



Minority Health Profile

Maternal and Infant Health

by Race and Ethnicity

Center for Vital and Health Statistics
December, 2003

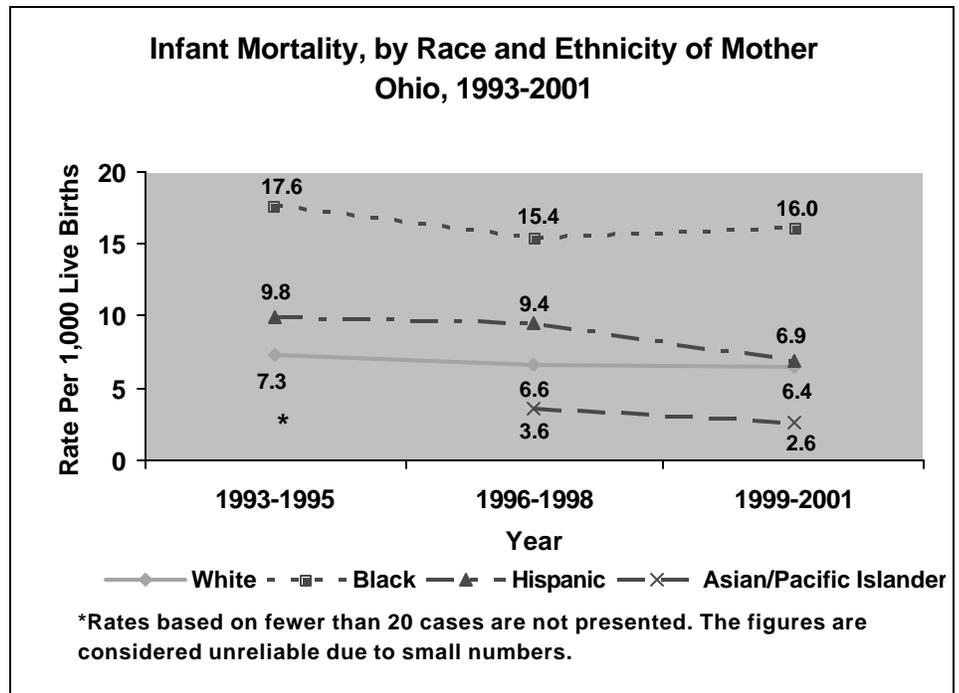
Data Bulletin

KEY FINDINGS

- During the 1999-2001 time period, black female Ohioans had rates of infant mortality more than double those of whites, Hispanics and Asian/Pacific Islanders. Black females also had the highest percent of preterm births, low birth weight babies and lack of first trimester prenatal care compared to white, Asian/Pacific Islander, American Indian/Alaska natives and Hispanic Ohioans from 1999-2001. During this same time period, black women were less likely to smoke during pregnancy compared to their white and American Indian/Alaska native counterparts. When examining trends from 1993-2001, black women had a decrease in infant mortality, sudden infant death syndrome, preterm births, low birth weight, lack of first trimester prenatal care and smoking during pregnancy. In contrast, the maternal mortality rates for blacks increased by more than 25 percent from the 1990-1995 time period to the 1996-2001 time period.
- Hispanics had the greatest decrease in infant mortality from the 1993-1995 time period to the 1999-2001 time period compared to other racial/ethnic groups in Ohio. Trend analysis showed that the percent of preterm births, low-birth-weight infants, and lack of first trimester prenatal care remained relatively stable for Hispanics for the 1993-2001 time period, while smoking during pregnancy for the same time period decreased.
- Asian/Pacific Islanders had the lowest percent of smoking during pregnancy in Ohio compared to all other racial/ethnic groups from 1993-2001, and the lowest rate of infant mortality from 1996-2001. During the 1999-2001 time period, Asian/Pacific Islanders had the lowest percentage of pre-term births.
- American Indian/Alaska native Ohioans consistently had the highest percentage of smoking (more than 30 percent) during pregnancy, more than 10 percent greater than white women who had the second-highest smoking rate during pregnancy. American Indian/Alaska native women had the second-highest percent of preterm births and low-birth-weight babies during the 1999-2001 time period. Trend data indicated an 18.4 percent drop from the 1993-1995 time period to the 1999-2001 time period for American Indian/Alaska native females who did not receive first trimester prenatal care.
- While many of the data highlights presented in this bulletin reflect national trends in infant/maternal health, this bulletin does not examine a number of areas that may be vital to understanding differences in racial and ethnic birth outcomes. Factors that influence maternal/infant health can include, but are not limited to areas such as plurality of birth; age of mother; income; education; behavioral risk factors; social support and social networks; access to care; insurance; occupational risk factors; housing; and neighborhood safety to name several. It is important to attempt to sort through the complexity of these factors to truly understand the degree to which different risks contribute to increased mortality rates and poorer pregnancy outcomes.

Infant Mortality

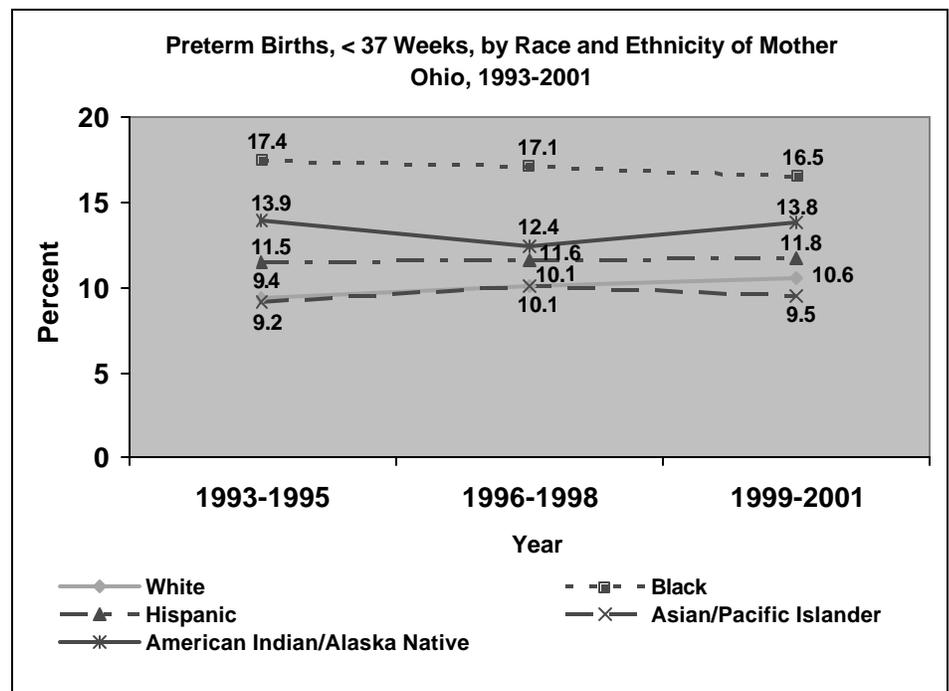
- The rate of infant mortality for black Ohio infants was more than twice the rate of white infants for each three year period examined from 1993-2001.
- Asian/Pacific Islanders consistently had the lowest infant mortality rate, followed by whites and Hispanics.
- Hispanics had the largest decrease in infant mortality from the 1993-1995 time period to the 1999-2001 time period (29.6 percent) followed by whites (12.3 percent) and blacks (9.1 percent).



- The infant mortality rate for blacks rose by 3.9 percent from the 1996-1998 time period to the 1999-2001 time period, while decreasing for Asian/Pacific Islanders (27.8 percent).

Preterm Births

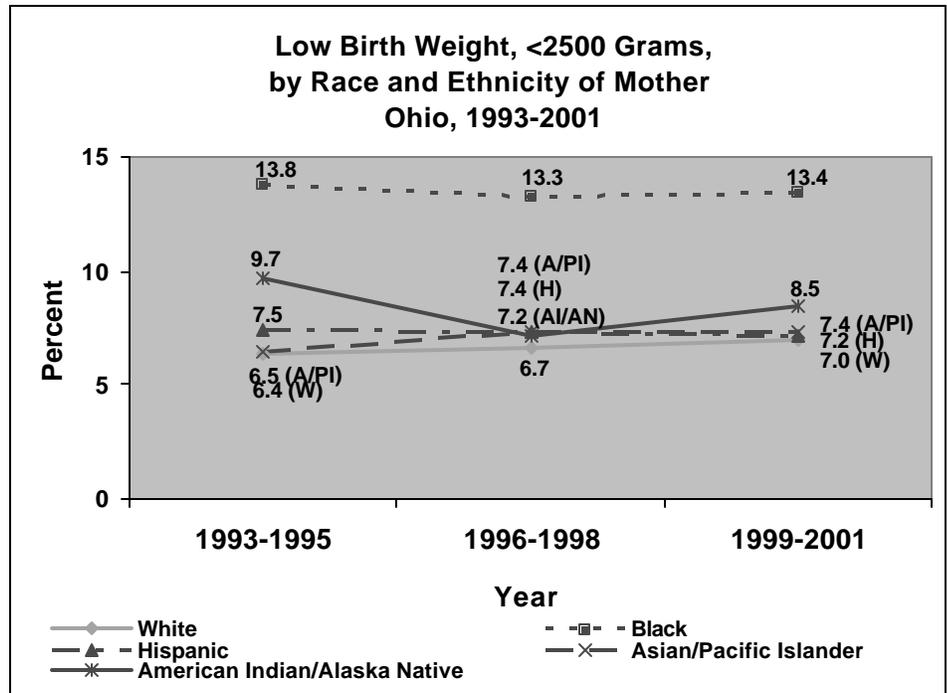
- During the 1999-2001 time period, blacks had the highest percent of preterm births (16.5 percent) followed by American Indian/Alaska natives (13.8 percent), Hispanics (11.8 percent), whites (10.6 percent) and Asian/Pacific Islanders (9.5 percent).
- Although the percent of preterm births remained the highest for blacks in 1999-2001, this was the only racial/ethnic group with a decrease (5.2 percent) in preterm births from the 1993-1995 time period.



- Whites had the largest increase in the number of preterm births (12.8 percent) from 1993-1995 to 1999-2001 followed by Asian/Pacific Islanders (3.3 percent), Hispanics (2.6 percent) and American Indian/Alaska natives (0.7 percent).

Low Birth Weight

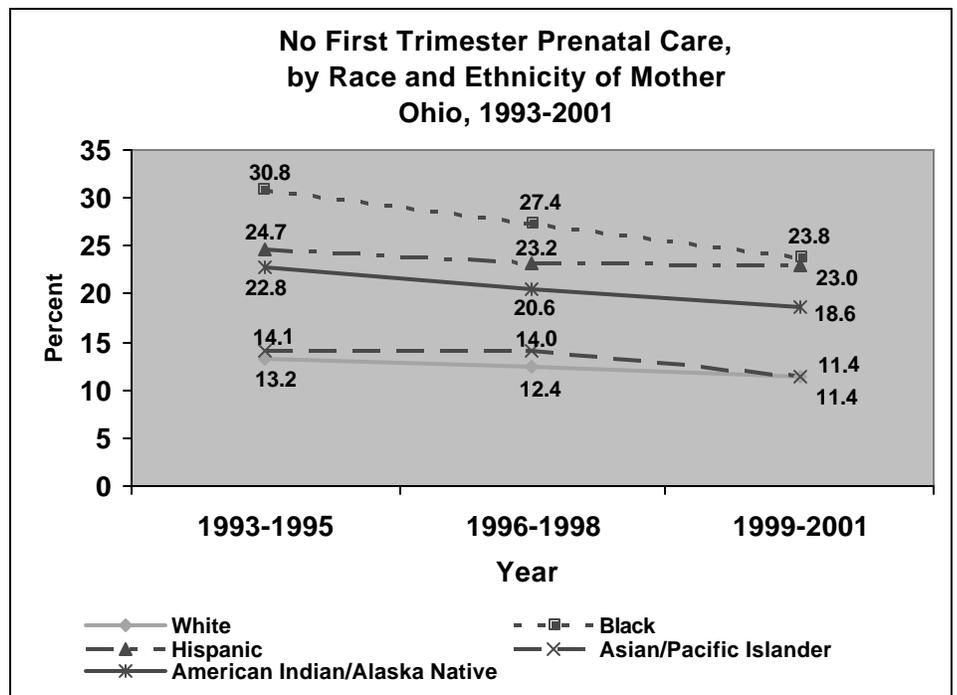
- The percent of low-birth-weight infants (<2,500 grams) was nearly twice as high for blacks when compared to whites, Hispanics and Asian/Pacific Islanders for each time period examined.
- Although the percent of low-birth-weight (<2,500 grams) infants remained the highest for blacks in 1999-2001, there was a slight decrease of 2.9 percent from the 1993-1995 time period. Hispanics had a decrease of 4 percent for low-birth-weight infants from 1993-1995 to 1999-2001 while American Indian/Alaska natives had a decrease of 12.4 percent.



- Asian/Pacific Islanders and whites both had increases in the number of low-birth-weight infants (<2,500 grams) from 1993-1995 to 1999-2001 with Asian/Pacific Islanders experiencing a 13.8 percent increase and whites a 9.4 percent increase.

Prenatal Care

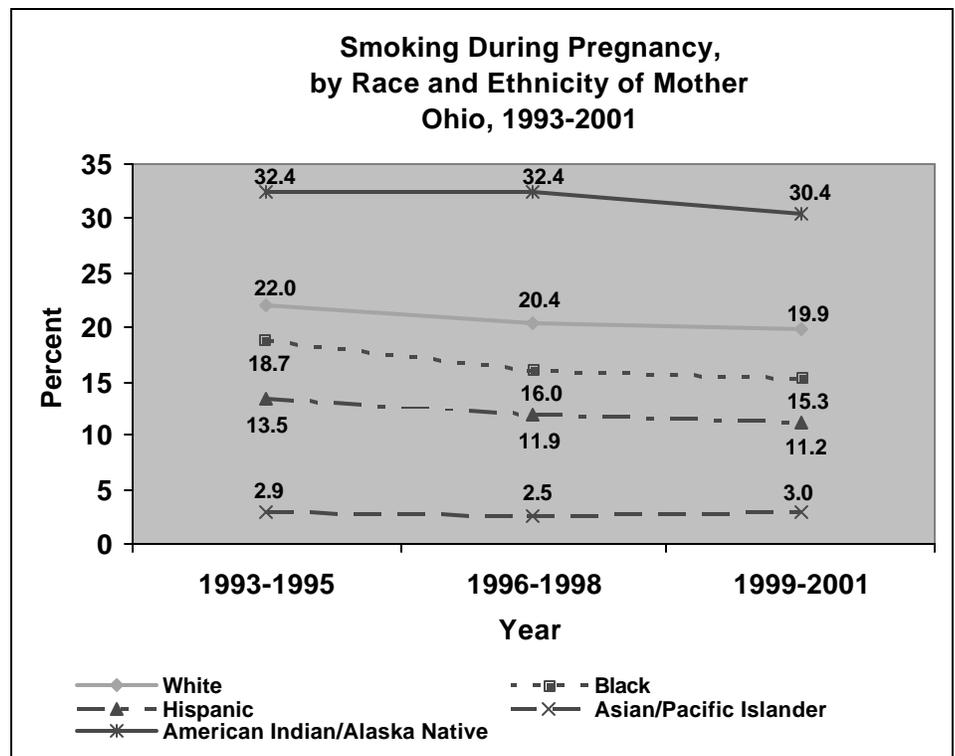
- Every racial and ethnic group had a decrease in the number of females who did not receive first trimester prenatal care from the 1993-1995 time period to the 1999-2001 time period.
- During the 1999-2001 time period, black females had the highest percent of no first trimester prenatal care (23.8 percent) followed by Hispanics (23 percent), American Indian / Alaska natives (18.6 percent), whites and Asian/Pacific Islanders (both 11.4 percent).



- Although the percent of no first trimester prenatal care remained the highest for black females in 1999-2001, that rate had decreased by 22.7 percent from the 1993-1995 time period. The rate also decreased by 19.1 percent for Asian/Pacific Islanders, 18.4 percent for American Indian/Alaska natives, 13.6 percent for whites and 6.9 percent for Hispanics.

Smoking During Pregnancy

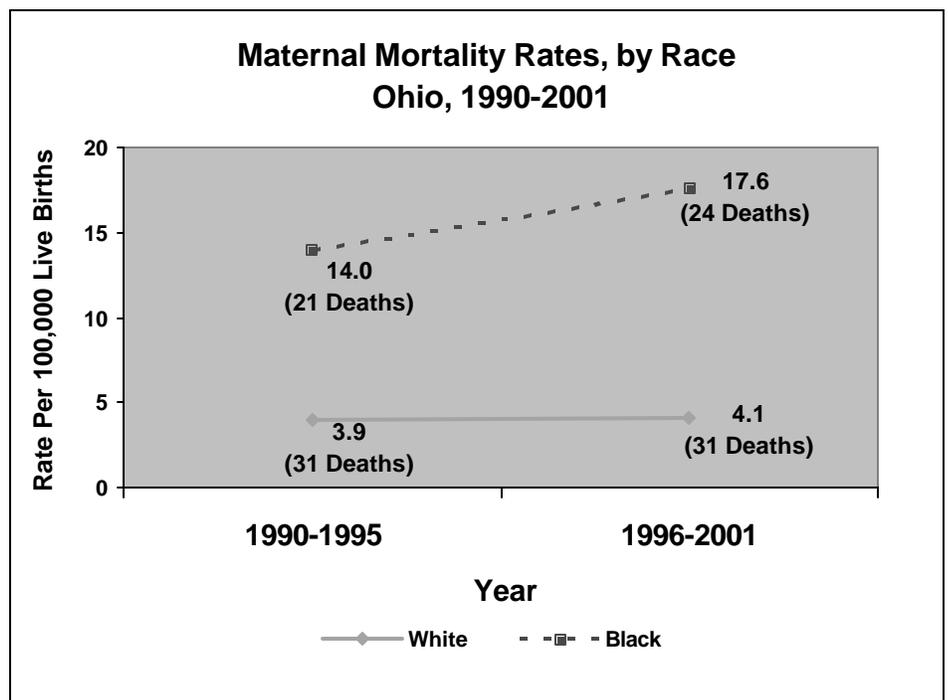
- During the 1999-2001 time period, American Indian/Alaska natives had the highest percent of smoking during pregnancy (30.4 percent) followed by whites (19.9 percent), blacks (15.3 percent), Hispanics (11.2 percent) and Asian/Pacific Islanders (3 percent).
- The majority of racial/ethnic groups in Ohio had decreases in smoking during pregnancy from the 1993-1995 time period to the 1999-2001 time period. Black females had the largest decrease in smoking during pregnancy for this time period (18.2 percent) followed by Hispanics (17 percent), whites (9.5 percent) and American Indian/Alaska natives (6.2 percent).



- Although Asian/Pacific Islanders consistently had the lowest percent of smoking during pregnancy compared to other racial/ethnic groups in Ohio, this group had the only increase in smoking during pregnancy from 1993-1995 to 1999-2001 (3.4 percent).

Maternal Mortality

- The maternal mortality rate for black Ohio females rose by 25.7 percent from the 1990-1995 time period to the 1996-2001 time period, and by 5.1 percent for white females.
- Black female Ohioans had a maternal mortality rate more than three times greater than white females from 1990-1995 and more than four times greater than white females from 1996-2001.



Leading Causes of Infant Death

Infant Deaths and Percent of Total Infant Deaths for the Five Leading Causes of Death White Infants, 1993 to 2001

Cause of Death	1993-1995		1996-1998		1999-2001	
	Number of Deaths (Rank)	Percent of Total Deaths	Number of Deaths (Rank)	Percent of Total Deaths	Number of Deaths (Rank)	Percent of Total Deaths
Congenital Malformations	700 (1)	24.5	595 (1)	23.6	518 (1)	21.4
Low Birth Weight	452 (2)	15.8	446 (2)	17.7	437 (2)	18.0
Sudden Infant Death Syndrome	399 (3)	14.0	294 (3)	11.6	228 (3)	9.4
Respiratory Distress of Newborn	175 (4)	6.1	123 (5)	4.9	---	---
Maternal Complications	121 (5)	4.2	139 (4)	5.5	154 (4)	6.3
Cord and Placental Complications	---	---	---	---	114 (5)	4.7
All Other Causes	1,006	35.3	928	36.8	975	40.2
All Causes	2,853	100.0	2,525	100.0	2,426	100.0

- Congenital malformations were the leading cause of death for white infants during the 1999-2001 time period, accounting for more than 21 percent of white infant deaths. Low birth weight was the second-leading cause of death in white infants (18 percent) followed by sudden infant death syndrome (9.4 percent), maternal complications (6.3 percent) and cord/placental complications (4.7 percent).
- The three leading causes of infant death remained the same for white infants during all three time periods examined. During the 1999-2001 time period, respiratory distress of newborn was replaced by cord/placental complications as a top five cause of infant deaths in whites.

Infant Deaths and Percent of Total Infant Deaths for the Five Leading Causes of Death Black Infants, 1993 to 2001

Cause of Death	1993-1995		1996-1998		1999-2001	
	Number of Deaths (Rank)	Percent of Total Deaths	Number of Deaths (Rank)	Percent of Total Deaths	Number of Deaths (Rank)	Percent of Total Deaths
Low Birth Weight	306 (1)	24.1	263 (1)	25.4	298 (1)	26.9
Sudden Infant Death Syndrome	204 (2)	16.1	146 (2)	14.1	95 (3)	8.6
Congenital Malformations	156 (3)	12.3	130 (3)	12.5	126 (2)	11.4
Maternal Complications	87 (4)	6.9	74 (4)	7.1	93 (4)	8.4
Respiratory Distress of Newborn	65 (5)	5.1	---	---	---	---
Cord and Placental Complications	---	---	47 (5)	4.5	58 (5)	5.2
All Other Causes	450	35.5	377	36.4	439	39.6
All Causes	1,268	100.0	1,037	100.0	1,109	100.0

- Low birth weight was the leading cause of death for black infants in 1999-2001, accounting for more than 26 percent of black infant deaths. Congenital malformations were the second-leading cause of death in black infants (11.4 percent) followed by sudden infant death syndrome (8.6 percent), maternal complications (8.4 percent) and cord/placental complications (5.2 percent).
- The three leading causes of infant death remained the same for black infants during the 1993-1995 and 1996-1998 time periods, with low birth weight the leading cause, followed by sudden infant death syndrome and congenital malformations. During the 1999-2001 time period, sudden infant death syndrome dropped from the second-leading cause of infant deaths in blacks to the third-leading cause.

NOTES

All of the data presented in this bulletin were obtained from Ohio Department of Health birth and death certificates for calendar years 1993-2001.

For this data bulletin, we have chosen to focus on key areas of maternal and infant health. Lack of reported disparity in maternal/infant health does not imply that any racial or ethnic Ohio group is good relative to national or other standards. In cases where the racial/ethnic population is particularly small in the state (i.e. American Indian/Alaska Native), the racial/ethnic group may not be representative of that group nationwide. The data presented in this bulletin did not test for statistically significant differences between groups.

It is important to note that reporting of racial and ethnic status is subject to misclassification. Particularly in the area of mortality, information is often reported by someone other than the individual. In the cases of infant data related to pregnancy, the information is obtained from the birth certificate, which assigns race and ethnicity solely based on the race and ethnicity of the mother. For these reasons, combined with small numbers for Ohio, we did not report further breakout of rates and percents for Asian/Pacific Islanders and Hispanics by sub-groups.

Mortality data presented in this bulletin is calendar year specific. The data does not attempt to link information from the death certificate to information from the birth certificate for each infant less than 1 year of age. It is possible that race/ethnicity information could vary on the same infant from the birth to the death certificate.

Infant death is defined as the death of a live-born infant occurring within the first year of life.

Maternal deaths are those for which the certifying physician has designated a maternal condition as the underlying cause of death.

All calculated rates are based on populations enumerated in the 2000 Census. Comparisons with mortality data calculated with the 1990 population standard should not be utilized.

Based on work from the National Center for Health Statistics and the Census Bureau, along with the Census Bureau¹, Census 2000 respondents that identified themselves as being of an "other" race or of multiple races were assigned (bridged) to one of the following four race categories specified under the 1997 standards: White, Black, American Indian/Eskimo/Aleut and Asian/Pacific Islander. As in prior years, there was also a separate question to assess ethnicity as either Hispanic or non-Hispanic. Hispanics may be of any race.

Recommendations from the National Center for Health Statistics^{2,3} and the Family Health Outcomes Project⁴ were followed to produce the Ohio Maternal/infant mortality results by race and ethnicity. These recommendations included the following:

- In cases where there were fewer than 20 deaths, rates are not presented. When rates are based on small numbers or events, random error can affect the usefulness of the data and associated confidence intervals can be relatively wide.
- In order to counteract the random error for small numbers (numerator less than 20); multiple year data was utilized to obtain mortality rates. Three years of mortality data were combined to allow calculation of additional death rates for minority groups such as Hispanics and Asian/Pacific Islanders.
- Mortality trends by race were presented by combining three years of mortality data, calculating a mortality rate, and comparing the rates over distinct time periods (i.e. 1993-1995, 1996-1998 and 1999-2001).

REFERENCES USED IN THIS DATA BULLETIN

¹U.S. Census Populations With Bridged Race Categories 2000, National Center for Health Statistics.

²Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National vital statistics reports; vol 47 no.3. Hyattsville, Maryland: National Center for Health Statistics. 1998.

³Hoyert DL, Arias E, Smith BL, Murphy SL, Kochanek KD. Deaths: Final Data for 1999. National vital statistics reports; vol 49 no 8. Hyattsville, Maryland: National Center for Health Statistics, 2001.

⁴McCandless RR, Oliva G. Guidelines for statistical analysis of public health data with attention to small numbers. Family Health Outcomes Project at the University of California, San Francisco, 2002.