

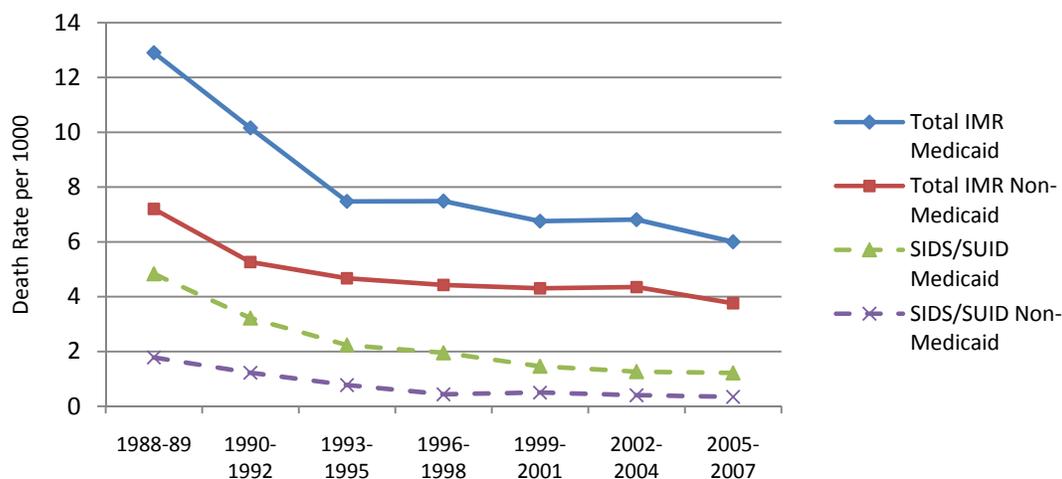
Infant Mortality and SIDS/SUID

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Infant mortality is often used as a standard measure of a population's health. The leading causes of infant death in Washington include birth defects, SIDS (Sudden Infant Death Syndrome), and disorders related to prematurity and low birth weight. A number of factors contributed to improvements in infant mortality in Washington in the 1990s and early 2000s: implementation of the First Steps Program in 1989; new treatments for lung disease associated with prematurity; and the Back to Sleep media campaign which has sought to reduce rates of SIDS by telling mothers to place their babies on their backs for sleep.

In Washington State, the rates of total infant deaths and deaths due to SIDS/SUID (included in the total Infant Mortality Rate) have both decreased dramatically from 1988-89 to 2005-07.

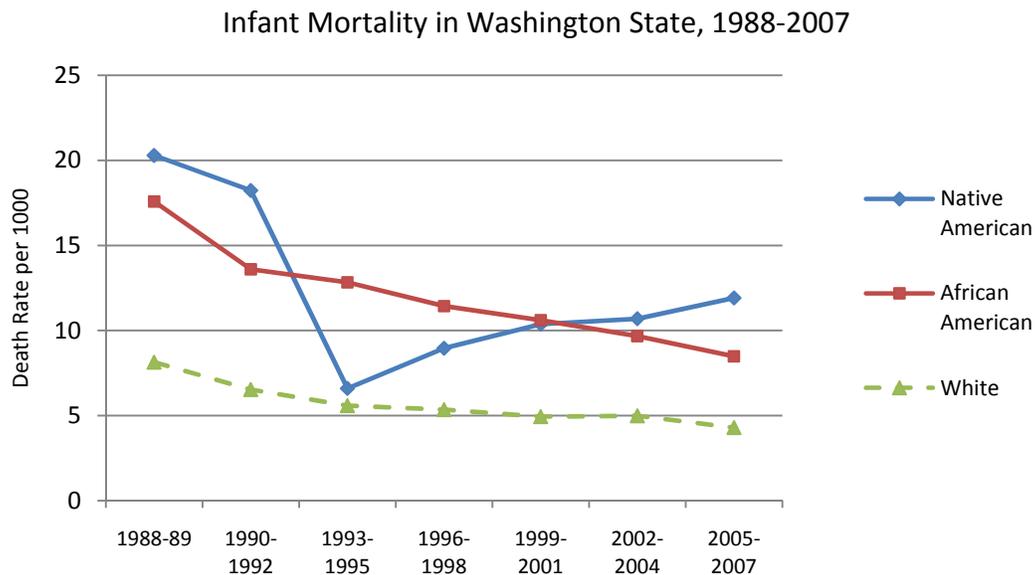


- Total infant mortality decreased from 8.7 per 1000 in 1988-89 to 4.8 per 1000 in 2005-7, with a greater than 50% decrease for Medicaid infants (from 12.9 per 1000 in 1988-89 to 6.0 in 2005-7).
- The rate of SIDS/SUID decreased from 1.8 per 1000 in 1988-89 to 0.8 per 1000 in 2005-7—representing a decrease of 70%. Among Medicaid infants, the rate of SIDS/SUID decreased by 75%, from 4.8 per 1000 in 1988-89 to 1.2 per 1000 in 2005-7.
- For total infant deaths and deaths from SIDS/SUID, rates for Medicaid infants remain two to four times higher than those for non-Medicaid infants.



Infant Mortality and Race/Ethnicity

Disparities in the health of African American and Native American infants, as reflected by infant mortality and SIDS rates, are well recognized both in Washington State and across the United States. Poverty is an important risk factor for poor health outcomes, and in Washington as in many other parts of the U.S., African Americans and Native Americans are financially less well off than whites. Pregnant women with family incomes at or below 185% of the Federal Poverty Level are eligible for Washington’s First Steps program. Among women who gave birth in 2008, the proportions of Native Americans and African Americans on First Steps, 78.1% and 68.7%, respectively, were about double the proportion of white women, 37.6%. On the other hand, the highest proportion of pregnant women on Medicaid (80.4%) occurs among Hispanic women, and this group has a rate of infant mortality (4.4 per 1000) nearly as low as that for white infants (4.3 per 1000).



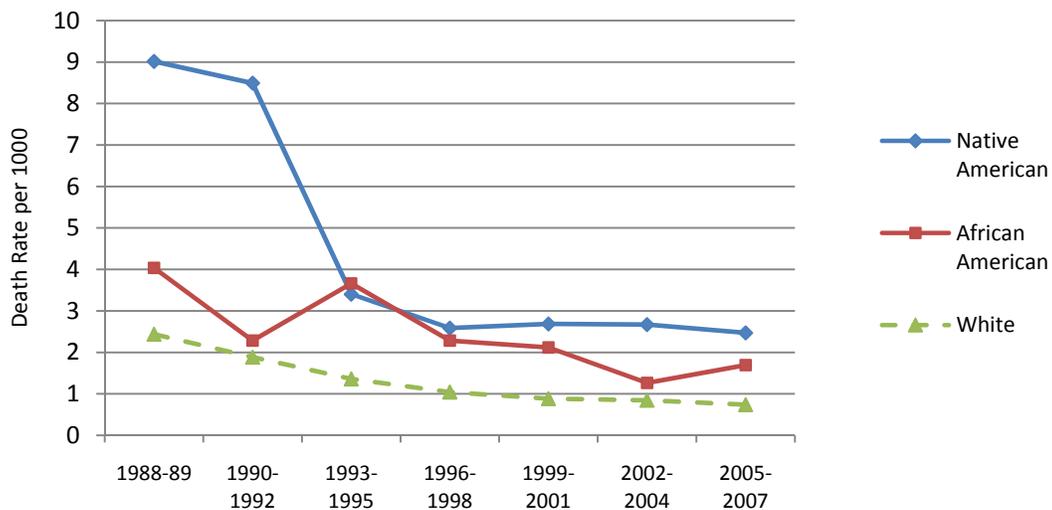
- For white infants, infant mortality steadily decreased from 8.1 per 1000 in 1988-89 to 4.3 per 1000 in 2005-7, representing a decrease of 47%.
- For African Americans, the decrease in infant mortality was somewhat greater (52%), from 17.6 per 1000 in 1988-89 to 8.5 in 2005-7. Among Native Americans, after an encouraging yet unexplained decrease in infant mortality in 1993-5, infant mortality has increased steadily, though the 2005-7 level (11.9 per 1000) remains significantly lower than the rate in 1988-89 (20.3 per 1000).
- Causes of infant deaths may suggest potential interventions to reduce these disparities. By combining deaths in 2000-07, we were able to identify specific causes of death and compare their contributions to the disparities. For African Americans, with an overall infant death rate during these years 1.9 times greater than that for white infants, the causes with the greatest disparities were complications of pregnancy and delivery, prematurity and low birth weight, and digestive system problems, each with a rate nearly or greater than three times that for white infants. For Native Americans, with an overall infant death rate during these years 2.3 times greater than that for white infants, the causes with the greatest disparities were injuries and accidents (5.4 times greater), ill-defined and unknown causes (5.0 times higher), infectious disease (4.0 times higher), and SIDS (3.0 times higher). (All the listed death causes had statistically significant differences compared to whites.)

SIDS/SUID and Race/Ethnicity

SIDS (Sudden Infant Death Syndrome) is defined as the sudden death of an infant under one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history (Willinger et al., 1991). In some cases, when all the criteria for SIDS have not been met, the cause of death may be listed as SUID (Sudden Unexpected Infant Death). In this report, these two causes of death have been combined.

No single factor or condition has been identified as the cause of SIDS. A number of risk factors have been identified: prone or side sleeping position, infection, parental smoking, low birth weight, African American, and Native American race/ethnicity. Until SIDS/SUID is better understood, the best strategy for reducing SIDS/SUID deaths is to reduce exposure to modifiable risk factors. This is the basis for the Back to Sleep campaign, which emphasizes putting babies on their backs to sleep, providing a firm, flat sleeping surface, and avoiding overheating and exposure to tobacco smoke.

SIDS/SUID Death Rates in Washington State, 1988-2007



- For white infants, deaths from SIDS/SUID steadily decreased from 2.4 per 1000 in 1988-89 to 0.7 per 1000 in 2005-7, representing a decrease of 70%.
- For African Americans, the decrease in SIDS/SUID was somewhat smaller (58%), from 4.0 per 1000 in 1988-89 to 1.7 per 1000 in 2005-7. For Native Americans, death rates from SIDS/SUID have steadily decreased, after an especially steep decline from 1988-89, from 9.0 in 1988-89 to 2.5 in 2005-7, a decrease of 72%.
- For African Americans and Native Americans, rates of SIDS/SUID remain two to three times greater than the rate for white infants. In 2005-7, the rate of SIDS/SUID for African Americans was 2.3 times greater than that for white infants. In 2005-7, the rate of SIDS/SUID for Native Americans was 3.3 times greater than that for white infants.
- SIDS/SUID rates for African American infants were at their lowest in 2002-2004, the same time that DOH and DSHS conducted targeted interventions to improve messaging about safe sleep position in the African American community.

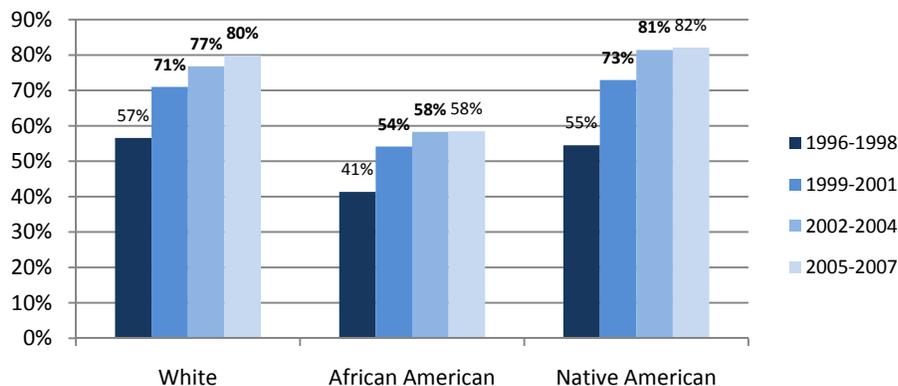
Sleep Position

In 1992-94, pediatric providers and the Back to Sleep media campaign began to tell mothers to place their babies on their backs, not on their stomachs, for sleep. That message was reinforced in 2005, with the recommendation that every caregiver should use back sleep position during every sleep period. The American Academy of Pediatrics recommends a separate but proximate sleeping environment and strongly discourages bed sharing during sleep.

PRAMS (Pregnancy Risk Assessment Monitoring System), a survey sponsored by the Centers for Disease Control and conducted in Washington by the Department of Health, records new mothers' answers to the question "How do you **most often** lay your baby down to sleep now?" The first year this information was collected in Washington was 1996.

Mothers Reporting Babies Most Often Sleeping on Their Backs (per PRAMS)

Figures in bold indicate statistically significant differences from prior years.



- Overall, in Washington, the proportion of new mothers putting their babies on their backs for sleep increased from 42.9% in 1996 to 79% in 2008. In 2002, the proportion for new Medicaid mothers putting their babies on their backs to sleep increased to 71.3%, just below the rate for all Washington women. In 2008, the rate of back sleeping for new Medicaid mothers (76.8%) was just below that for all women (79%).
- After large increases in 1999-2001 and 2002-04, the rate of back sleeping among Native Americans exceeded that among white infants. In 2005-07, 82% of Native American mothers put their babies on their backs to sleep most often, compared to 80% of white mothers.
- The rate of back sleeping reported by African American mothers remains lower than that for any other race/ethnic group in Washington. In 2005-7, 58.4% of African American mothers reported putting their babies on their backs for sleep.

CONCLUSION. Trends in infant mortality and deaths from SIDS/SUID are encouraging. Challenges remain to sustain improvements for Washington's infants and to achieve further reductions. Current strategies include educating families and providers about safe sleep environments, targeting interventions for the highest-risk families, and reducing tobacco use/exposure during pregnancy. Influencing community values and individual behavior about safe sleep environments and infant safety is a complex process. Partnering with high-risk communities to change cultural norms about child safety, family violence, and the impact of alcohol and drug abuse is another key strategy to reduce health disparities.

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