred among Hispanics (1,357 deaths, 47.1 percent) and non-Hispanic Whites (812 deaths, 28.2 percent).

County Infant Mortality Rates

Infant mortality rates for 38 of California's 58 counties are shown on **Table 3**. Infant mortality rates cannot be examined for other counties because they have fewer than the 1,000 live births needed to calculate reliable mortality rates. Even in some of the medium and large counties, the infant mortality rate can vary substantially from year to year. These 38 counties accounted for 98.8 percent of California's live births and 98.8 percent of the infant deaths in 2000.

For more Vital Statistics data, see the DHS Center for Health Statistics Home Page at:

www.dhs.ca.gov/org/hisp/chs/chisindex.htm

In 2000, the county infant mortality rates varied from a high of 9.5 in Yuba County to a low of 1.8 in El Dorado County. Fifteen counties had a lower rate in 2000 compared to 1999, and twenty-one had a higher rate. For two counties the rate was unchanged from 1999 to 2000. Statistical tests applied to the 2000 and 1999 infant mortality rates in each county revealed San Joaquin county had a statistically significant increase ($p < .05$),⁴ all others were not statistically significant.

Table 3 also shows the infant mortality rates for two city health departments. The infant mortality rates increased between 1999 and 2000 for both Long Beach and Pasadena. These changes were not statistically significant. The infant mortality rate is not shown for Berkeley because it had fewer than 1,000 live births.

Methodological Approach

Beginning with the 2000 birth and death data, race reporting changed to allow for the reporting of up to three races. In 2000, 9,870, or 1.9 percent of all live births had multi-race (two or more races) mothers and 84, or 2.9 percent of the infant deaths were multiple-race decedents. Because race groups are not strictly comparable to those of prior years, trends by race/ethnicity should be viewed with caution.

Table 2 provides infant mortality rates for decedents who were Hispanic (of any race or races), non-Hispanic Black and non-Hispanic White. These rates are calculated with respective denominators consisting of births to mothers who were Hispanic (of any race or races), non-Hispanic Black, and non-Hispanic White. For 2000 data, White and Black decedents and mothers were single race, White and Black only. Rates were not calculated for additional race/ethnic groups due to the unsatisfactory reporting of some races on death certificates, and the unstable rates that result from small numbers of events. Birth Cohort files should be used for calculating mortality rates for other groups. "Total" infant mortality rates include all infant deaths per 1,000 live births, irrespective of race or Hispanic origin.

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

TABLE 1
NUMBER AND RATE OF INFANT DEATHS
CALIFORNIA, 1950 - 2000
(By Place of Residence)

YEAR	NUMBER OF INFANT DEATHS	INFANT MORTALITY RATE ¹
2000	2,884	5.4
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 MORTALITY RATES BY RACE/ETHNICITY ¹
CALIFORNIA, 1991-2000
(By Place of Residence)

RACE/ ETHNICITY	INFANT MORTALITY RATES BY RACE/ETHNICITY ¹										INFANT DEATHS 2000 ^a
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000 ^a	
TOTAL ²	7.5	6.9	6.8	7.0	6.3	5.9	5.9	5.7	5.4	5.4	2,884
HISPANIC	7.1	6.4	6.4	6.3	5.8	5.4	5.6	5.5	5.2	5.3	1,357
non-HISPANIC BLACK	16.4	16.7	15.5	15.2	14.1	14.0	13.2	13.7	12.9	12.8	413
non-HISPANIC WHITE	7.0	6.3	6.2	6.8	6.0	5.6	5.5	5.1	4.8	4.8	812

¹ Race/ethnicity of mother. All mothers of Spanish/Hispanic origin regardless of race are included in the "Hispanic" group.

^a Beginning with the 2000 birth and death data, race reporting changed to allow for the reporting of up to three races.

In 2000, Mothers in the "White" and "Black" groups are non-Hispanic and reported the single race "White" or "Black" only.

This change causes a slight discontinuity between 2000 and prior years for Black and White infants.

² Total Includes all race groups (White, Black, Hispanic, Asian, Pacific Islander, American Indian, Other, Two or more races and Unknown race).

Note: Rates are per 1,000 live births.

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

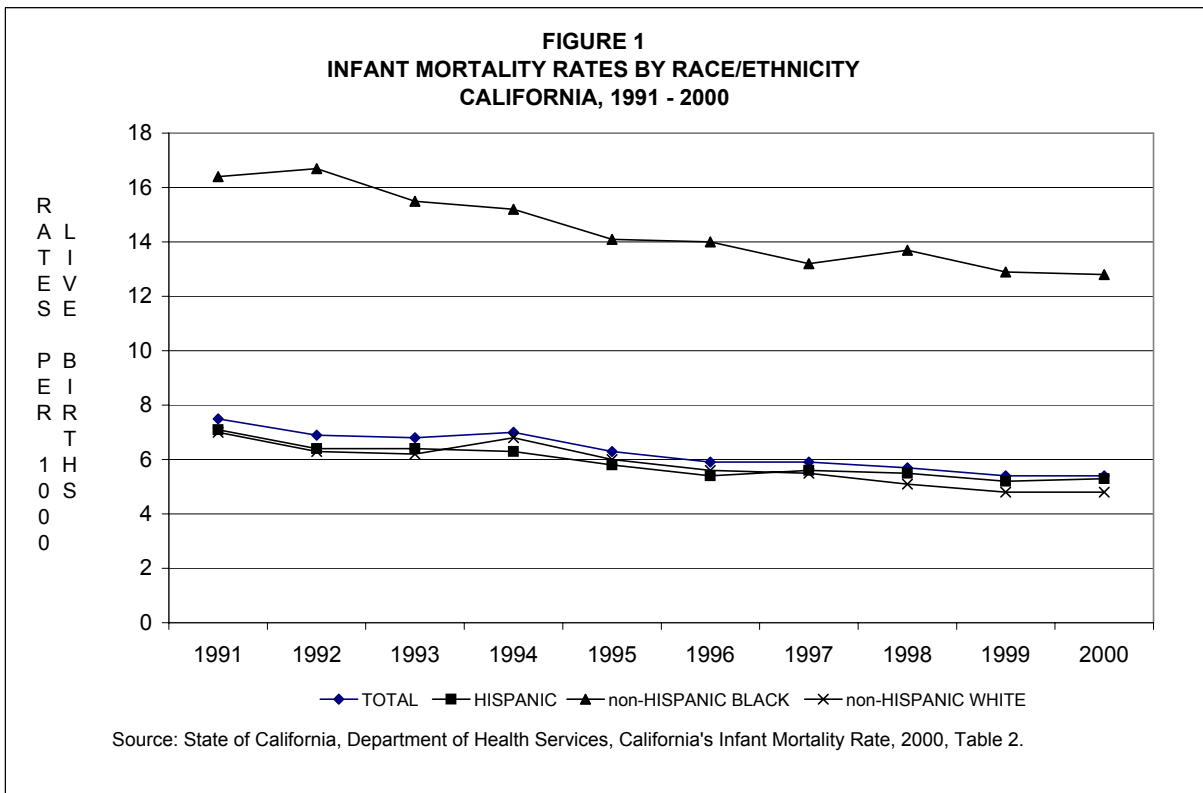


TABLE 3
INFANT MORTALITY RATES BY COUNTY OF RESIDENCE¹
CALIFORNIA, 1991 - 2000

COUNTY	INFANT DEATHS PER 1,000 LIVE BIRTHS										INFANT DEATHS 2000
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
CALIFORNIA	7.5	6.9	6.8	7.0	6.3	5.9	5.9	5.7	5.4	5.4	2,884
ALAMEDA	7.7	7.2	6.2	6.4	5.4	6.0	6.0	5.1	5.3	4.6	103
BUTTE	7.4	7.3	7.7	6.4	10.3	6.9	6.7	7.9	3.1	6.4	14
CONTRA COSTA	6.1	6.6	5.8	5.7	6.0	5.5	5.1	5.9	5.2	4.8	64
EL DORADO	3.6	7.9	4.5	8.9	3.5	6.0	1.8 ^a	3.6	4.9	1.8 ^a	3
FRESNO	9.6	9.5	7.4	9.3	8.3	7.9	8.4	6.5	6.1	7.2	102
HUMBOLDT	8.1	6.7	11.2	12.5	8.9	4.7	4.1	8.9	4.1	7.3	10
IMPERIAL	3.9	4.7	5.3	6.2	4.9	4.4	2.5	7.2	4.9	4.7	12
KERN	10.2	8.9	10.8	11.2	10.9	9.8	6.7	6.7	6.9	7.4	86
KINGS	7.9	7.8	6.5	9.0	6.1	11.5	5.8	7.9	7.4	6.0	13
LOS ANGELES	7.8	7.2	7.3	6.9	6.7	5.9	5.9	5.9	5.4	4.9	777
LONG BEACH ²	8.7	4.9	8.2	9.3	8.1	4.9	4.4	7.1	6.1	6.7	56
PASADENA ²	9.3	8.8	12.6	7.5	7.3	8.5	5.3	6.4	7.1	7.3	17
MADERA	4.1	6.0	8.0	8.2	7.0	6.5	4.0	6.3	5.1	5.7	12
MARIN	5.4	3.1	6.1	5.1	2.7	3.4	4.5	2.3	2.6	3.5	10
MENDOCINO	6.7	6.2	11.8	6.1	8.0	9.8	4.9 ^a	5.5	4.0 ^a	8.3	9
MERCED	9.7	7.3	5.9	7.2	8.2	7.2	6.9	6.2	6.6	4.9	19
MONTEREY	6.8	6.1	7.1	5.8	5.7	5.3	5.8	6.2	4.8	5.7	39
NAPA	5.2	2.6	7.0	6.0	5.5	4.6	3.3 ^a	3.4 ^a	1.3 ^a	4.0	6
ORANGE	6.1	5.4	5.9	6.0	5.6	4.4	4.4	4.4	4.4	4.9	231
PLACER	6.1	4.2	7.6	4.1	6.3	6.2	1.9 ^a	4.1	6.1	7.2	22
RIVERSIDE	8.8	8.4	7.6	8.4	7.1	6.4	6.0	7.5	6.8	6.7	167
SACRAMENTO	8.1	7.0	7.1	7.3	7.0	6.9	7.0	6.1	6.2	5.8	105
SAN BERNARDINO	9.3	8.6	7.9	7.9	7.7	7.1	8.3	7.5	7.6	7.0	201
SAN DIEGO	7.1	5.9	6.2	6.6	4.9	5.4	5.5	5.2	5.2	5.9	263
SAN FRANCISCO	6.5	7.2	5.0	8.2	4.3	4.8	4.5	5.0	3.8	4.0	35
SAN JOAQUIN	7.9	8.6	8.5	7.6	6.4	7.6	7.2	6.0	4.6	6.9	66
SAN LUIS OBISPO	4.3	6.8	7.5	7.1	3.8	4.4	6.0	5.9	3.0	4.5	11
SAN MATEO	6.4	5.2	4.0	3.2	5.1	4.0	5.1	4.3	3.6	5.3	55
SANTA BARBARA	7.4	5.0	6.4	5.0	6.7	3.7	4.5	5.7	4.7	5.6	32
SANTA CLARA	6.9	6.0	5.3	5.8	5.2	5.1	5.6	3.8	4.8	4.5	123
SANTA CRUZ	5.8	4.2	6.2	7.6	3.7	6.1	4.8	5.8	4.9	4.6	16
SHASTA	9.4	9.8	5.2	8.0	6.9	5.9	8.5	4.6	6.0	6.0	11
SOLANO	7.0	7.4	7.1	8.8	5.1	7.1	6.4	6.5	5.6	4.6	27
SONOMA	5.7	6.0	5.7	5.3	4.4	4.2	4.1	5.5	5.9	4.8	27
STANISLAUS	7.6	9.3	5.8	8.4	5.9	6.8	7.1	6.8	7.0	7.0	51
SUTTER	4.0	4.7	10.4	4.9	6.0	7.9	6.6	7.8	3.5 ^a	6.0	7
TULARE	6.8	6.2	5.8	7.1	5.7	6.1	6.1	6.8	5.0	6.6	48
VENTURA	6.9	5.8	5.5	4.8	5.4	5.0	7.5	5.6	5.0	4.1	48
YOLO	10.0	8.8	6.1	9.7	5.0	9.7	6.2	3.3	3.7	6.2	14
YUBA	10.0	5.2	6.3	8.9	8.4	4.6	8.6	-	7.0	9.5	10

¹ Counties with 1,000 or more births in 2000.

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.