

FIRST STEPS DATABASE

INFANT MORTALITY AND SIDS

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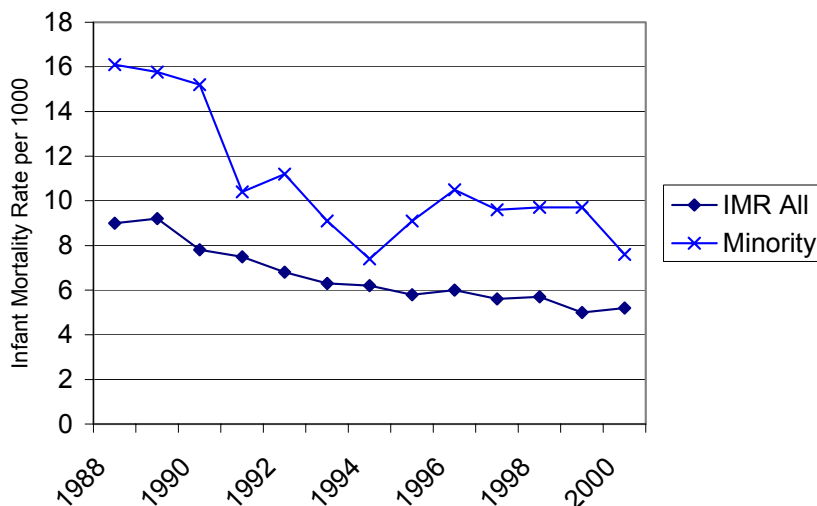
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Infant mortality (deaths of liveborn infants during the first year of life) is often used as a standard measure of a population's health. The leading causes of infant death in the United States and in Washington State include birth defects, SIDS (Sudden Infant Death Syndrome), and disorders related to prematurity and low birth weight. While infant mortality declined rapidly from 1900 to 1950, improvements have been gradual since 1950, and infant mortality rates for African Americans and American Indians have remained substantially higher than those for other races.

A number of factors have contributed to improvements in infant mortality in Washington State in the 1990s. The First Steps program, Washington's Medicaid expansion for low income pregnant women that started in August 1989, has increased access to prenatal care and has provided enhanced prenatal care. First Steps' enhanced prenatal services have been associated with decreases in low birth weight for certain high-risk women. Surfactant therapy for respiratory disease has reduced mortality among very low birth weight infants although the estimated reduction in infant mortality attributed to surfactant therapy is rather low (3%) (Schwartz et al., 1994). In 1992-94, pediatric providers and the Back to Sleep media campaign began to tell mothers to place their babies on their backs for sleep. SIDS rates have fallen dramatically for some groups since Back to Sleep has become a standard message for parents of newborn babies.

This report describes changes in infant mortality and SIDS in particular. Because death rates for Hispanic and Asian/Pacific Islander infants are generally no higher than the overall state rate, this brief report will focus on death rates for African American and American Indian infants.

Infant Mortality Rates: All Washington Infants vs. African American and American Indian Infants



- In Washington State, the overall rate of infant death has decreased by 44% from 9.1 per 1000 (1988-89) to 5.1 per 1000 (1999-2000).
- For African American and American Indian infants, the death rate decreased by 46% from 15.9 per 1000 (1988-89) to 8.6 per 1000 (1999-2000). The death rate for African American and American Indian infants remains 1.9 times greater than the rate for white infants (4.6 per 1000 in 1999-2000).

SIDS (SUDDEN INFANT DEATH SYNDROME)

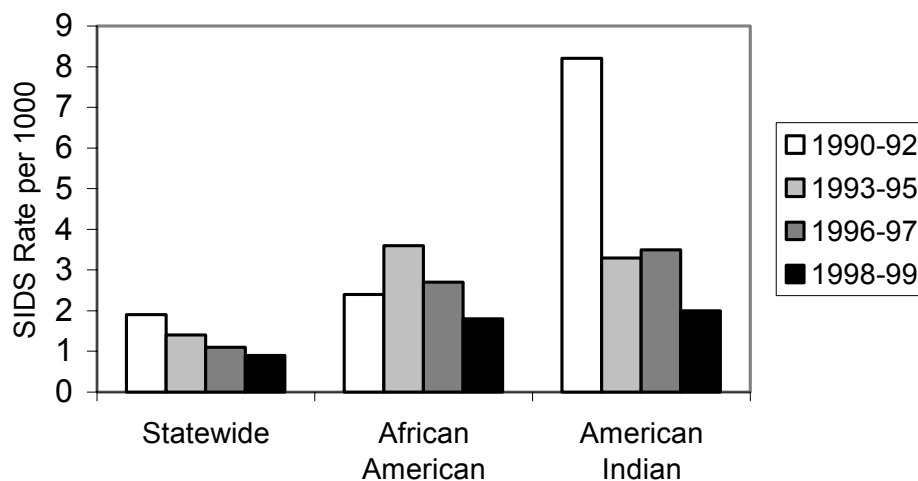
SIDS is defined as the sudden death of an infant under one year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history (Willinger et al., 1991).

In 1990, SIDS accounted for 30% of all infant deaths in Washington State. By 1999, the proportion of deaths due to SIDS had decreased to 16%. SIDS remains the leading cause of death during the postneonatal period (the second through twelfth months of the infant's life).

No single factor or condition has been identified as the cause of SIDS. In fact, SIDS may have a variety of different causes in individual infants. A number of risk factors for SIDS have been identified: prone or side sleeping position, infection, parental smoking, low birth weight, African American and American Indian race/ethnicity. A recent study from Australia, as yet unconfirmed by other researchers, found a strong association between a toxin produced by certain *E. coli* bacteria and SIDS deaths (Goldwater, 2002). Until the cause of SIDS is known, the best strategy for reducing SIDS deaths is to reduce exposure to the risk factors whenever possible. 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.

The following graph shows reductions in the rate of SIDS since the Back to Sleep campaign started in 1993-94.

SIDS Rates: All Washington Infants vs. African American and American Indian Infants

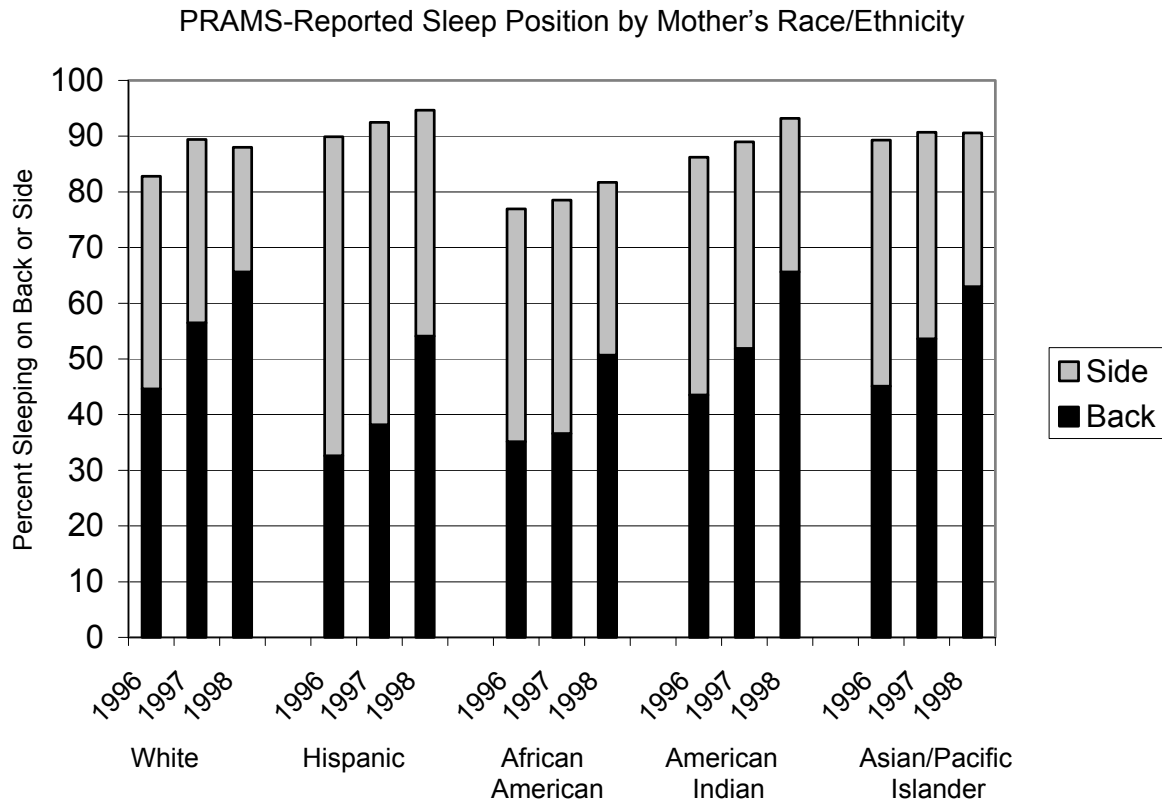


- In Washington State, the overall rate of infant death due to SIDS has decreased by 53% from 1.9 per 1000 (1990-92) to 0.9 per 1000 (1998-1999).
- For African American infants, the death rate due to SIDS decreased by 25% from 2.4 per 1000 (1990-92) to 1.8 per 1000 (1998-1999).
- For American Indian infants, the death rate due to SIDS decreased by 76% from 8.2 per 1000 (1990-92) to 2.0 per 1000 (1998-1999).

The reductions in the SIDS rates are encouraging. For American Indian infants, the reduction has been dramatic. For African American infants, the reduction has been relatively modest.

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. For many families, putting babies on their back to sleep represented a major change in parenting behavior. 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 put your new baby down to sleep *most* of the time?" The first year this information was collected in Washington was 1996.

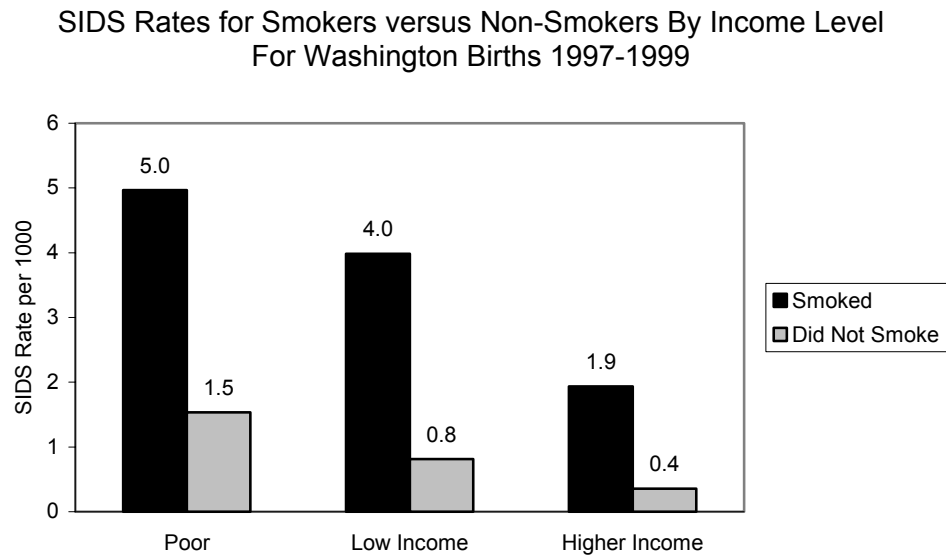


- For all groups, the proportion of women who reported putting their babies on their back or on their side to sleep has increased from 1996 to 1998.
- As well, the proportion putting their babies on their backs to sleep has increased, and the proportion putting their babies on their sides to sleep has decreased. This is consistent with newer recommendations (October 1996) that the back-to-sleep position is preferable to the side-to-sleep position.
- Hispanic women reported the highest rate (94.7%) of back or side sleep position in 1998. African American mothers reported the lowest rate of back or side sleep position (81.7%).
- White women and American Indian women reported the highest rate of back sleep position (65.6% for both groups) in 1998. African American women reported the lowest rate of back sleep position (50.7%).

While sleep position is not the only risk factor for SIDS, the risk of SIDS is reduced if more babies are put on their backs to sleep. All families and other caregivers need to hear a culturally-appropriate Back to Sleep message and to understand its importance. A few babies with certain medical conditions may need to sleep on their sides or stomachs; in these cases, the pediatric provider will tell parents the best sleep position for their baby.

OTHER RISK FACTORS FOR SIDS

Maternal smoking during pregnancy and environmental exposure to smoke after the baby's birth are important risk factors for SIDS. Many pregnant women are motivated to quit or reduce smoking while pregnant, and smoking cessation programs are available to help them stop smoking. New mothers may face greater challenges in achieving a smoke-free environment for their baby after its birth. In addition, as shown in the following graph, poverty remains a risk factor for SIDS.



- For each income group, the SIDS rate is three to five times higher for infants born to mothers who smoked during pregnancy. The SIDS rate for infants born to poor women who were smokers, 5.0 per 1000, was three times higher than the rate for infants of non-smoking poor women, 1.5 per 1000. Among higher income women, the SIDS rate was 1.9 per 1000, nearly five times greater than that for non-smokers (0.4 per 1000).
- Among infants born to both smokers and non-smokers, the SIDS rate is higher for infants born to poor families, as compared to those born to higher income families. For infants born to smokers, the SIDS rate for poor infants (5.0 per 1000) was 2.5 times greater than that for higher income infants (1.9 per 1000). For infants born to non-smokers, the SIDS rate for poor infants (1.5 per 1000) was nearly four times greater than that for higher income infants (0.4 per 1000).

Many challenges remain to sustain health improvements for Washington's infants and to achieve further reductions in deaths from SIDS. Continued efforts are needed at different levels, from data collection about child deaths and basic research about the cause(s) of SIDS, to community outreach where SIDS rates remain high. The Department of Social and Health Services and the Department of Health seek to achieve further reduction in SIDS deaths by educating families and providers about sleep position, targeting interventions for the highest-risk families, and reducing tobacco use during pregnancy. Partnering with community-based organizations is a critical factor to support these goals.

Data sources for this report include the Department of Health Center for Health Statistics and PRAMS project, and the First Steps Database. The First Steps Database was developed as a program monitoring tool for First Steps. The database links Medicaid claims and eligibility with birth and death certificates. Additional copies of this report (#9.62) and a list of references may be requested from DSHS Research and Data Analysis (phone 360-902-0707). RDA reports are available at the website, www1.dshs.wa.gov/rda. The SIDS Foundation of Washington (phone 800- 533-0376; website www.SIDsofWA.org) is also a valuable resource.