

Public Health Data Watch

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Racial Disparities in Infant Mortality: King County, 1980-1998

The death of an infant in the first year of life is, unquestionably, a tragic event for parents and families. At a community level, the rate of infant death is considered a fundamental indicator of population health and social well-being. In Seattle and King County, significant reductions in infant mortality have been observed over the past two decades, the cumulative success of advances in medical care, health education campaigns, and policy and programmatic changes in health services and health coverage. However, the tremendous improvement in infant mortality County-wide masks persistent disparities among King County's racial and ethnic groups: African Americans and Native Americans in the County continue to experience infant death rates that are 2.7 times higher than other groups, a gap that appears to have widened in recent years.

In this issue of *Data Watch*, we provide an update on current infant mortality trends in King County and explore the disparities in infant death, as well as key risk factors for death, between African Americans and whites. Though Native Americans experience infant mortality rates as high as African Americans, detailed analysis of trends and patterns of these deaths is omitted because the small number of Native American infants who die each year (3-4, on average) results in highly unstable rates. However, when birth risk factor data are presented (pages 5-7), Native Americans are included.

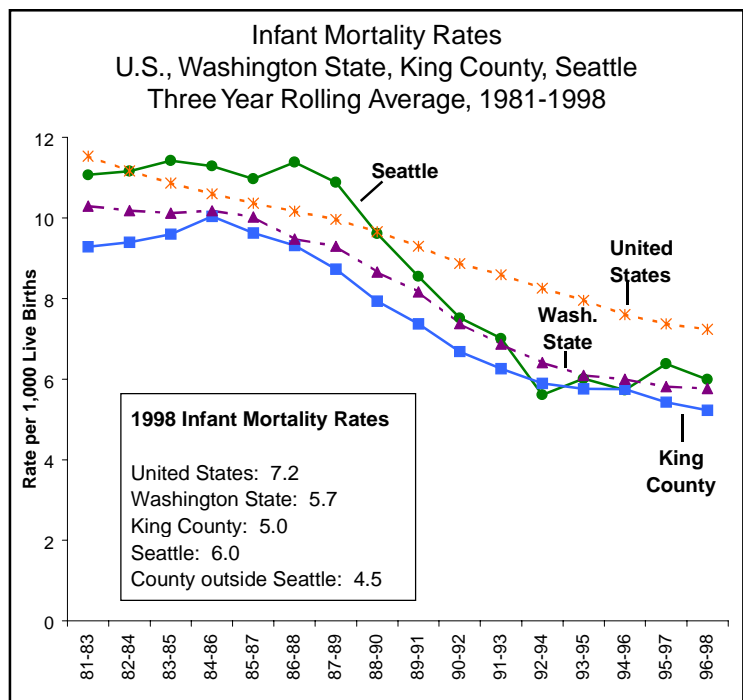
Trends in Infant Mortality

In 1998, the infant mortality rate in King County was 5.0 deaths per 1,000 live births, the lowest rate ever reached in the county. King County – and Washington State as a whole – continues to experience infant mortality rates well below the national average. Based on preliminary data, the 1999 King County infant death rate remained essentially unchanged at 5.1.

111 infants died in King County in 1998; one-third of these deaths were to residents of the city of Seattle, and the remaining two-thirds were to residents outside the city limits. In Seattle, the 1998 infant mortality rate was 6.0 and in the County outside Seattle, the rate was 4.5.

The rate of infant mortality in King County continues to decline, though at a slower pace than the 1984-1993 period. The downward movement in the rate from 1993-1998 is not statistically significant.

In Seattle, following several years of rapid decline, the rate of infant death appears to have leveled off. After reaching a low of 4.8 in 1994, the rate has hovered around 6.0. In the areas of King County outside Seattle, the rate of infant mortality continues a statistically significant downward trend.



Trends in Infant Mortality, by Race and Ethnicity

While the rate of infant mortality in King County as a whole continues to compare favorably to state and national averages, disparities in infant mortality across racial groups within the County persist. Infants born to African American and Native American mothers are 2.7 times more likely to die in the first year of life than white infants, a differential that is statistically significant.

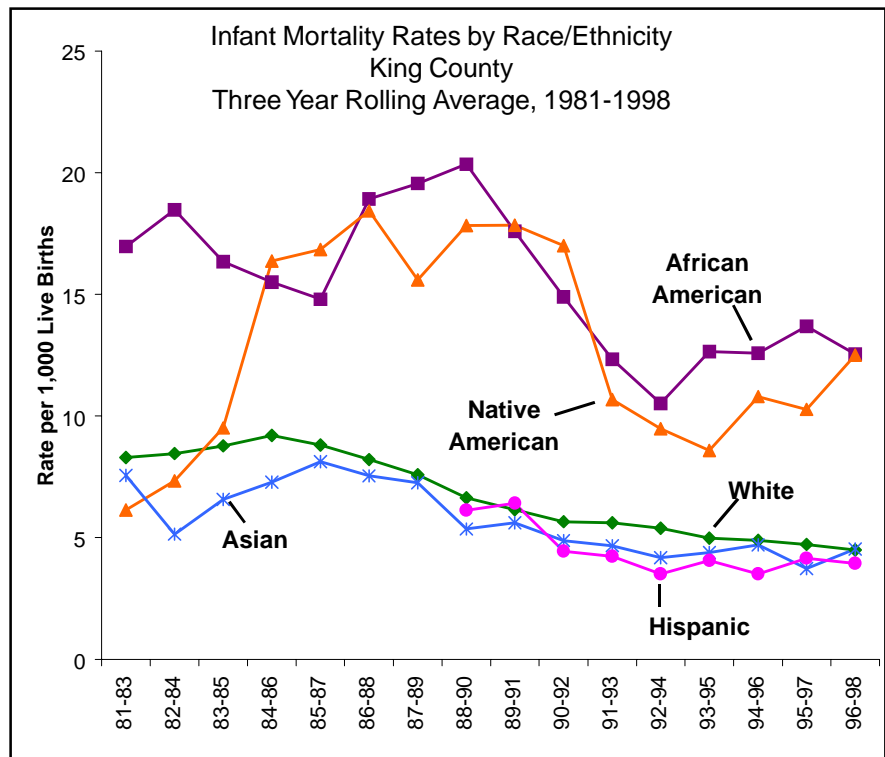
This gap was closing rapidly from the late 1980s to the mid-1990s, but subsequently infant mortality rates among African Americans and Native Americans have ceased declining and may be on the rise. Mortality rates for white, Asian/Pacific Islander, and Hispanic infants have been stable over the last five years.

The rate of infant mortality for African Americans appears to be increasing since the 1992-1994 period, but the trend is not statistically significant.

Additional years of data will be necessary to determine whether the downward trend has truly reversed.

Preliminary data for 1999 suggest that the African American infant mortality rate has remained elevated at 13.1. The 1998 rate was 13.1 as well.

For Native Americans, the small number of deaths (3-4 deaths per year, on average) makes trends in the rates difficult to interpret.



Epidemiologic analyses frequently examine group differences in health outcomes by demographic characteristics such as age, gender, and race/ethnicity. In recent years, the presentation of data broken down by race/ethnicity has been questioned by researchers and communities. There is concern that readers may incorrectly assume that differences between groups are biological and that the racial categories used are not necessarily reflective of individuals' self-identification. It has also been argued that the continued use of race/ethnicity may reinforce negative stereotypes, introduce false assumptions, and stigmatize communities of color.

Most researchers believe that race/ethnicity is a marker for complex social, economic, and political forces that are important influences on community and individual health. Most communities of color in this country have experienced social and economic discrimination, and other forms of racism, which can negatively affect the health of those communities. We continue to examine and present data by race/ethnicity because we believe that it is important to understand which racial/ethnic groups are disproportionately affected by significant health issues. We hope this understanding will lead to strategies that address these issues, as well as the social and economic inequities which underlie them.

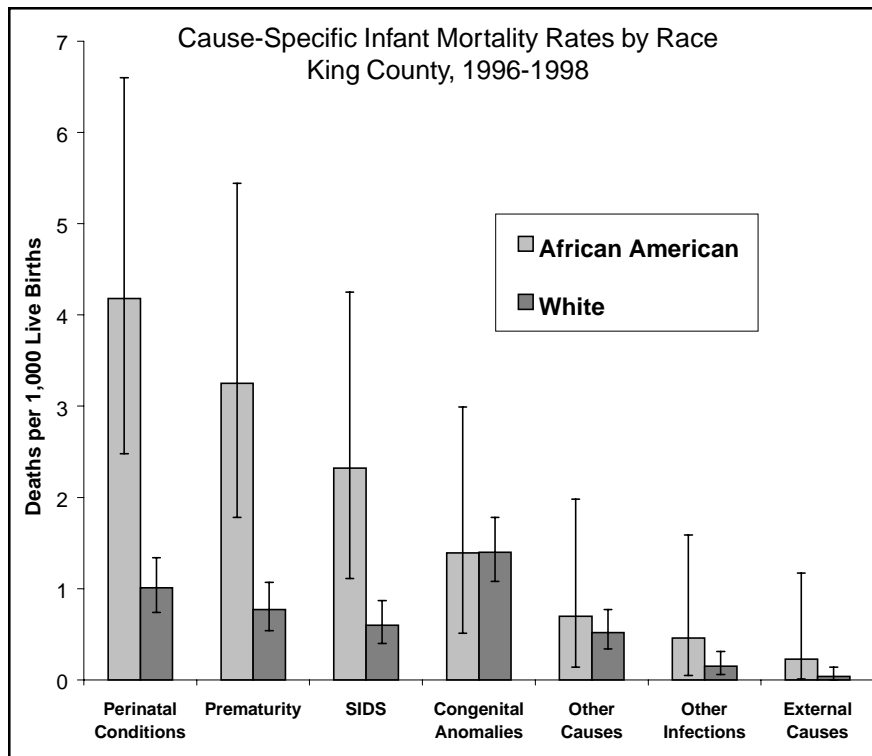
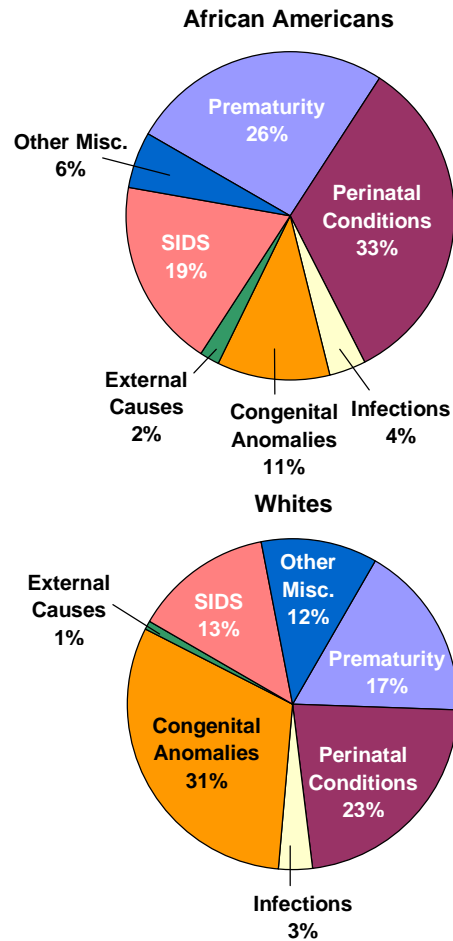
Infant Deaths by Cause: African Americans and Whites

Among the 18 deaths per year among African American infants, the leading cause of mortality is perinatal conditions (33%), followed by prematurity (26%). As the rate of mortality from Sudden Infant Death Syndrome (SIDS) among African Americans has declined, perinatal conditions and prematurity factor more prominently than in years past, and now collectively account for nearly 6 out of every 10 African American infant deaths. (See glossary on bottom of page 4 for cause of death definitions.)

SIDS is the third leading cause of death for African American babies (19%), followed by congenital anomalies (11%), other causes (6%), non-perinatal infections (4%), and external causes (intentional and unintentional injuries) (2%).

The cause-specific distribution of infant deaths for white infants (average of 70 deaths per year) follows a different pattern. Perinatal conditions and prematurity death rates have declined to the point that congenital anomalies are now the leading cause of infant death among white babies, accounting for nearly a third (31%) of all deaths. The second and third leading causes are perinatal conditions (23%) and prematurity (17%), respectively.

Distribution of Infant Deaths by Cause & Race
King County 1996 - 1998



Disparities in Cause-Specific Infant Mortality: African Americans and Whites

The greatest racial disparity in infant mortality is found among deaths resulting from prematurity and perinatal conditions, where African American infants are more than four times as likely to die than white infants. African American babies are also 3.8 times more likely to die from SIDS than their white counterparts.

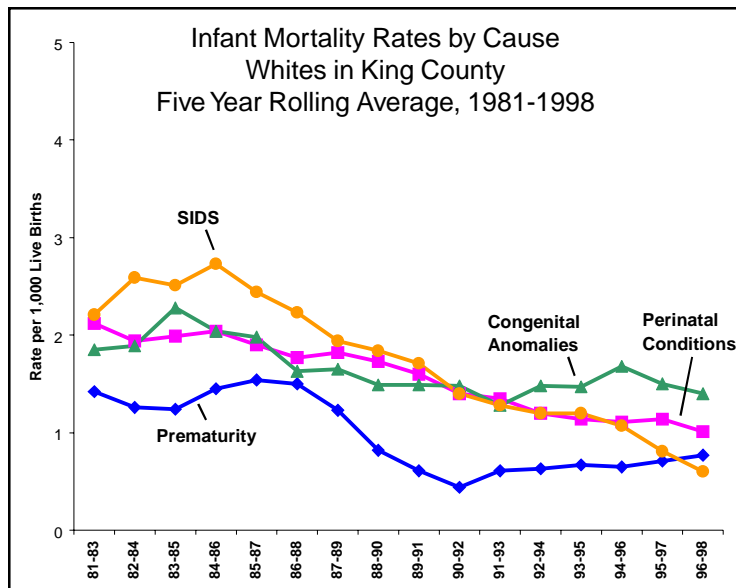
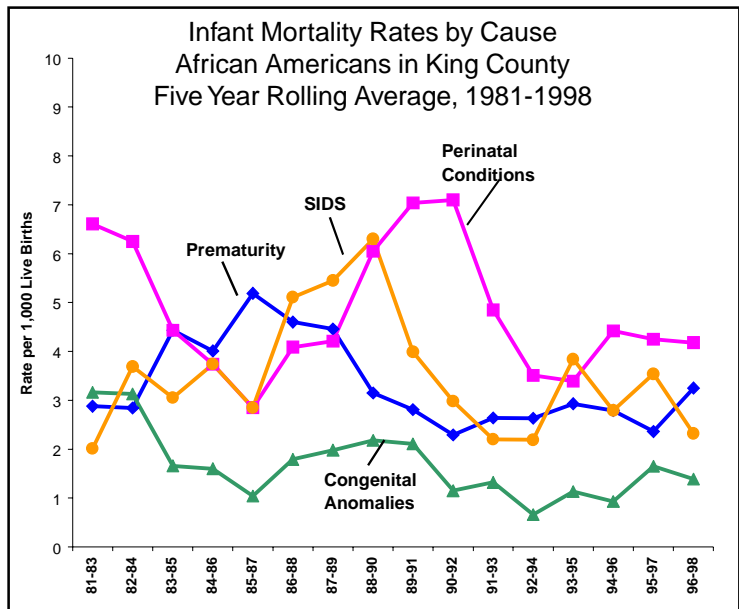
Though a greater proportion of infant deaths among whites are due to congenital anomalies than among African Americans, the two groups experience nearly identical mortality rates from these conditions.

Trends in Cause-Specific Infant Mortality: African Americans and Whites

Among African Americans, infant mortality due to perinatal conditions rose from 1985-1990, then declined from 1990-1995. The downward trend appears to have ended in 1995, with deaths from perinatal conditions reaching a plateau around 4.4.

Prematurity-related mortality decreased from 1987-1992 (though not statistically significantly), and was fairly stable during the 1992-1998 period when the average rate was 2.9.

Death rates from SIDS dropped significantly from 1988-1992. Continued improvement in African American SIDS mortality appears to have stopped in 1992: rates during the 1992-1998 period fluctuated around an average of 2.7.



Among white infants, mortality rates from SIDS and perinatal conditions continue to decline. Deaths due to congenital anomalies decreased from 1985-1993, and have subsequently plateaued. Prematurity-related mortality declined from 1987-1992, and has also been stable in recent years.

The disparities in cause-specific infant mortality increased during the mid-1990s, as deaths from SIDS and perinatal conditions ceased declining among African Americans, while they continued to decrease among whites.

Glossary:

Perinatal conditions: a group of conditions generally leading to death in the first 27 days of life, including perinatal respiratory conditions, birth trauma, hypoxia and asphyxia during birth, perinatal infections, and other perinatal conditions (including maternal conditions both related and unrelated to pregnancy).

Prematurity: deaths due to respiratory distress syndrome, bronchopulmonary dysplasia, necrotizing enterocolitis, and other conditions related to extreme prematurity and low birthweight. The categorization of causes of infant death is limited by the overlap between the perinatal and prematurity groups. A large portion of infants assigned to the perinatal category were born prematurely. Deciding whether the death of these infants was due primarily to their prematurity or to a complication in the perinatal period is imprecise, probably resulting in some misclassification.

SIDS: sudden, unexplained death of an apparently healthy infant, whose death remains unexplained after all known causes have been ruled out through autopsy, death scene investigation, and medical history.

Congenital anomalies: birth defects.

Prevalence and Trends in Birth Risk Factors by Race

African American and Native American infants remain significantly more likely than whites to be born too early (premature) and too small (low birthweight). Among African Americans, rates of low birthweight, very low birthweight, prematurity, and multiple birth have been stable in recent years. For Native Americans, rates of low birthweight increased significantly from 1993-1998, while rates of premature birth declined significantly.

Young maternal age and single marital status (i.e. unmarried) do not pose direct risks for infant mortality, but can be thought of as markers for other, unmeasured risks such as low socioeconomic status. In King County, African Americans and Native Americans are 3-4 times more likely to have these birth risk factors than whites. Rates for both indicators declined significantly among African Americans from 1993-1998.

Rates of late entry into prenatal care (third trimester or none) and inadequate prenatal care utilization (too few visits relative to gestational age of infant and month prenatal care began, as measured by the Kotelchuck index) are decreasing among African Americans, though the latter is not statistically significant. Both African Americans and Native Americans remain significantly more likely than whites to start prenatal care late and receive an inadequate amount.

Rates of reported tobacco and alcohol use during pregnancy are declining sharply for all three groups. It is unclear whether these declines represent a real change in the prevalence of prenatal smoking and alcohol consumption, or a change in women's willingness to report these behaviors.

Among whites, the rate of multiple births, prematurity, low birthweight, and very low birthweight are all increasing significantly. Much of the increase in low birthweight for whites appears to be related to the increase in multiple births, since the rate of low birthweight for singleton births is stable.

Prevalence and Trends in Birth Risk Factors by Race, King County

	African Americans		Native Americans		Whites		African American - White Rate Ratio	Native American - White Rate Ratio
	% of Births 1996-98	Time Trend 1993-98	% of Births 1996-98	Time Trend 1993-98	% of Births 1996-98	Time Trend 1993-98		
Low Birth Weight (< 2500 g)	10.9%*	—	7.8%*	▲	5.4%	▲	2.0	1.4
Very Low Birth Weight (< 1500 g)	2.6%*	—	1.1%	—	0.9%	▲	2.9	1.2
Premature (<37 weeks gestation, calc.)	14.8%*	—	12.2%*	▼	9.0%	▲	1.6	1.4
Multiple Birth (twins, triplets, etc.)	3.1%	—	3.0%	—	3.2%	▲	1.0	0.9
Mother's Age < 18	6.5%*	▼	9.4%*	—	2.0%	▼	3.3	4.7
Unmarried Mother	58.9%*	▼	60.0%*	—	20.2%	▲	2.9	3.0
Late (3rd) or No Prenatal Care	6.7%*	▼	8.9%*	—	2.3%	▼	2.9	3.9
Inadequate Prenatal Care (Kotelchuck)	18%*	—	22.9%*	—	7.1%	▼	2.5	3.2
Smoking During Pregnancy	13.3%*	▼	22.4%*	▼	11.0%	▼	1.2	2.0
Alcohol Use During Pregnancy	1.8%	▼	4.4%*	▼	1.8%	▼	1.0	2.4

Rates followed by an asterisk (*) are statistically significantly higher than the rate for whites.

▲ Indicates a statistically significant increase over the period 1993-1998.

▼ Indicates a statistically significant decrease over the period 1993-1998.

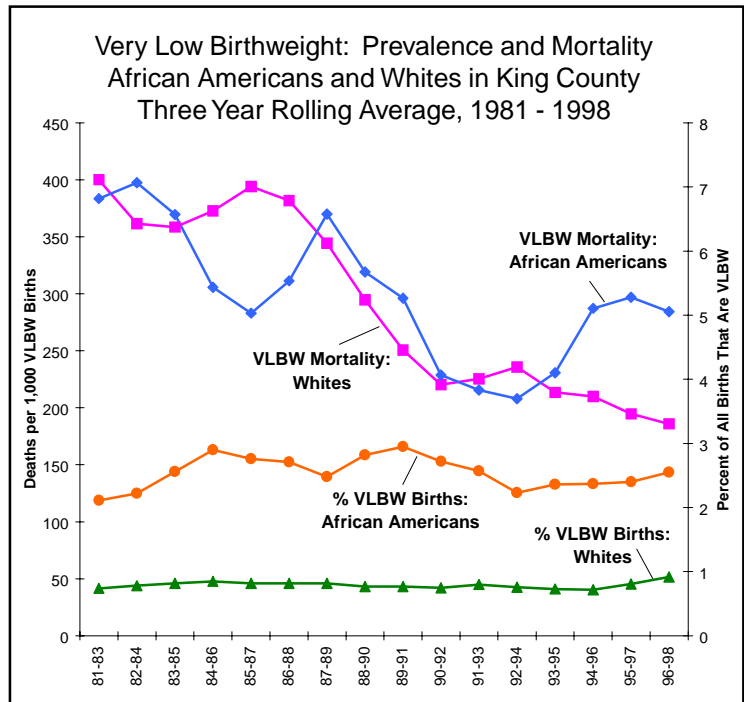
Very Low Birthweight Incidence and Mortality: African Americans and Whites

Low birthweight, especially weight less than 1500 grams (very low birthweight - VLBW), continues to be a critical risk factor for infant mortality. Among African Americans in King County, 61% of all infant deaths occurred to the 2.6% of infants born at very low birthweight from 1996-1998.

Mortality caused by VLBW can increase in two ways: either the number of infants born at VLBW (% VLBW) can increase or the survival of VLBW infants can worsen (VLBW-specific mortality).

The proportion of African American infants born at VLBW has remained fairly stable in recent years, though African American infants continue to be nearly 3 times more likely to be VLBW than white infants.

Among African Americans, mortality rates for infants born at VLBW (<1500g) appear to be increasing in recent years (though not statistically significantly), following a decline from the late 1980s to the early 1990s. For whites, very low birthweight specific mortality rates continue to improve. It is not clear why survival rates have worsened for VLBW African American infants.



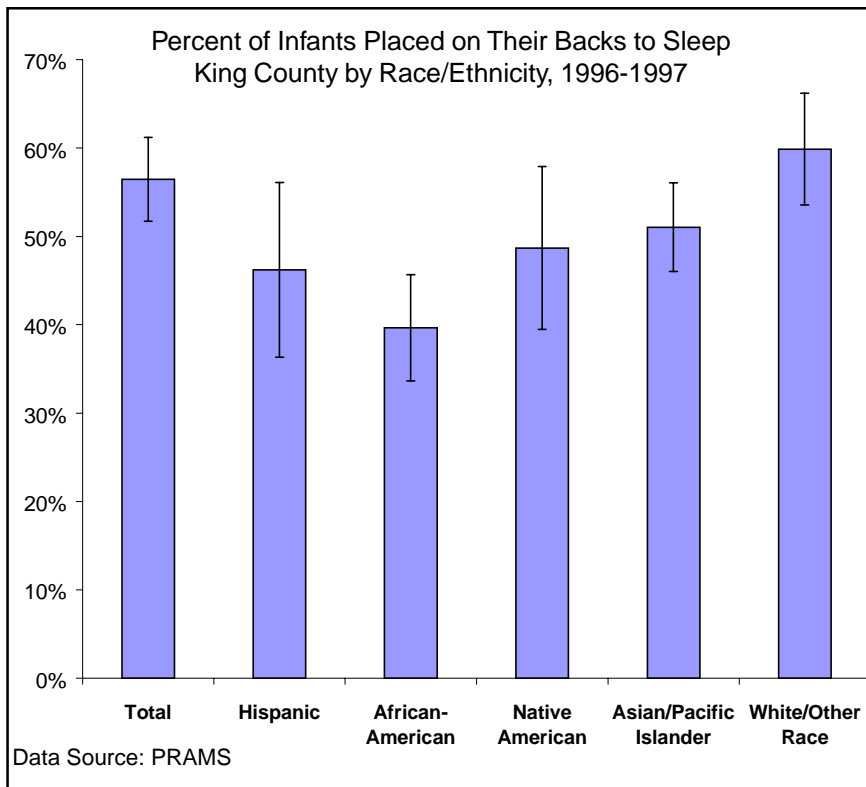
Prevalence of Back Sleep Position

Infants who are placed on their stomachs (prone) and sides for sleep are at increased risk of dying from Sudden Infant Death Syndrome (SIDS). The significant

reduction in SIDS deaths in King County from the mid 1980s to the early 1990s is thought to be a direct result of public and professional education on the importance of back sleep position.

Recent survey data suggest that the prevalence of back sleep position for infants differs by race and ethnicity in King County. African American infants are significantly less likely than white infants to be routinely placed on their backs for sleep. There are no significant differences among the other groups. Additional years of data are needed to assess trends in sleep position over time.

While SIDS mortality has declined dramatically among African Americans in King County, rates have stopped improving since 1992. Clearly, important work remains in the promotion of safe sleep position and environment.



Disparities in Stress and Social Support During Pregnancy

There is a growing body of literature demonstrating the increased risk of adverse birth outcomes (e.g., preterm delivery and other risk factors for infant mortality) associated with the experience of psychosocial stress, both chronic and acute. Some studies suggest that the presence of social support, particularly from the partner and close others, has positive effects on pregnancy outcome, and may help buffer the impact of stress. Differentials in exposure to stress and the availability of social support have been offered as possible explanations for the persistent disparities in pregnancy outcome between African Americans and whites.

Stressful Life Events During Year Before Delivery
King County, 1996 - 1998

Stress Events	African American	Native American	White
Changed residence (moved)	47.2%	47.1%	39.9%
Argued with partner more than usual	40.5%*	43.3%*	23.0%
Had bills and couldn't pay	34.6%*	40.6%*	22.1%
Someone close died	23.2%*	26.4%*	15.4%
Close family member hospitalized	21.9%	26.9%	21.5%
Separated or divorced from partner	20.2%*	17.1%*	4.7%
Someone close had drinking/drug problem	20.1%*	38.9%*	11.5%
Partner said he didn't want pregnancy	19.9%*	9.2%	7.7%
Partner lost job	14.7%	16.9%*	8.7%
Mother lost job	14.3%*	12.7%	6.0%
Mother or partner went to jail	13.5%*	17.0%*	2.6%
Involved in a physical fight	10.0%*	12.8%*	2.4%
Homeless	9.5%*	8.4%	4.0%
Reported 5 or more stress events	20.1%*	25.2%*	6.8%

Stress factor prevalences followed by an asterisk (*) are statistically significantly higher than the estimate for whites.

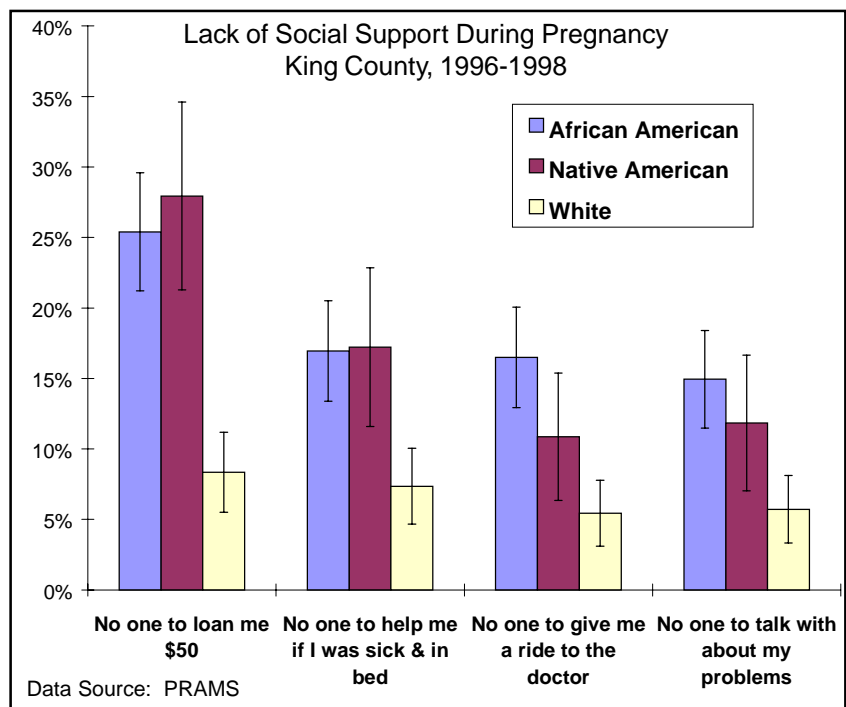
Data Source: PRAMS

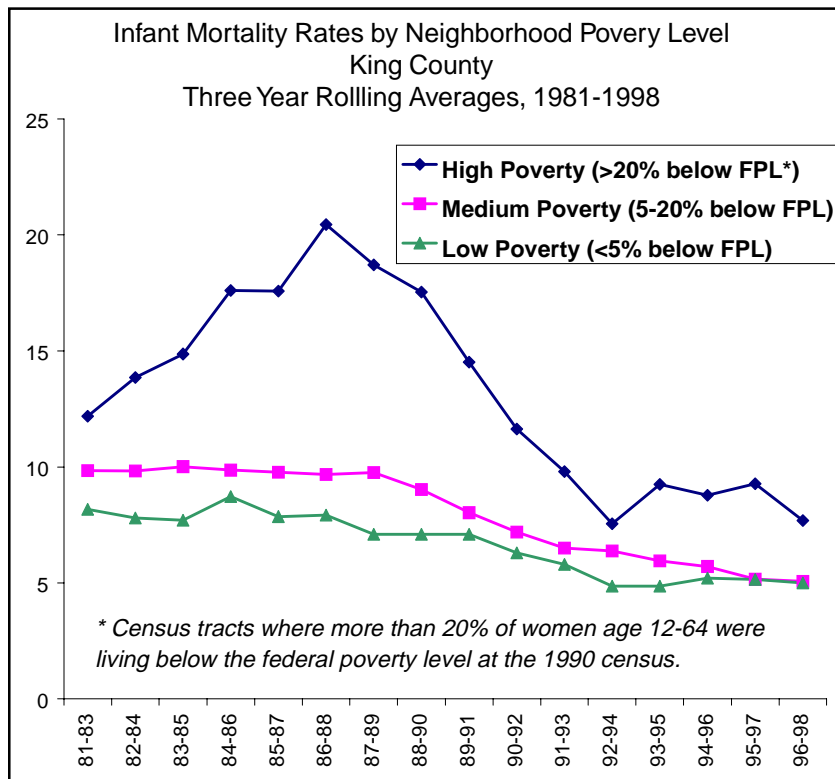
In a survey of women who recently gave birth, African American and Native American mothers were more likely than white mothers to report experiencing stressful life events in the year before delivery. Of the thirteen stress events listed on the survey, African American mothers reported experiencing all but three events at significantly higher rates than whites.

African American and Native American mothers also reported significantly higher levels of cumulative stress during the year before delivery than their white counterparts. Twenty-five percent of Native American mothers and 20% of African American mothers reported experiencing five or more of the listed stress events, compared with 7% of white mothers.

It is important to note that this survey does not account for women's *perceptions* of stress, nor does it include all experiences women may find stressful. For instance, the experience of racism poses a chronic source of stress for women of color that may contribute to higher rates of pregnancy-related morbidity and mortality.

African American and Native American mothers also reported lower levels of social support than white mothers in the survey. African American mothers were three times more likely than whites to report they had no one to loan them \$50 and no one to give them a ride to the doctor, and more than twice as likely to report they had no one to talk with about emotional problems and no one to help if they were sick and had to stay in bed.





Trends in Infant Mortality, by Neighborhood Poverty Level

In the high poverty neighborhoods of the County, the rate of infant death has been stable since 1992, following a period of rapid decline. The disparity in infant mortality rates between high poverty neighborhoods and low poverty neighborhoods remains. In 1996-98, the rate of infant death in high poverty areas was 1.5 times higher than the rate in low poverty areas.

The rate of infant mortality in the medium poverty areas of the County continued a slow decline, nearly matching the rate in the low poverty areas in recent years. The rate of infant death in the low poverty neighborhoods of the county has remained essentially unchanged since 1992.

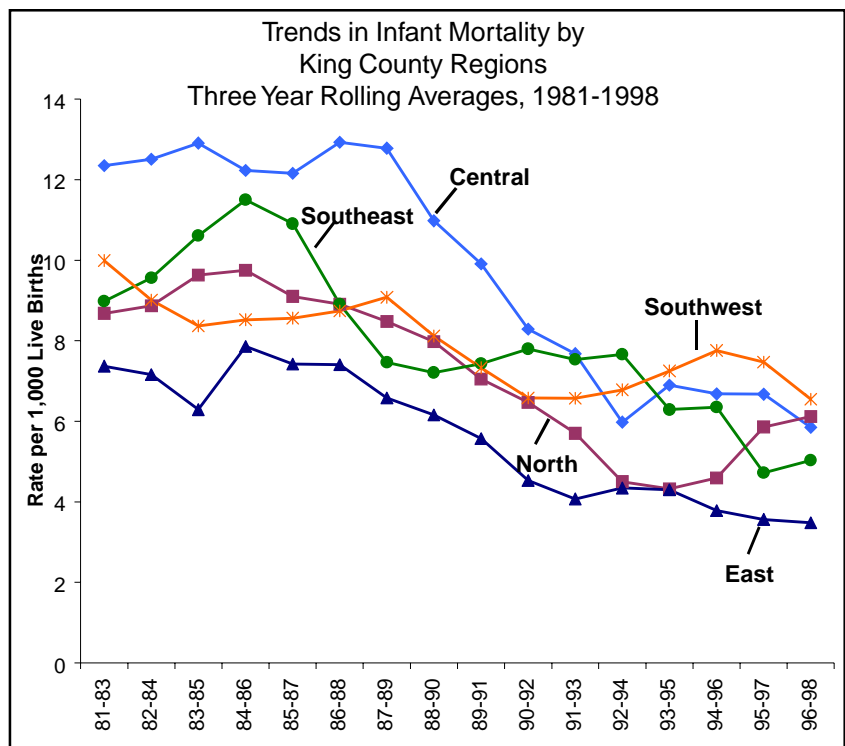
Trends in Infant Mortality, by King County Region

The rapid declines in infant mortality seen in Central and North Regions during the late 1980s and early 1990s appear to have ended. Since the 1992-94 period, the infant mortality rate in Central Region has been stable, while the rate in North Region appears to be increasing (though not statistically significant).

In the Southwest area of the County, the infant mortality rate rose from 1990 to 1995, and has started to decline again in recent years. Southwest Region has experienced the highest rate of infant death in the county since 1994, surpassing Central Region. The 1996-98 rate of infant death in Southwest (6.6/1,000) was almost twice the rate in East Region, the area with the lowest rate (3.5/1,000).

During the late 1980s and early 1990s – when other parts of the County were experiencing rapid declines in infant death – mortality rates in Southeast Region were stable. However, in recent years, the area has seen a significant downward trend.

East Region continues to see downward movement in the infant mortality rate.



Summary

Over the last decade, King County saw dramatic improvement in the rate of infant mortality. However, significant disparities remain: African American and Native American infants are nearly 3 times more likely to die in the first year of life than white infants. This gap has widened in recent years, as infant mortality ceased declining among African Americans and Native Americans.

There is no single cause of infant mortality and no single solution. Reducing disparities in infant death will require focused, coordinated efforts by many sectors of the community. The following strategies are suggested:

- Protecting and improving women's health *prior* to conception, to identify risks and treat pre-existing conditions (e.g., infection, hypertension, diabetes, etc.).
- Supporting women in planning their pregnancies, through expanded access to contraceptive methods and services. Planning for pregnancy allows for pre-conceptional risk identification and management.
- Providing early and aggressive treatment of maternal infection (e.g., bacterial vaginosis) during pregnancy, according to CDC and ACOG guidelines.
- Ensuring a strong system of perinatal regionalization, so that women with high risk pregnancies deliver at facilities where they can receive the appropriate level of care.
- Developing culturally-relevant messages promoting back sleep position and safe sleep environment for use with families, caregivers, and communities.
- Fostering community-driven strategies to provide psychosocial support to pregnant women and families.
- Supporting efforts to reduce social and economic disparities, and to address the impacts of racism on women, families, and communities of color.

To implement these strategies, Public Health will be working with others in the community to:

- Maintain infant mortality outreach efforts targeted to minority populations.
- Work with individuals and agencies in the African American and Native American communities to explore ways to increase psychosocial support and decrease the impact of disparities and racism on pregnant women and families.
- Seek resources to do case reviews of very low birthweight births and deaths to better understand how to reverse the worsening African American mortality in this group.
- Work with the state to expand access to family planning services through implementation of the Family Planning Waiver as soon as it is approved by the Health Care Financing Administration.

This issue of Public Health Data Watch was prepared by Christie Spice, Kathy Carson, Maria Carlos, and Sue Spahr. We wish to thank David Solet, Jim Krieger, and many others for review and comment.

Public Health Data Watch monitors trends in key health indicators for King County. It is produced by the Epidemiology, Planning, and Evaluation Unit (EPE) of Public Health - Seattle & King County, with assistance from other Health Department staff. For additional copies of this report, please contact:

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Note: We provide alternate formats for printed material upon request for people with special needs.

Activities and Resources

INFANT MORTALITY PREVENTION NETWORK

There are 9 agencies which participate in the Infant Mortality Prevention Network, each of which conducts outreach under a different model of outreach, ranging from intensive case management, to individual health education, to training of parents and outreach workers.

- **Center For MultiCultural Health**

Target Population: Families of Color in Seattle

Services: small group presentations and health information workshops; referral information; assistance with Basic Health Plan and Medicaid enrollment; and blood pressure, cholesterol and glucose screenings.

- **El Centro De La Raza**

Target Population: Latino Families in Seattle

Services: provides services including referral to alcohol and drug treatment; help with baby supplies, clothing, food and shelter; and Medicaid enrollment.

- **Operational Emergency Center's Infant Mortality Prevention Program**

Target Population: Low-income families in Seattle and South King County

Services: educational workshops for families with young children; support, resources and baby supplies for families; outreach and education in the community around health care and nutrition access.

- **People Of Color Against AIDS Network**

Target Population: Native, African American Families in Seattle

Services: provides support for pregnant women and new dads, help with Medicaid enrollment and baby supplies, and assist with finding other resources in the community.

- **Program for Early Parent Support (PEPS)**

Target Population: Families with children, birth to 3, in King County

Services: provides support and resources for new parents and training for outreach workers and parents.

- **Seattle Indian Health Board**

Target Population: Low-income families and families of color in Seattle

Services: provides outreach, prenatal care, education, case management and maternity support services for pregnant women and their families.

- **Street Outreach Services' Infant Mortality Prevention Program**

Target Population: Families of Color in Seattle

Services: The program's goal is to reduce harm to pregnant women and their infants through comprehensive outreach and education regarding infant mortality risks; help finding services to meet any of the family's needs; referral to drug and alcohol treatment; referral to housing and shelter when available; assistance locating infant supplies, clothing; and transportation to medical appointments in emergency situations.

- **Public Health - Seattle & King County MOMs Plus - Infant Mortality Prevention**

(described on page 11)

- **UW Maternal & Infant Care Clinics**

Target Population: Families seeking prenatal services at UW

Services: infant mortality outreach workers provide intensive case management for UW clients, & serve as liaisons between high-risk clients & UW staff.

KING COUNTY FIRST STEPS/MATERNITY SUPPORT SERVICES (MSS)

Target population: low income pregnant women on Medicaid needing assistance with medical care, education, counseling and referrals.

Geographic area: MSS services are available throughout King County at Public Health Centers, community clinics, hospitals and at other social service agencies.

Services: Individualized client counseling and education provided by an MSS team comprised of a public health nurse, social worker and nutritionist. Services are available throughout the pregnancy and conclude two months postpartum.

PUBLIC HEALTH – SEATTLE & KING COUNTY PROJECTS

• **Public Health Nursing Services**

Target Population: Pregnant and/or parenting families in Seattle-King County

Services: provide clinic, home or community visits to assist families with health concerns, parenting, lifestyle issues, and assist in accessing needed community resources.

• **Early Post-Birth Discharge Program**

Target Population: Women discharged from the University of Washington within 48 hours of birth

Services: Families receive home visit within 48 hours of discharge in which a PHN does a physical assessment on both mother and infant, assessment of transition from hospital to home, and assure medical follow-up for mother and infant.

Care for Special Populations:

• **MOMS Plus:** Co-location of four main programs:

• **MOMS Case Management:** Case management services provided by public health nurses to pregnant substance-using population to facilitate prenatal care and prenatal substance abuse treatment. Case management follow-up to infant's first birthday.

• **Shelter Plus Care:** Several housing programs are part of Shelter Plus Care. Long term case management follow-up is provided for formerly homeless recovering clients.

• **Mobile WIC:** WIC services provided at substance abuse treatment centers and on home visits to teens, and substance using women who are pregnant or parenting.

• **Perinatal Outreach/Infant Mortality Prevention:** outreach services provided to high risk pregnant women to encourage prenatal care and substance use treatment to improve birth outcomes and prevent infant mortality.

• **Northwest Family Center**

Target Population: HIV infected women, children, adolescents and their families.

Services: On-site services include case management, financial advocacy, mental health and chemical dependency counseling, child life specialist services, primary HIV care, prenatal care and monitoring and of HIV exposed children. The BABES Network provides support and advocacy. Treatment of HIV infected children is arranged at Children's Hospital Medical Center and deliveries of HIV infected women are usually arranged at University of Washington Medical Center.

• **Best Beginnings**

This is a replication of the highly successful David Olds Nurse Home Visitor Program.

Target Population: 50 first time mothers who are UWP-Premera/Healthy Options enrollees will be recruited from UW Maternal and Infant Care Clinic (MICC), Harborview Women's Clinic, and Public Health: Columbia Health Center.

Services: These families will be followed by the same Public Health Nurse until the child is 3 years old. They will be offered an average of 2 home visits per month, with weekly visits for the first 6 weeks of enrollment, and the first 6 weeks of the baby's life. An additional important part of the King County Best beginnings Project will be to establish and maintain regular and ongoing communication between the PHN and the Primary Care Providers for the family.

Why: In initial research studies this intensive home visiting model was found to have very positive outcomes, including a reduction in maternal behavioral problems due to drugs or alcohol, decrease in maternal smoking during pregnancy, reduction in subsequent pregnancy among low income unmarried women, fewer ER visits for childhood injuries, a reduction and/or delay of subsequent pregnancies and fewer arrests and convictions of the adolescent children born to mothers while they were enrolled in the program.

• **King County Child Death Review**

Target Population: Unexpected deaths of children less than 18 years old in King County.

Services: An interagency/interdisciplinary team reviews unexpected deaths to determine strategies to prevent future deaths of a given type. For infants, deaths due to SIDS or positional asphyxia are the main types of death reviewed.

• **Bereavement Support**

Target Population: Parents in King County who have had an infant death.

Services: Families who have recently experienced the death of a baby are offered a bereavement support visit by a Public Health Nurse or Social Worker. The nurse or social worker talks with the family and discusses grief support and a variety of resources that might be helpful for the family.

RESOURCES ON THE WORLD WIDE WEB

The following agencies have Web-Sites with useful information about infant mortality prevention and intervention:

Association of SIDS & Infant Mortality Programs

<http://www.asip1.org/>

Co-sponsor of the Back-to-Sleep Campaign, ASIP is an association of health and human service providers and promotes counseling, education, advocacy, and research to ensure a supportive community response for those affected by infant and child death and to reduce the risk of death for future children. Web site has articles, contacts, and links to other related web-sites.

Centers for Disease Control's Reproductive Health Information Source

<http://www.cdc.gov/nccdrphp/drh/>

This CDC Web-site has information about research and links to other web-sites related to: unintended pregnancy, safe motherhood, infant health, men's reproductive health, women's reproductive health, information about racial and ethnic minorities.

Healthy Mothers Healthy Babies Coalition

<http://www.hmhb.org/>

Healthy Mother Healthy Babies provides a state and national forum for collaborative partnerships of public and private organizations, employers, policy makers and consumers to promote culturally and linguistically appropriate, community-based services that foster healthy mothers, babies and families. The national coalition has an internship focusing on areas such as Adolescent Health/Pregnancy Prevention, Fathers/Male Involvement in MCH, Perinatal Outreach Workers, Substance Use and Pregnancy. Web-site provides information about state contacts and coalition activities across the nation.

March of Dimes – Washington State Chapter

<http://www.modimes-wa.org/>

The mission of the March of Dimes Birth Defects Foundation is to improve the health of babies by preventing birth defects and infant mortality. Web-site has information about activities of the Washington State Chapter, as well as links to the national web-site, with articles and publications about maternal and child health, public health education materials and various March of Dimes sponsored activities.

Maternal and Child Health Bureau, US Dept. of Health & Human Services, Publications Catalog

<http://www.nmchc.org/html/cf/catalog.cfm>

This Maternal and Child Health Clearinghouse Web-site has a wealth of health education resources related to maternal and child health, including infant mortality, SIDS, infant health, mothers' health, fathers' health, all in a searchable catalog format.

National Institute of Child Health & Human Development - Back to Sleep Campaign

<http://www.nichd.nih.gov/sids/sids.htm>

This website co-sponsored by the National Institute of Child Health and Human Development, the Maternal and Child Health Bureau, the American Academy of Pediatrics, the SIDS Alliance and the Association of SIDS and Infant Mortality Programs, has information about the Back to Sleep Campaign materials as well as links to sponsors' web-sites.

National SIDS Resource Center

<http://www.circsol.com/SIDS/>

The National Sudden Infant Death Syndrome Resource Center provides information services and technical assistance on sudden infant death syndrome and related topics. Web-site has information about the Resource Center's information sheets and publications, annotated bibliographies, and reference and referral services regarding SIDS.

SIDS Foundation of Washington

<http://www.sidsfwa.org>

The SIDS Foundation of Washington is dedicated to the informational support of bereaved families, to the education of the general public and professionals and to the ultimate elimination of SIDS through research. Web-site provides information about the organization's activities and links to other web-sites about SIDS.

**Infant Mortality Rates by Health Planning Area in King County
Five Year Average, 1994-1998**

	Average # Infant Deaths Per Year	Average # Live Births Per Year	Infant Mortality Rate Per 1,000 Live Births
Auburn	8	1,455	5.4
Bellevue	4	941	4.7
Bothell/Woodinville	5	856	6.1
Central Seattle	6	468	12.8 ▲
East/Northeast County	2	398	4.5
Eastgate/Issaquah	4	1,127	3.7
Federal Way	8	1,354	5.9
Highline/Burien	11	1,249	8.5 ▲
Kent	9	1,487	6.1
Kirkland/Redmond	6	2,052	2.9 ▼
Mercer Island	<1	30	—*
North Central Seattle	3	767	4.2
North County	4	748	5.1
North of Canal Area	9	1,810	5.1
North Seattle	5	758	6.1
Renton	6	1,227	4.6
Southeast County	6	1,085	5.7
Southeast Seattle	11	1,393	7.6
Vashon Island	1	47	—*
West Seattle	4	1,094	3.7
White Center/Skyway	7	1,012	6.9
KING COUNTY	120	21,852	5.5

▲ Statistically significantly **higher** than the rate for King County.

▼ Statistically significantly **lower** than the rate for King County.

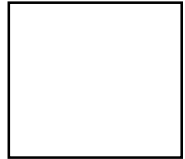
* Fewer than 5 deaths over time period; no rate reported.

Data Sources

Linked birth-infant death files for 1980-1998: Washington State Department of Health, Center for Health Statistics. The infant mortality rate for a given year represents the deaths to King County residents younger than one year of age divided by the live births to King County residents during the same year (multiplied by 1,000).

PRAMS survey data for 1996-1998: Washington State Department of Health, Office of Maternal and Child Health. PRAMS is a population-based mail and telephone survey of women who have recently delivered in Washington State. Data for this report reflect live births to King County residents occurring between July 1996 through December 1998.

Public Health Data Watch



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Epidemiology, Planning and Evaluation Unit
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Summary

This issue of Public Health Data Watch reports on the growing disparities in infant mortality among King County's racial groups. While the infant mortality rate for King County dropped to a record low in 1998 (5.0), the reduction has not been shared equally by all groups: African Americans and Native Americans in the County experience infant death rates that are nearly three times greater than whites. In this report, we provide an update on current trends in infant mortality in King County and explore the disparities in infant death. Data on key risk factors for infant mortality are also included.

**Infant Mortality Rate in King County by Health Planning Area
Average Rate per 1,000 Live Births from 1994-1998**

