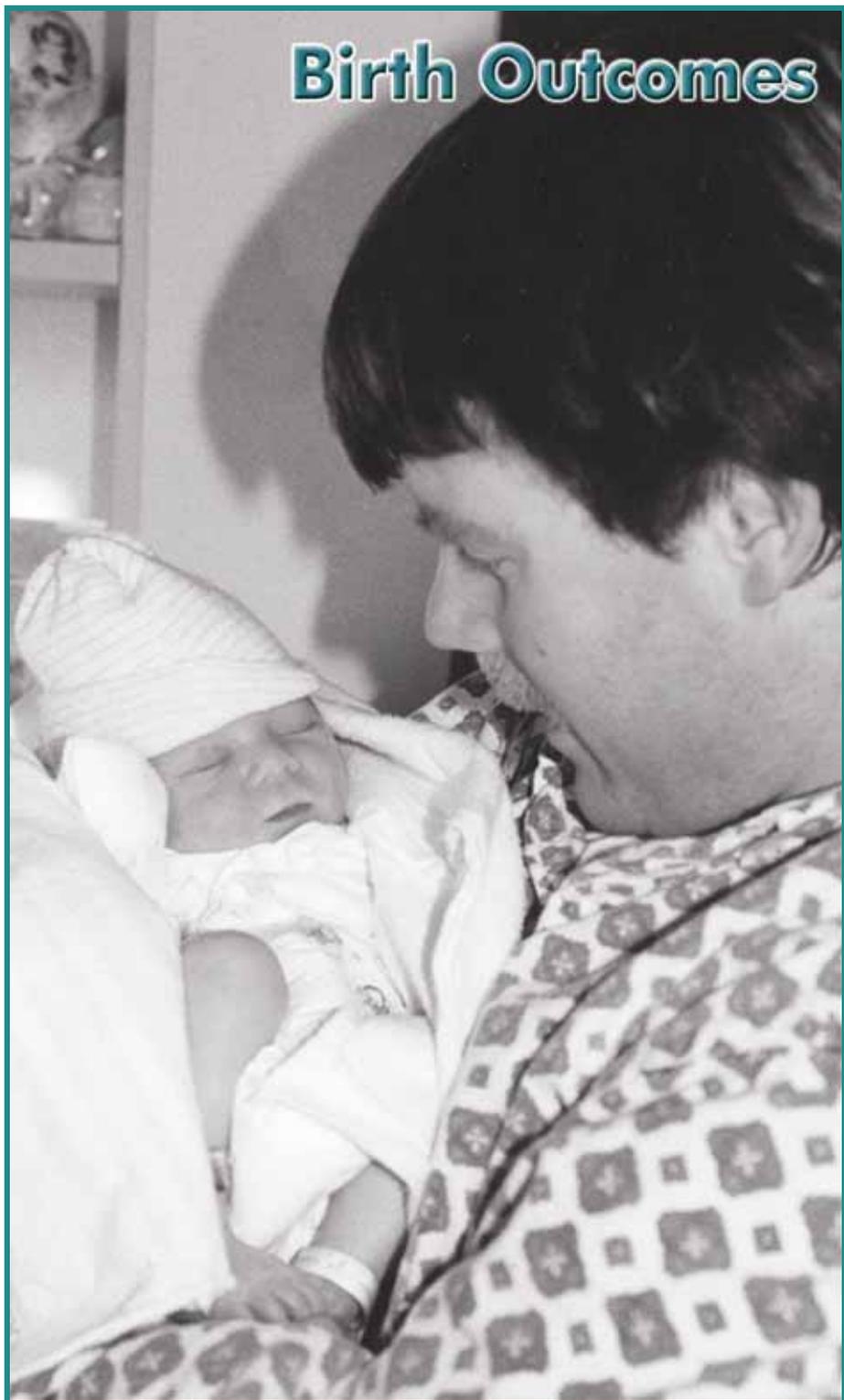


Birth Outcomes



Infant Mortality

Infant mortality is the leading world-wide indicator of maternal and infant health status. It is also valuable in assessing the quality and accessibility of primary health care available to pregnant women and infants, and the impact of poor socio-economic conditions on maternal and infant health. Alaska has made great strides in reducing infant mortality over the last decade.

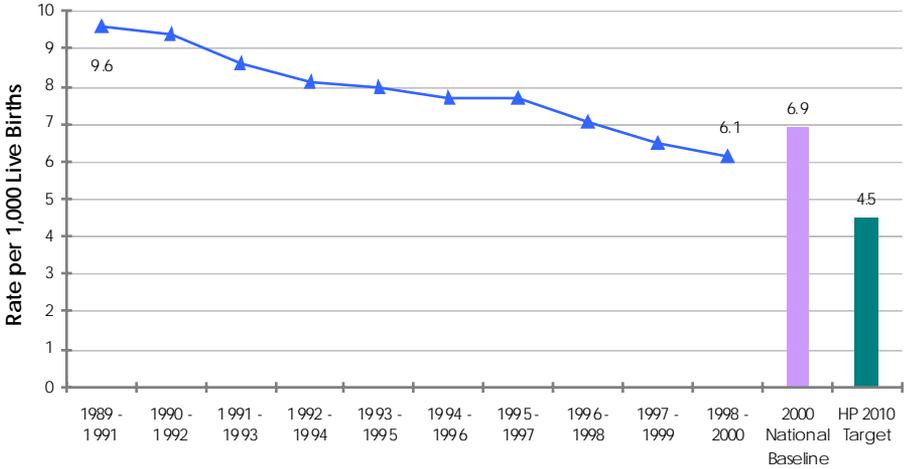
- ◆ During 1998 - 2000, Alaska's infant mortality rate was 6.1 per 1,000 live births, compared to 8.6 per 1,000 from 1989 - 1991, a decrease of nearly 30%.
- ◆ Alaska's infant mortality rate now ranks 12th in the Nation.
- ◆ Alaska's infant mortality rate for 1998 - 2000 is 12% lower than the overall rate for the nation in 2000 (7.1 per 1,000).
- ◆ In general, the Alaska Native population has an infant mortality rate nearly twice that of the white population. This disparity has not changed over the last ten years.
- ◆ Although the disparity between Alaska Natives and whites has remained unchanged, there has been a significant decline in infant mortality for Alaska Natives (42%) over the last decade.

Data Source: Alaska Bureau of Vital Statistics.

Rate ratios are often used to compare rates for two populations. A rate ratio of 1.0 indicates that there is no difference in the race-specific rates for the two populations being compared.

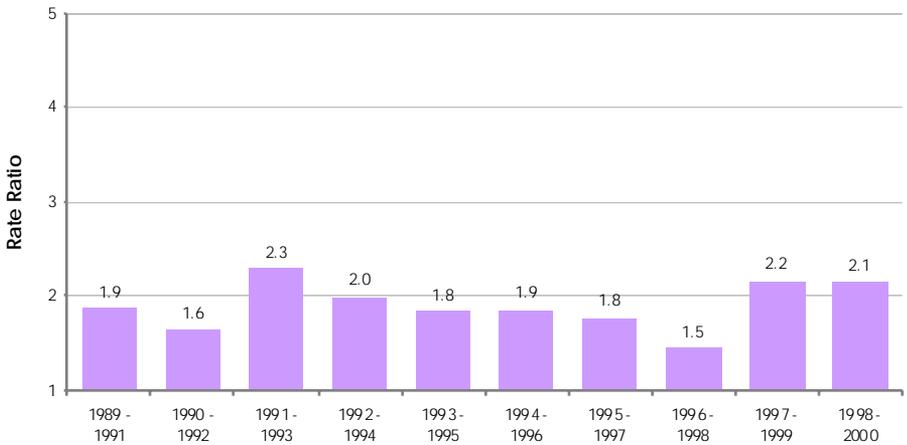
Birth Outcomes

Infant Mortality Rate by Three-Year Moving Average Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Racial Disparity in Infant Mortality Rates Alaska Native Versus White Populations Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Neonatal Mortality

Medical advances and improved access to prenatal care have contributed to declines in infant mortality during the neonatal period (from birth up to 28 days), particularly in preterm infants.

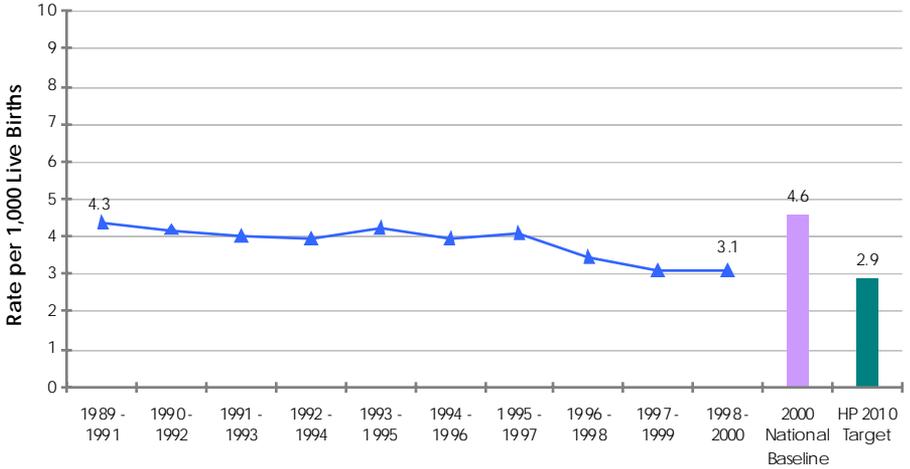
- ◆ In 1998 - 2000, Alaska's neonatal mortality rate was the lowest in the Nation (3.1 per 1,000 live births).
- ◆ Neonatal mortality in Alaska declined by almost 30% over the last decade .
- ◆ Alaska's neonatal mortality rate is consistently lower than the national average, which was 4.7 per 1,000 live births in 2000.
- ◆ From 1991 - 2000, neonatal infant mortality in Alaska declined 26.3% for whites and 31.1% for Alaska Natives. Although there have been significant declines in the neonatal mortality rates for all races, the rate for Alaska Natives has remained at about 1.5 times that of whites.

Data Source: Alaska Bureau of Vital Statistics.

Rate ratios are often used to compare rates for two populations. A rate ratio of 1.0 indicates that there is no difference in the race-specific rates for the two populations being compared.

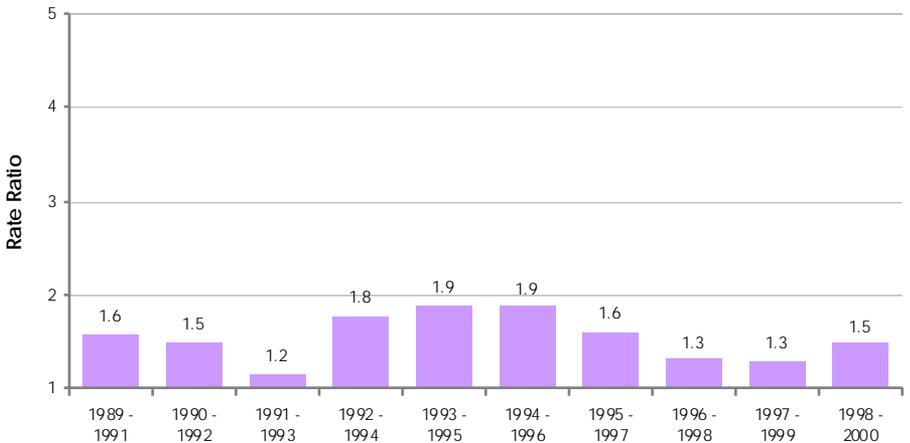
Birth Outcomes

Neonatal Mortality Rate by Three-Year Moving Average Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Racial Disparity in Neonatal Mortality Rates Alaska Native Versus White Populations Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Post-Neonatal Mortality

Post-neonatal mortality is more often caused by environmental conditions than problems with pregnancy and childbirth. Nationally, the leading causes of death during the post-neonatal period (28 through 364 days) are: Sudden Infant Death Syndrome (SIDS), birth defects, injuries, pneumonia/influenza, and homicide. Alaska's post-neonatal death rate is high relative to other states.

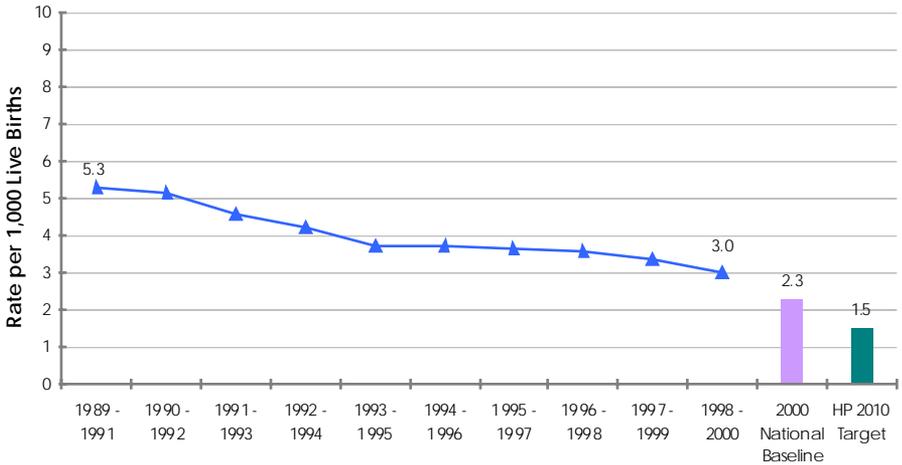
- ◆ Alaska's post-neonatal mortality rate for 1998 - 2000 was nearly 35% higher than the national rate in 2000 and twice as high as the Healthy People 2010 target.
- ◆ Post-neonatal mortality in Alaska has declined significantly over the last decade, from 5.3 per 1,000 live births in 1989 - 1991 to 3.0 per 1,000 live births in 1998 - 2000, a decline of 43%.
- ◆ From 1991 - 2000, post-neonatal mortality declined 40% for whites and 50% for Alaska Natives. Although there have been significant declines in the post-neonatal mortality rates for all races, the disparity between Alaska Natives and whites has not been significantly reduced.
- ◆ Over the last decade, babies born to Alaska Native mothers were 2.5 times more likely to die during the post-neonatal period than those born to white mothers.

Data Source: Alaska Bureau of Vital Statistics.

Rate ratios are often used to compare rates for two populations. A rate ratio of 1.0 indicates that there is no difference in the race-specific rates for the two populations being compared.

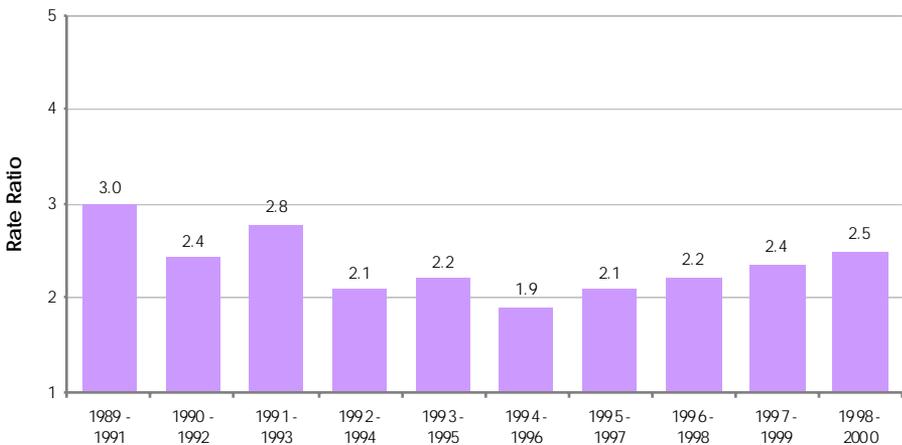
Birth Outcomes

Post-Neonatal Mortality Rate by Three-Year Moving Average, Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Racial Disparity in Post-Neonatal Mortality Rates Alaska Native Versus White Populations Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Fetal Mortality

Fetal mortality is calculated as the number of deaths during the fetal period (20 weeks gestation to birth) per 1,000 live births plus fetal deaths. Deaths during this period are often associated with maternal complications of pregnancy and birth defects. Prenatal smoking and drinking have been shown to greatly increase rates of fetal mortality.

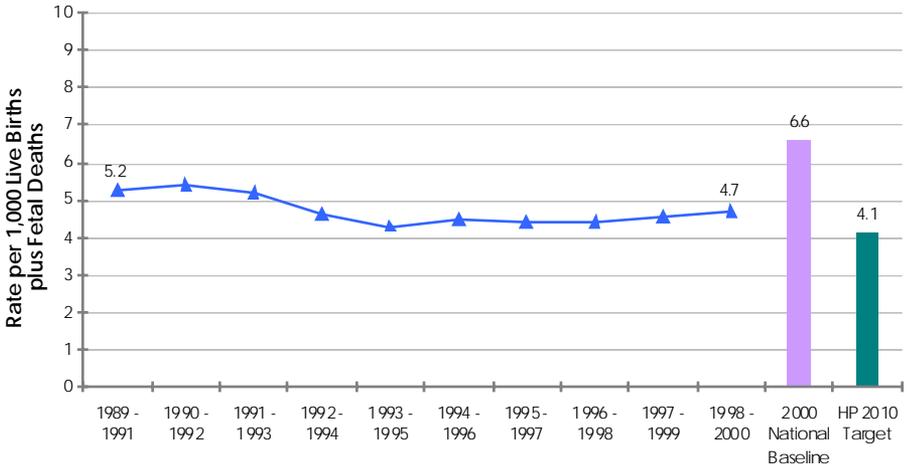
- ◆ Over the last decade, the overall fetal mortality rate for Alaska has been consistently lower than the national baseline. Alaska's fetal mortality rate in 1998 - 2000 was almost 30% lower than the national rate for 2000.
- ◆ Although lower than the national rate, fetal mortality in Alaska remains higher (15% higher in 1998 - 2000) than the Healthy People 2010 target.
- ◆ While the overall fetal mortality rate for Alaska has remained nearly unchanged over the last decade, there has been a significant increase for blacks (68%).
- ◆ Black women have a fetal mortality rate about 2.5 times that of Alaska Natives and whites.

Data Source: Alaska Bureau of Vital Statistics

Rate ratios are often used to compare rates for two populations. A rate ratio of 1.0 indicates that there is no difference in the race-specific rates for the two populations being compared.

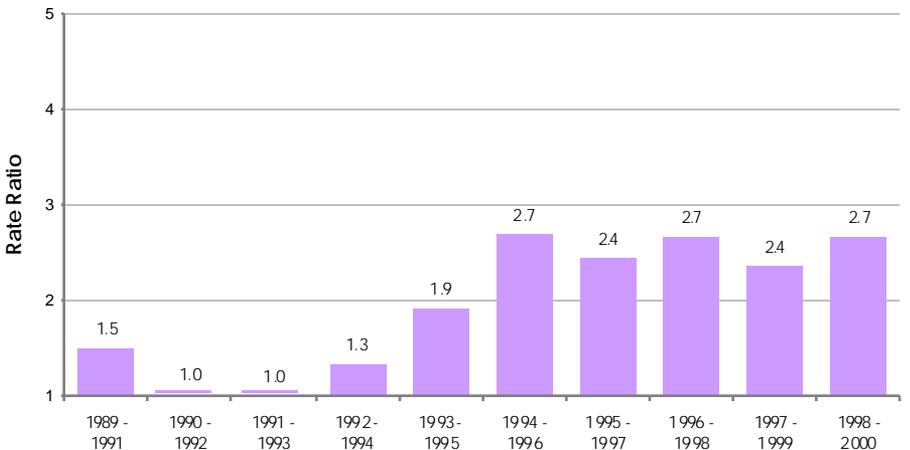
Birth Outcomes

Fetal Mortality Rate by Three-Year Moving Average Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Racial Disparity in Fetal Mortality Rates Black Versus White Populations Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Low and Very Low Birth Weight

Compared to infants of normal weight, low birth weight (less than 5.5 pounds) infants are at increased risk of impaired development, such as delayed motor and social development. Studies have shown that children who were born at low birth weights were more likely to have learning disabilities and be adversely affected in their performance at school than children who were born at normal birth weight. Infants born at very low birth weights (less than 3.3 pounds) have a 25% chance of dying before age 1.

- ◆ The 2000 national baseline for low birth weight was 1.8 times Alaska's rate in 2000 (7.6% compared to 4.4%) and the national average for very low birth weight was twice as high (1.4% compared to 0.7%).
- ◆ Over the last decade, there was no significant decline in the percentage of low or very low birth weight births in Alaska. In fact, the percentage of low birth weight babies born increased almost 16% in Alaska between 1991 and 2000.
- ◆ Although there has been no significant decline in these measures, Alaska remains much lower than the nation, ranking among the top five states for low birth weight and very low birth weight.
- ◆ In 2000, the rate of low birth weight for babies born to black mothers in Alaska was more than twice the rate for the total population and nearly 3 times the rate than babies born to white mothers.

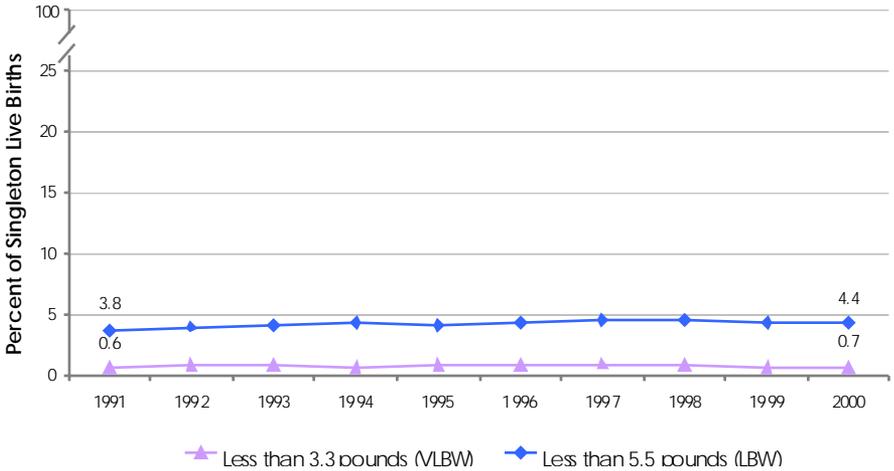
Note: The prevalence of low birth weight (LBW) and very low birth weight (VLBW) includes singleton births only.

Data Source: Alaska Bureau of Vital Statistics

The Healthy People 2010 Objective for the percentage of low and very low birth weight births are 5% and 0.9%, respectively.

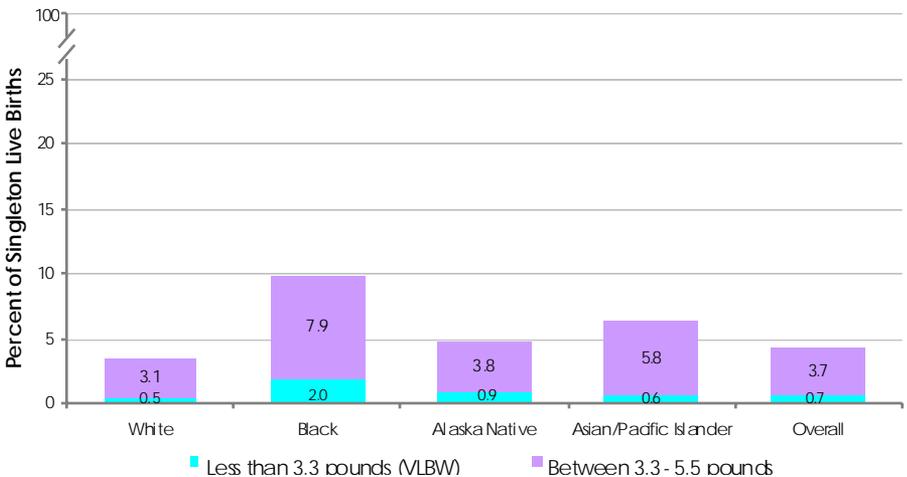
Birth Outcomes

Low and Very Low Birth Weight (LBW and VLBW) by Year Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Low and Very Low Birth Weight (LBW and VLBW) by Race Alaska, 2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Preterm Births

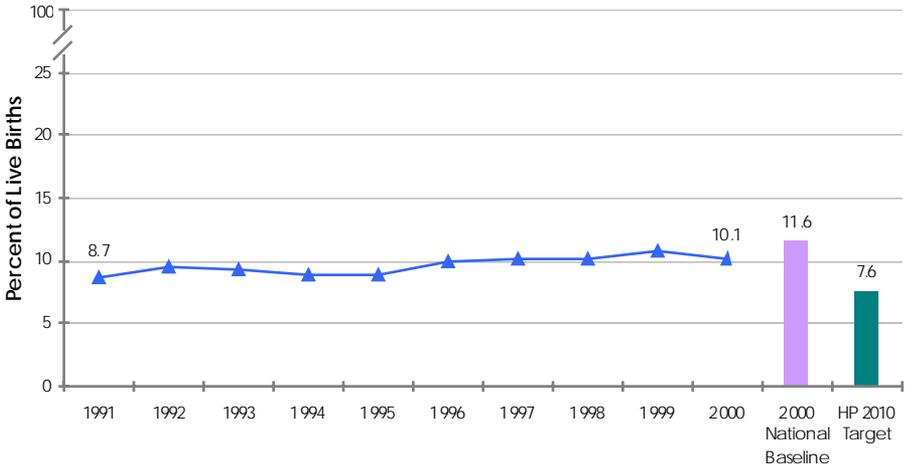
The majority of low and very low birth weight infants are born preterm. Nationally, preterm birth is the leading cause of neonatal deaths not associated with birth defects.

- ◆ Since 1991, the overall percentage of babies born preterm in Alaska (10.1% in 2000) has significantly increased by 13.8%.
- ◆ Over the last ten years, the percentage of preterm infants born to white mothers has consistently been lower than any other race. However, it is the only race-specific rate to increase significantly (22% from 1991 - 2000).
- ◆ Infants born to black mothers in 1991 - 2000 were 1.7 times more likely to be born preterm than whites. The prevalence of preterm birth among Alaska Natives and Asian/Pacific Islanders was 1.5 and 1.3 times that of whites, respectively.
- ◆ Blacks had higher rates of preterm birth than any other race over the last decade. In 2000, the preterm birth rate for blacks was almost twice that of whites.

Data Source: Alaska Bureau of Vital Statistics.

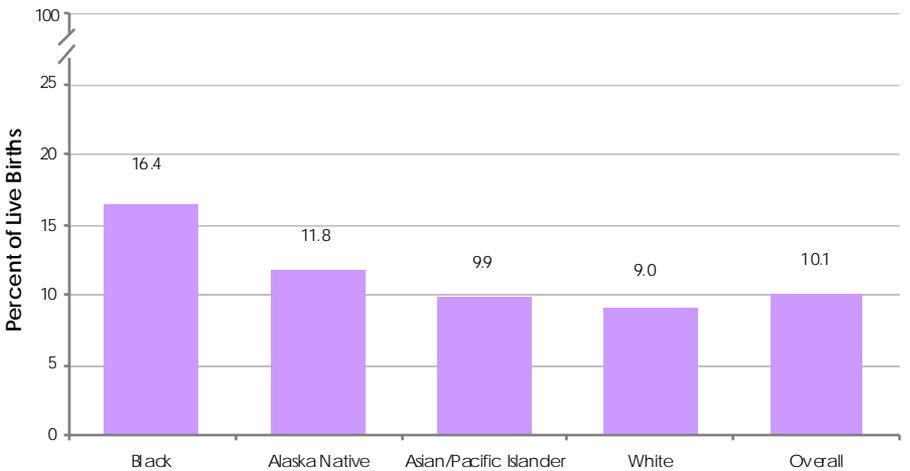
Birth Outcomes

Preterm Births (Less than 37 Weeks) by Year Alaska, 1991-2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Preterm Births by Race Alaska, 2000



Data Source: Alaska Bureau of Vital Statistics. Prepared by MCH Epidemiology Unit.

Prevalence of Birth Defects

Birth defects are the second leading identifiable contributing cause of infant death in Alaska behind preterm birth. During 1992 - 1999, approximately 1 in every 4 infant deaths in Alaska had congenital anomalies identified as a contributing cause of death. Both genetic and environmental factors can cause birth defects, however, the causes of about 70% of birth defects are unknown.

- ◆ Each year in Alaska, about 1,800 babies are born with at least one reportable birth defect. About 500 babies in each annual birth cohort are born with at least one major congenital anomaly*.
- ◆ Cardiovascular defects are the most common major congenital anomalies reported to the Alaska Birth Defects Registry, affecting roughly 1 in 60 newborns.
- ◆ Birth defects contribute to shorter life spans and long-term disability. For those children and families who live with birth defects, complex and diverse services are required from multiple public and private sector resources.
- ◆ Children with birth defects are often enrolled in state-funded Early Intervention/Infant Learning Programs. Every year, approximately 2,000 children receive services through this program alone, with an annual cost of \$3,800 per child.

* Major congenital anomalies are those that are defined and monitored by the National Birth Defects Prevention Network.

Data Sources: Alaska Maternal Infant Mortality Review; Alaska Birth Defects Registry; Alaska Infant Learning Program, Section of Maternal Child and Family Health.

Major Birth Defects in Alaska Birth Years 1996-1999

Birth Defect	Rate per 1,000	Number of Affected Live Births
Cardiovascular	17.7	1 in 60
Genitourinary	6.6	1 in 150
Gastrointestinal	5.9	1 in 170
Musculoskeletal	4.9	1 in 205
Central Nervous System	4.8	1 in 210
Orofacial	2.9	1 in 350
Chromosomal	1.8	1 in 560
Fetal Alcohol Syndrome*	1.6	1 in 625
Eye	0.8	1 in 1,250
Ear	0.4	1 in 2,860

* Fetal Alcohol Syndrome data are for birth years 1996 – 1998.

Data Source: Alaska Birth Defects Registry, MCH Epidemiology Unit

Fetal Alcohol Syndrome (FAS)

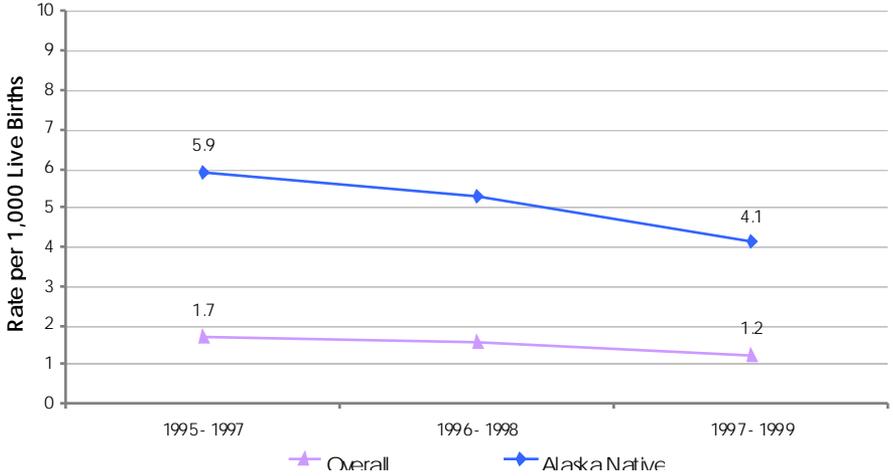
Infants who are exposed to maternal alcohol use during pregnancy are at risk for Fetal Alcohol Syndrome (FAS) and other alcohol-related birth defects. FAS is 100% preventable if a woman does not drink during pregnancy. First defined as a clinical condition in 1973, FAS has drawn considerable attention in Alaska. In 1998, the Section of Maternal, Child and Family Health established the Alaska Fetal Alcohol Syndrome Surveillance Project to identify and monitor FAS prevalence over time.

- ◆ During 1995 - 1999, an average of 15 Alaskan infants were born each year with Fetal Alcohol Syndrome.
- ◆ An average of 163 Alaskans born annually during 1995 -1999 were identified as being affected by maternal alcohol use during pregnancy.
- ◆ FAS is not diagnosed until three to five years after birth or later. An apparent declining trend in FAS prevalence in Alaska may be misleading, as children in younger birth cohorts may not yet have been diagnosed.
- ◆ Babies born to Alaska Native women have higher rates of FAS than other races. For birth years 1995 - 1999, the FAS prevalence among Alaska Natives was more than 15 times that of whites.
- ◆ More than one-third of children who were diagnosed with FAS were born preterm and with low or very low birth weight.

Race-specific estimates of FAS prevalence should be interpreted with caution. Increased awareness of maternal alcohol use and careful medical documentation by Alaska Native health organizations may result in more complete reporting of potential cases of FAS among Alaska Natives.

Data Source: Alaska Fetal Alcohol Syndrome Surveillance Project

FAS Prevalence by Race, Three-Year Moving Average Alaska, 1997-1999



Data Source: Alaska Fetal Alcohol Syndrome Surveillance Project, MCH Epidemiology Unit