



Alaska Maternal and Child Health Data Book 2003

**Alaska Division of Public Health
Section of Maternal Child and Family Health**

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Alaska Maternal and Child Health Data Book 2003

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The first edition of the *Alaska Maternal and Child Health (MCH) Data Book* brings together comprehensive information on the health status of Alaskan mothers, infants, children and families. The Data Book synthesizes information from statewide surveillance systems, surveys, vital records and program services to provide policy makers, public health professionals and health care providers with critical data on leading health status indicators and emerging issues in Maternal and Child Health. We hope that this format will serve as an easy-to-use reference guide for people seeking statistics and epidemiological information for use in program planning and decision making.

The *Alaska MCH Data Book* includes information through 2000, the most recent year of complete data as of January 2003. Unless otherwise noted, we provide data that is representative of a given population at the state level. In this edition, we generally do not provide information on specific geographic areas of the state, nor do we include data on small sub-populations. Because of Alaska's small population size, we employ moving averages over three or five years to express rates for conditions with small numerators. We provide race-specific information only when there are sufficient numbers to express a statistically reliable

rate or trend. In keeping with the Nation's 2010 Objective of eliminating disparities in leading health indicators, the *Data Book* uses rate ratios to emphasize significant racial disparities for leading MCH indicators. The MCH Epidemiology Unit performed all data analysis and interpretation. Data sources are provided.

Reliable data is frequently not available on important and emerging issues in Maternal and Child Health. Throughout the *Data Book*, we list health issues of increasing national and local significance. These issues often speak to unmet needs for public health surveillance.

The *Alaska MCH Data Book* is produced by the Section of Maternal Child and Family Health, MCH Epidemiology Unit. Our mission is to provide the most reliable and statistically accurate information for MCH program planning and evaluation. We believe that programs and policy should be founded and guided by reliable epidemiologic data. We trust the *Data Book* will be helpful to all who work toward improving the health and well being of Alaskan families.

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In an average year in Alaska...

9,954 babies are born

61 babies die before their first birthday

573 babies are born with low or very low birth weight

1028 babies are born preterm

500 babies are born with at least one major congenital anomaly

15 infants are born with Fetal Alcohol Syndrome

20 teens ages 15 - 19 years die from suicide

35 children ages 1 - 14 years,
24 teenagers age 15 - 19 years and
37 women ages 15 - 44 years
die from unintentional injury

Note: Based on data from 1998-2000 with the exception of Fetal Alcohol Syndrome which was based on 1995-1999.

Population Characteristics



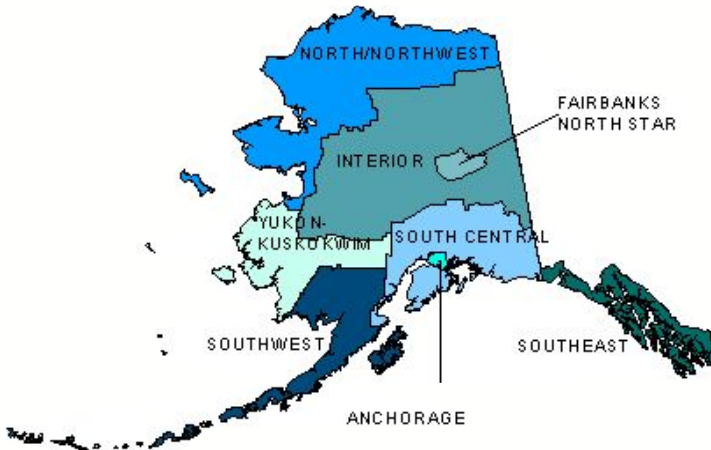
Population Size

The 2000 population estimate for Alaska is 627,697 – just 0.2% of the total United States (U.S.) population. Maternal and Child Health (MCH) programs serve infants, children from age one through nine, adolescents and women of childbearing age. Alaskans in these populations comprise almost half (48%) of the state’s total population.

- ◆ Alaska’s MCH population is proportionately larger than that of the United States.
- ◆ Population density averages one person per square mile in Alaska, compared to an average of 77.2 persons per square mile for the U.S.¹
- ◆ Alaska has the largest land area of any U.S. state (570,374 square miles) and one of the smallest populations. Long distances and the remote location complicate delivery of public health services in Alaskan towns and villages.

Data Source: Alaska Department of Labor

¹Alaska Department of Labor and Workforce Development, Alaska Population Overview, 1999 Estimates, 2000, p.16



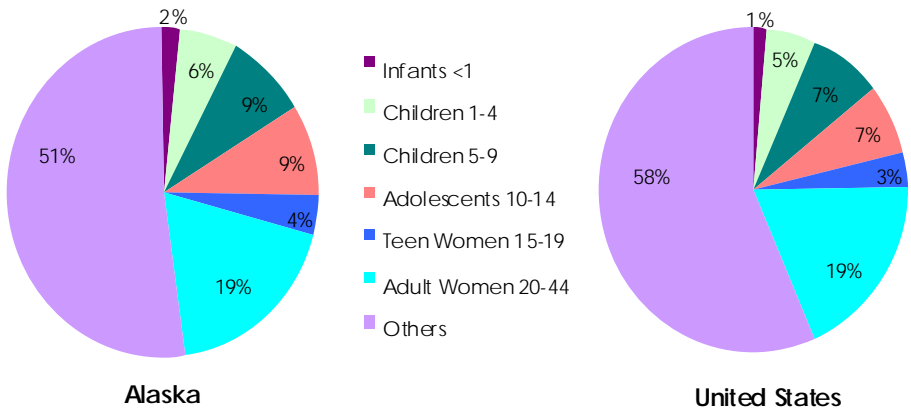
Population Characteristics

Population Composition by Maternal and Child Health Groupings, Alaska and United States, 2000

Population Group	Age in Years	Alaska Population Estimate	U.S. Population Estimate
Infants	< 1	9,762	3,827,009
Children	1 - 4	38,955	15,219,745
Children	5 - 9	54,545	20,549,505
Adolescents	10 - 14	56,238	20,528,072
Women of Childbearing Age	15 - 44	140,832	61,576,997
Teen Women	15 - 19	23,772	9,828,886
Adult Women	20 - 44	117,060	51,748,111
Others		327,365	159,720,578
Total Population		627,697	281,421,906

Data Sources: Alaska Department of Labor; U.S. Census Bureau, Population Estimates, 2000. Prepared by MCH Epidemiology Unit.

Maternal and Child Health Populations as a Percent of Total Population, Alaska and United States, 2000



Data Sources: Alaska Department of Labor; U.S. Census Bureau, Population Estimates, 2000. Prepared by MCH Epidemiology Unit.

Population Composition

The composition of Alaska's population is distinctly different from other states in the United States (U.S.).

- ◆ Based on 1999 population groupings*, minority groups in Alaska comprise 26% of Alaska's population compared to 18% of the total U.S. population.
- ◆ Alaska Natives** comprise 17% of Alaska's total population, compared to just 1% of the total U.S. population.
- ◆ Alaska's population is younger than the total U.S. population – 34% of Alaskans are under age 20 compared to 27% of Americans as a whole.

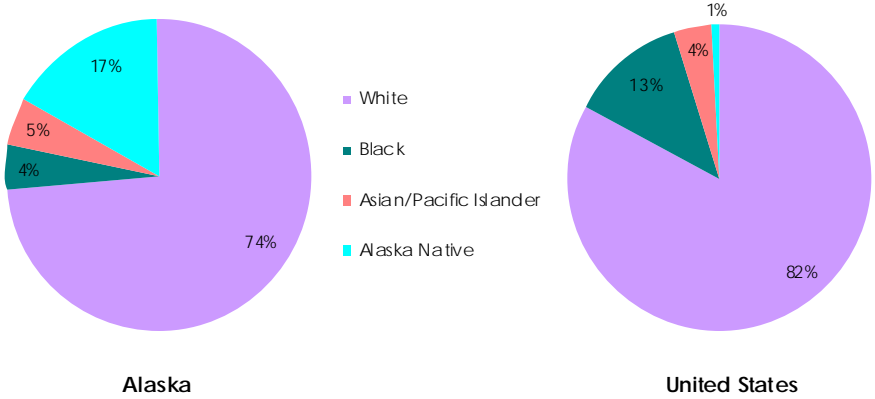
Data Source: Alaska Department of Labor

* The manner by which race is collected for population estimates changed with the 2000 U.S. Census. The Alaska Bureau of Vital Statistics has not yet converted to collecting multi-race information. This presents a problem for computing race-specific estimates of MCH indicators that combine birth or death information with population estimates (such as birth and fertility rates). Although most data presented in this issue of the MCH Data Book is current to 2000, we present 1999 data whenever race-specific population estimates are used.

** In this publication, the Alaska Native race category includes American Indians and Alaska Natives.

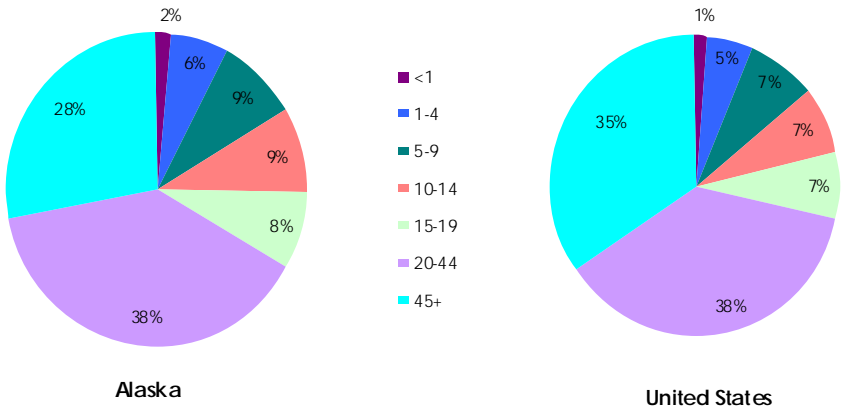
Population Characteristics

Population Distribution by Race Alaska and United States, 1999



Data Sources: Alaska Department of Labor; U.S. Census Bureau, Population Estimates, 1999. Prepared by MCH Epidemiology Unit

Population Distribution by Age in Years Alaska and United States, 2000



Data Sources: Alaska Department of Labor; U.S. Census Bureau, Population Estimates, 2000. Prepared by MCH Epidemiology Unit

Population Growth

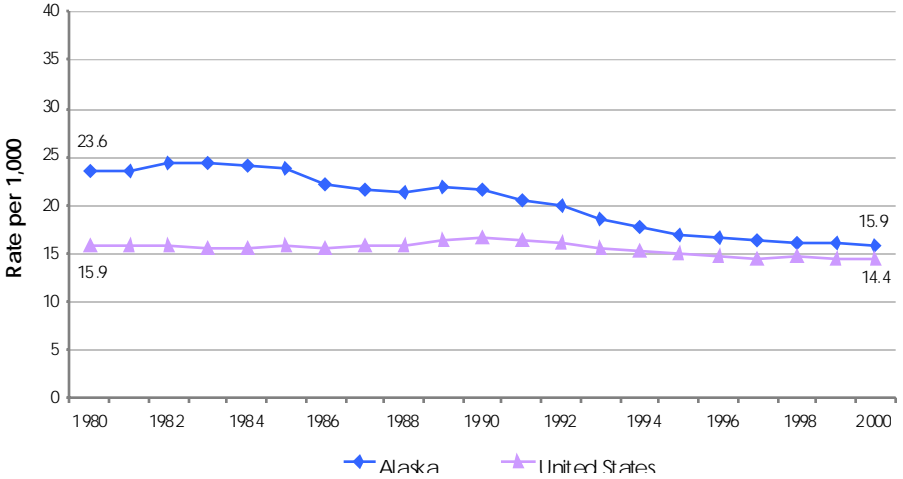
Historically, population growth in Alaska is characterized by periods of rapid growth due to in-migration during economic booms. By 1993, natural population increase (more births than deaths) began to provide the major stimulus for population growth.

- ◆ Alaska's crude birth rate, 15.9 per 1,000 population in 2000, is one of the highest in the nation. The crude birth rate for the United States was 14.4 live births per 1,000 in 2000.
- ◆ Alaska's crude birth rate declined 26.4% between 1990 and 2000. The birth rate for the nation declined by 16.2% over the same time period.
- ◆ Alaska Natives have the highest birth rate of all racial groups in Alaska (23.4 per 1,000 in 1999) – almost twice that of whites and about 1.5 times that of blacks and Asian/Pacific Islanders. One-fourth of infants born in Alaska annually are Alaska Native.

Data Sources: Alaska Bureau of Vital Statistics; National Center for Health Statistics.

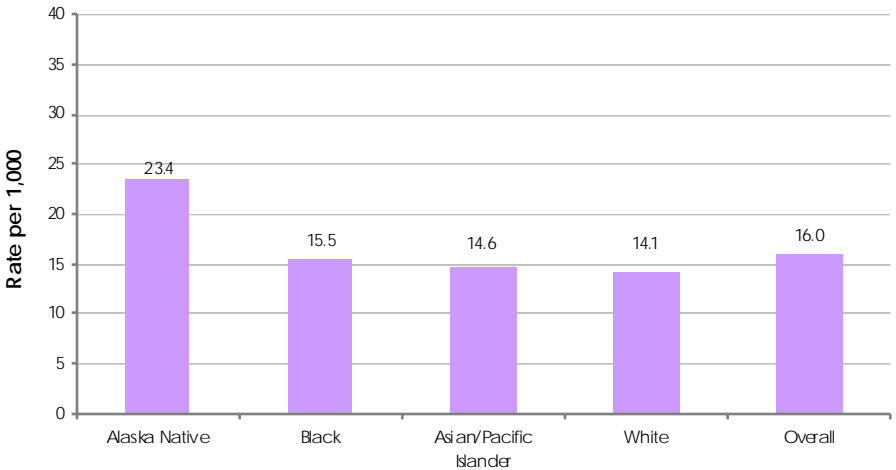
Population Characteristics

Crude Birth Rate by Year Alaska and United States, 1980-2000



Data Sources: Alaska Bureau of Vital Statistics; National Center for Health Statistics. Prepared by MCH Epidemiology Unit.

Crude Birth Rate by Race Alaska, 1999



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

Reproductive Health



Fertility

The fertility rate of a population is expressed by the number of births that occur over a given time period per thousand women of childbearing age (15 - 44 years). Fertility is declining in the United States and in Alaska. Despite a rapid decline in fertility since 1980, Alaska still has one of the highest fertility rates in the country.

- ◆ In 1980, Alaska's fertility rate was 31% higher than the national rate. Between 1980 and 2000, fertility in Alaska declined by 20%. While still significantly higher than the national rate, Alaska's fertility rate differed from the national average by just 4.5% in 2000.
- ◆ Alaska women are most likely to have a baby when they are in their twenties. The fertility rate for 15 - 19 year olds (usually referred to as the teen birth rate) is low in comparison – one-third the rate of 25 - 29 year olds and about one-half that of 30 - 34 year olds.
- ◆ Alaska Natives have higher fertility rates for every age group than Alaskan women of other races. Alaska Native teenagers, especially older teens (ages 18 - 19), have very high fertility rates compared to other teenagers – almost twice the total fertility rate for 18 - 19 year olds.

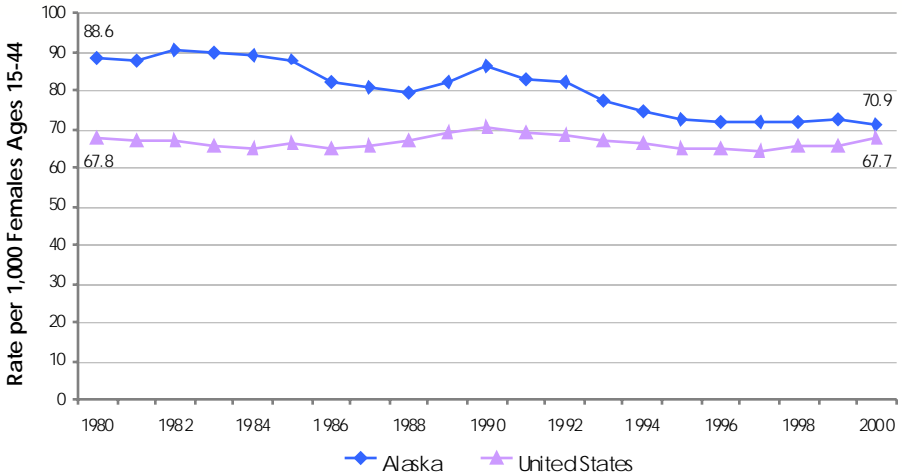
According to the Alaska Pregnancy Risk Assessment Monitoring System,

- ◆ Alaskan women who delivered a live-born infant in 2000 started menstruating at an average age of twelve and got pregnant with their first baby at age 20.
- ◆ The period of time between menarche and first pregnancy is, on average, one-third shorter for Alaska Native women (6 years) than for other races.

Data Sources: Alaska Bureau of Vital Statistics; National Center for Health Statistics; Alaska Pregnancy Risk Assessment Monitoring System.

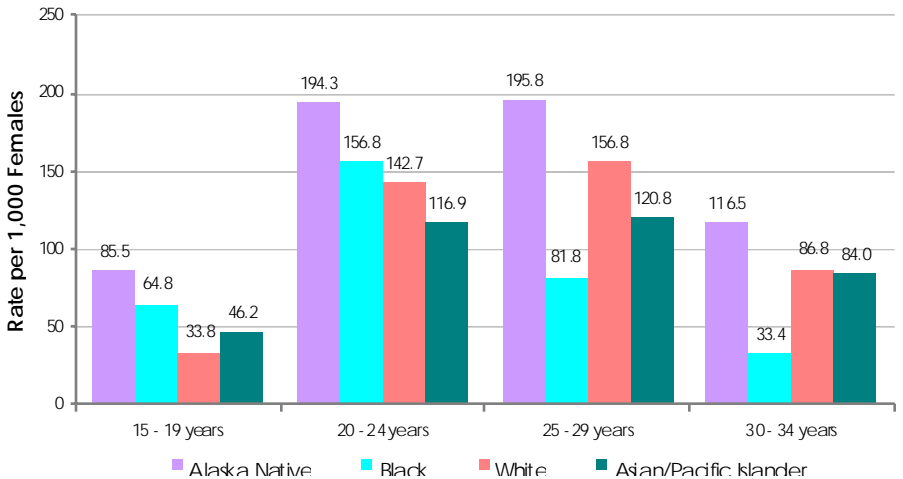
Reproductive Health

Fertility Rates by Year Alaska and United States, 1980-2000



Data Sources: Alaska Bureau of Vital Statistics; National Center for Health Statistics. Prepared by MCH Epidemiology Unit

Fertility Rate by Race and Age Alaska, 1999



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

Contraception

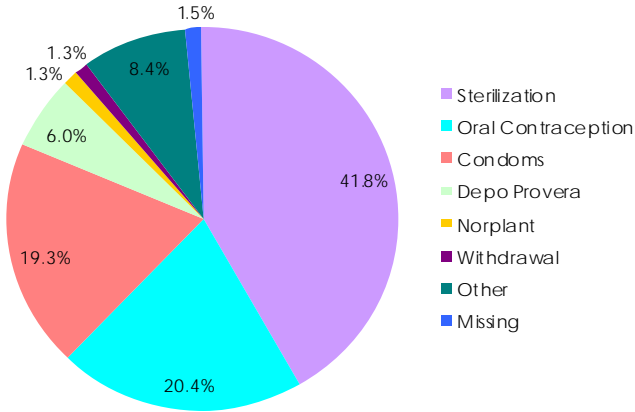
Seventy percent of Alaskan women ages 18 and over report that they use some type of birth control method. Among these women, the most frequently used method is sterilization (43%). Other commonly used methods are oral contraceptive pills (20%) and condoms (19%).

- ◆ Almost one-fourth of Alaskan women ages 18 and over report that they are not using birth control. Among these women, 18% want to be pregnant, while 53% of them cite reasons for not practicing birth control that put them at risk of having an unintended pregnancy.
- ◆ Twenty-three percent of Alaskan women who delivered a live-born infant in 2000 reported they became pregnant despite the use of a contraceptive method.
- ◆ Eighty-one percent of Alaskan women report that they were currently using a method of birth control when surveyed at about three months postpartum.

Data Sources: Alaska Behavioral Risk Factor Surveillance System; Alaska Pregnancy Risk Assessment Monitoring System.

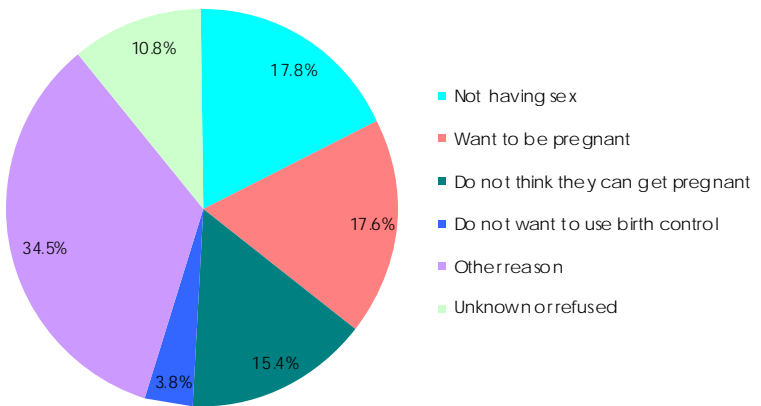
Reproductive Health

Birth Control Methods Among Women Who Practice Contraception, Ages 18 and Over, Alaska, 1998



Data Source: Alaska Behavioral Risk Factor Surveillance System. Prepared by MCH Epidemiology Unit.

Reasons for Not Using Birth Control, Women Ages 18 and Over, Alaska, 1998



Data Source: Alaska Behavioral Risk Factor Surveillance System. Prepared by MCH Epidemiology Unit.

Family Planning

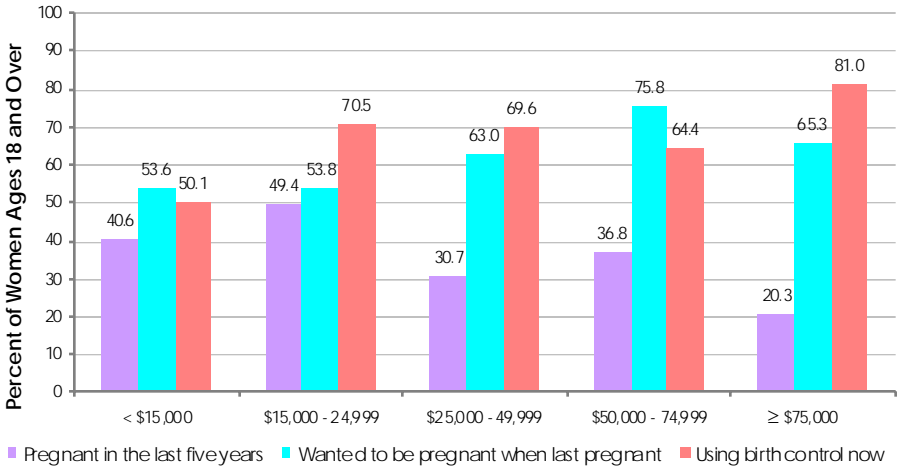
Income and race are associated with fertility and contraceptive behavior. As income decreases, women are more likely to have been pregnant in the last five years, less likely to have wanted to be pregnant, and less likely to be using birth control.

- ◆ Choice of health care provider is related to income level, with women in the lower income categories more frequently using public providers as their usual source of care. Almost one-fourth of Alaskan women ages 18 and over go to public health care providers as their usual source of services for female health concerns, while 62% report going to private physicians.
- ◆ Black women who delivered a live-born infant in 2000 had the highest percentage of self-reported postpartum birth control use (90%), followed by whites (83%), Alaska Natives (77%) and Asian/Pacific Islanders (70%).
- ◆ Black women who delivered a live birth in 2000 had the highest percentage of having had a live-born infant despite the use of birth control (36%), followed by whites (24%), Alaska Natives (22%) and Asian/Pacific Islanders (20%).

Data Sources: Alaska Behavioral Risk Factor Surveillance System; Alaska Pregnancy Risk Assessment Monitoring System.

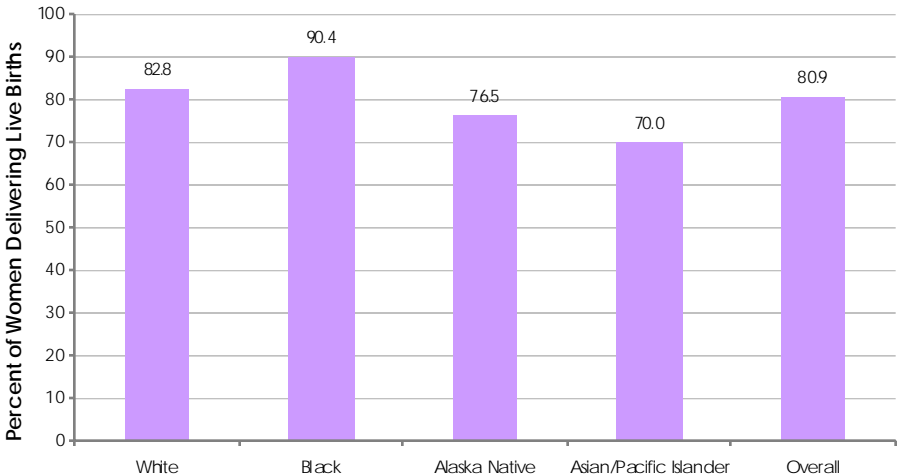
Reproductive Health

Reproductive Health Characteristics by Annual Income Level, Women Ages 18 and Over, Alaska, 1998



Data Source: Alaska Behavioral Risk Factor Surveillance System. Prepared by MCH Epidemiology Unit.

Postpartum Birth Control Use by Race Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Unintended Pregnancies

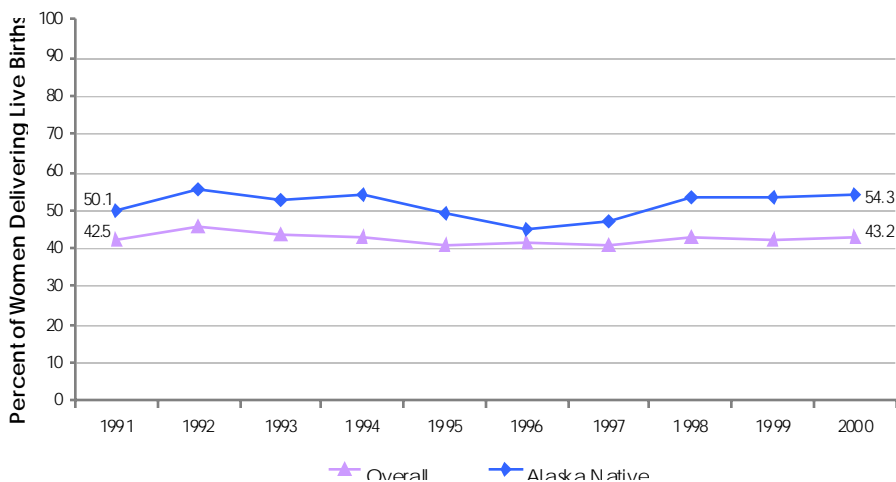
Unintended pregnancies result in considerable emotional and financial costs to individuals and society. Pregnancy is considered to be unintended when the woman did not want to be pregnant at the time or desired a later pregnancy. For the information presented here, unintended pregnancies are limited to those that result in a live-born infant.

- ◆ In Alaska, the overall prevalence of unintended pregnancies resulting in live births (42.6%) has not changed significantly over the past decade.
- ◆ The prevalence of unintended pregnancy among women who deliver a live birth is consistently higher among Alaska Native women compared to white women.
- ◆ Alaskan teenagers who deliver a live-born infant are more likely than women of other ages to have an unintended pregnancy. The prevalence of unintended pregnancies among teenagers less than 18 years old and 18 -19 years old was 91% and 61%, respectively, in 2000.
- ◆ Women who were in their thirties when they had their most recent baby had the lowest prevalence of unintended pregnancy (30.4%).

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

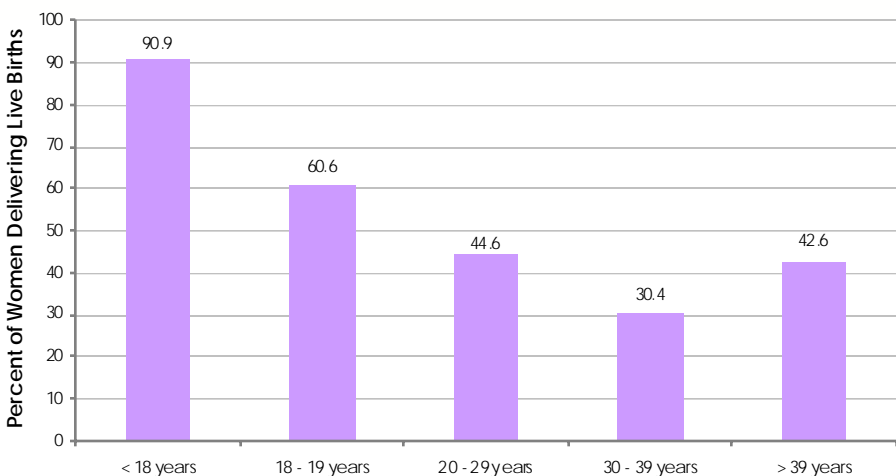
Reproductive Health

Unintended Pregnancies Among Women Delivering Live Births by Race and Year, Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Unintended Pregnancies Among Women Delivering Live Births by Age, Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Health



Early and Adequate Prenatal Care

Inadequate prenatal care, including late initiation of care, infrequent prenatal visits, or no care at all, is associated with poor infant and maternal outcomes. Mothers having late or no prenatal care are more likely to have low birth weight or preterm infants and are at increased risk for pregnancy-related mortality and complications of childbirth.

- ◆ In 2000, the national baseline for prenatal care in the first trimester and for adequate* prenatal care were 83% and 74% respectively, compared to Alaska at 80.5% and 67.4%.
- ◆ The percent of Alaskan women who begin prenatal care in the first trimester is slowly declining, as is the percent of mothers receiving adequate* prenatal care. This disconcerting decline in the reported quality of prenatal care in Alaska is being investigated by the Section of Maternal, Child and Family Health and the Alaska Bureau of Vital Statistics.

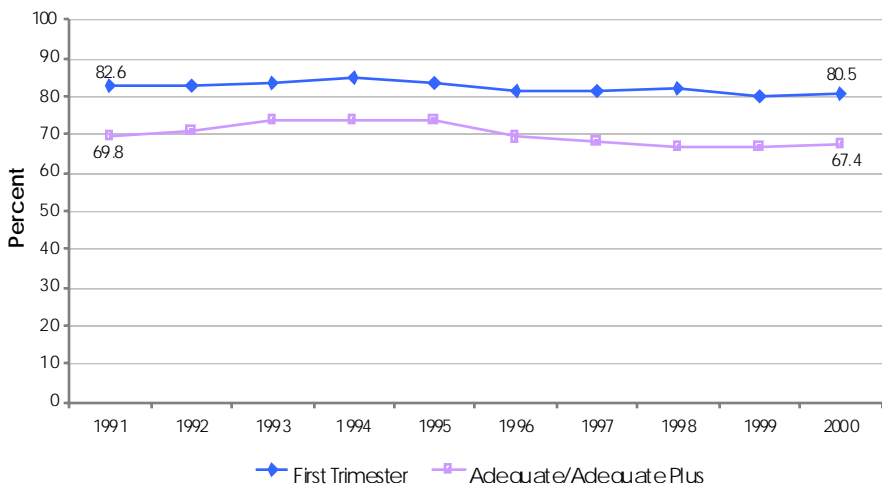
* Adequate prenatal care is a combination of adequate and adequate plus as defined by the Adequate Prenatal Care Utilization (APNCU), or Kotelchuck, Index.

Data Source: Alaska Bureau of Vital Statistics.

The Healthy People 2010 goals for care beginning in the first trimester of pregnancy and for adequate prenatal care have been set at 90%.

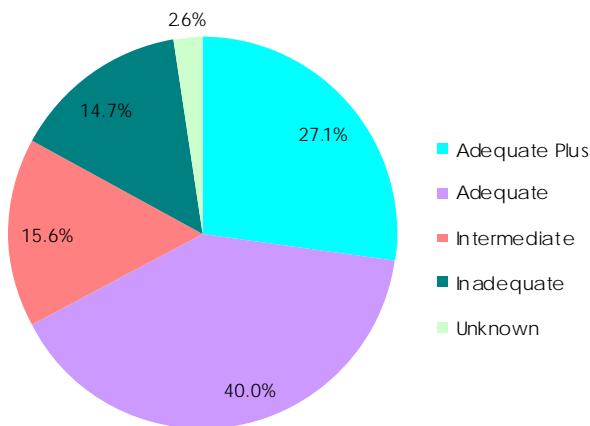
Prenatal Health: Protective Behaviors

Prenatal Care (First Trimester and Adequate) by Year Alaska, 1991-2000



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

Level of Prenatal Care Adequacy Alaska, 1999



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

Factors Affecting Prenatal Care

Early and adequate prenatal care insures improved maternal and infant outcomes. In Alaska, the lack of improvement in prenatal care indicators has been recognized as a problem, particularly for Alaska Native women. Since the risk of poor birth outcomes is greatest among the youngest mothers (ages 15 years and under), prevention of unintended pregnancy in adolescents and education of women about the need for early, continuous prenatal care are essential.

- ◆ The likelihood of adequate prenatal care increases with maternal age. Fewer than one-half of pregnant Alaskan women ages 15 years and under receive early or adequate prenatal care.
- ◆ Although the percentage of women receiving adequate prenatal care tends to increase with age, adequacy of prenatal care for Alaskan women of all age groups is significantly lower than the Healthy People objective of 90%.
- ◆ Prenatal care among young women is significantly lower than prenatal care received among other age groups. In 2000, 48.3% of teen women less than 15 years and 71% of women ages 15 - 19 years received prenatal care in the first trimester compared with over 80% of women in other age groups.
- ◆ Compared to other races in 2000, Alaska Natives received early and adequate* prenatal care less often. Whites had the highest prevalence of both early (84.9%) and adequate* prenatal care (74.4%) – 21% and 46% higher than the reported prevalence for Alaska Natives.

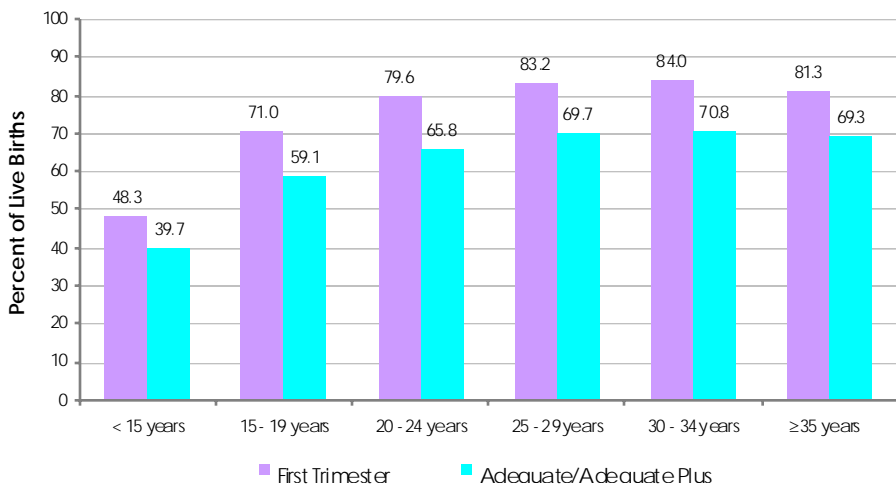
Disparities in prenatal care indicators for Alaska Natives may be partially explained by variation in the continuity of care for village residents. Utilization of different providers during the pregnancy may not be recorded accurately on the birth certificate.

* Adequate prenatal care is a combination of adequate and adequate plus as defined by the Adequate Prenatal Care Utilization (APNCU), or Kotelchuck, Index.

Data Source: Alaska Bureau of Vital Statistics.

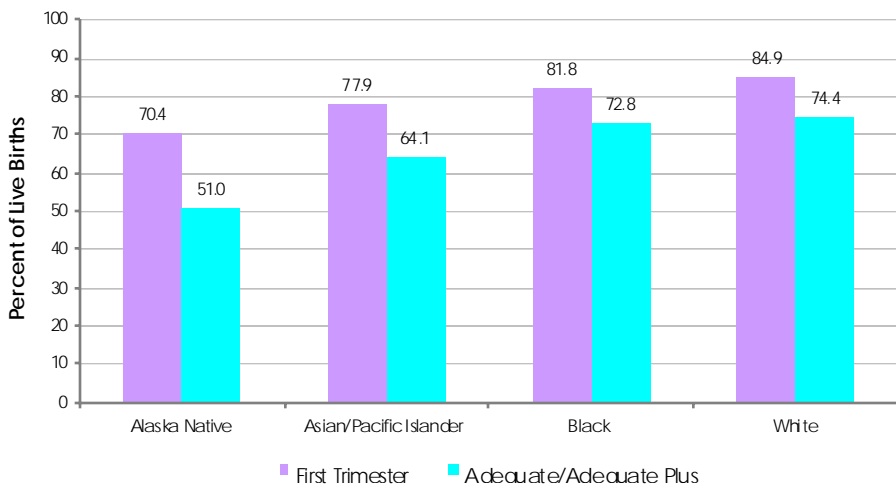
Prenatal Health: Protective Behaviors

Prenatal Care by Age Alaska, 2000



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

Prenatal Care by Race Alaska, 2000



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

Accessibility of Prenatal Care

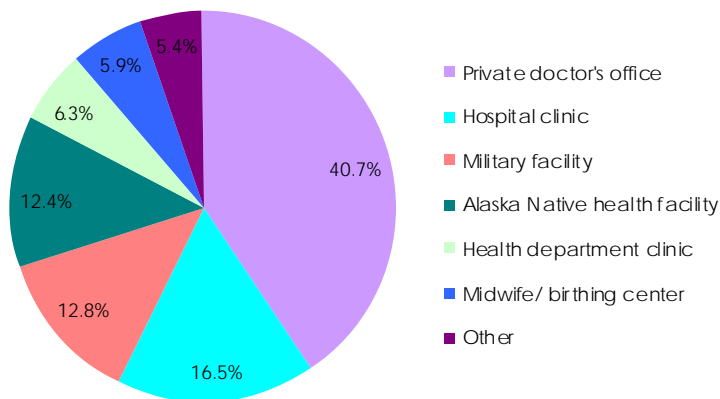
For women to receive early and adequate prenatal care, prenatal health care services must be available, accessible, and affordable. The type of health care provider seen, insurance status, early recognition of pregnancy and ability to find prenatal care locally may affect the level of prenatal care coverage in a population.

- ◆ Nearly 41% of Alaskans use private doctors as their primary source for prenatal care, followed by hospital clinics (16.5%), military facilities (12.8%), and Alaska Native clinics (12.4%). About 6% each use a health department clinic or midwife/birthing center.
- ◆ In 2000, prenatal care for 41% of the Alaskan women who delivered live births was paid, at least in part, by Medicaid. Private health insurance was used by 38% and one-fourth of Alaska women who delivered a live birth used personal income to help pay for their prenatal care.
- ◆ More than 20% of Alaska-resident women who delivered a live-born infant in 2000 did not get prenatal care as early in their pregnancy as they wanted. Among these women, nearly one-third reported they did not know they were pregnant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

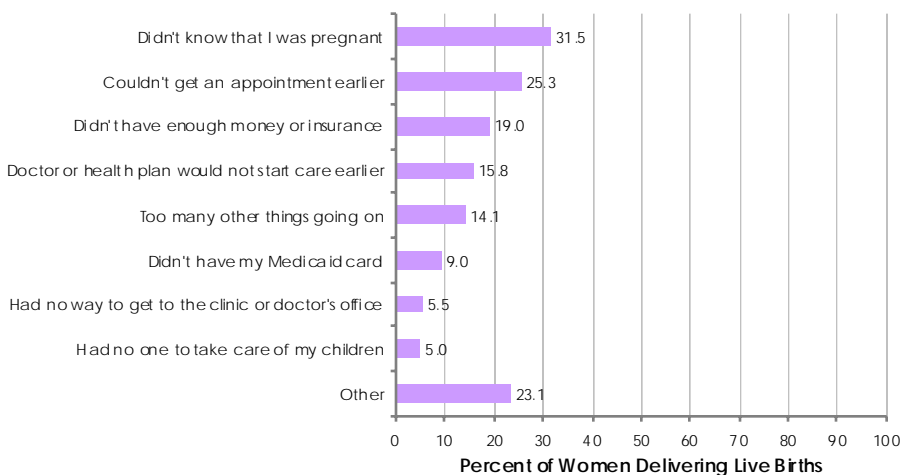
Prenatal Health: Protective Behaviors

Source of Prenatal Care Among Women Delivering Live Births, Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Reasons Prenatal Care Not Obtained Earlier Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Care Counseling

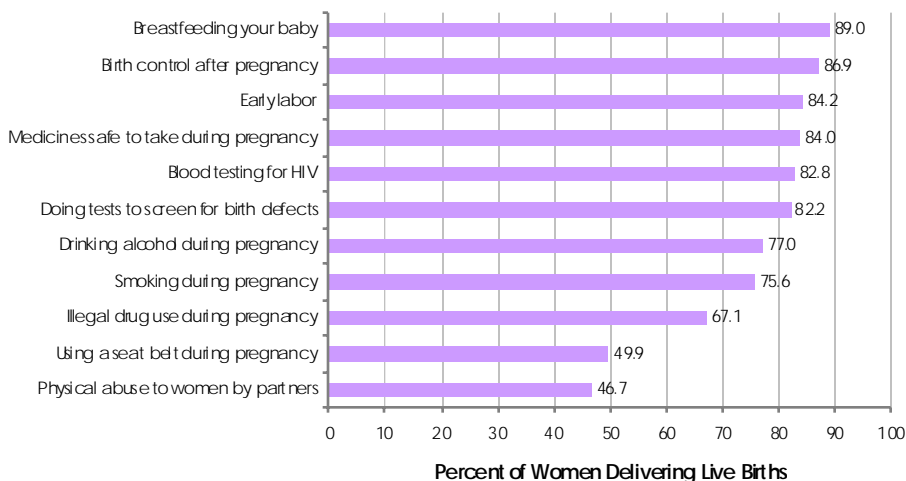
Good prenatal care includes screening for important risk factors, providing prenatal counseling, and promoting healthy behaviors. Prenatal care providers should offer education and counseling about behaviors that can affect maternal and infant health, as well as strategies for reducing risks and insuring a safe pregnancy and delivery.

- ◆ In 2000, the main topic areas discussed by health care workers with their prenatal patients were breastfeeding (89.0%), birth control methods to use after pregnancy (86.9%), and what to do if labor starts early (84.2%).
- ◆ Less often discussed prenatal topic areas were how using illegal drugs could affect the baby (67.1%), using a seat belt during pregnancy (49.9%), and physical abuse to women by their partners (46.7%).
- ◆ From 1996 - 1999, there was a significant increase (50%) in the percentage of women who indicated that their prenatal care provider had ever asked them directly whether they had been hurt or threatened by their partner.
- ◆ During 1999, 60.7% of Alaska Native women who delivered were screened prenatally for domestic violence, compared with 44.1% of Asian/Pacific Islanders, 35.8% of whites, and 32.2% of blacks.
- ◆ According to the Alaska Pregnancy Risk Assessment Monitoring System, 34.7% of Alaska women who delivered a baby during 1996 - 1999 took a childbirth class while they were still pregnant. Thirty-nine percent of white women, compared with 34.6% of black women, 25.4% of Alaska Native women and 22.3% of Asian/Pacific Islanders took a childbirth class during their pregnancy.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

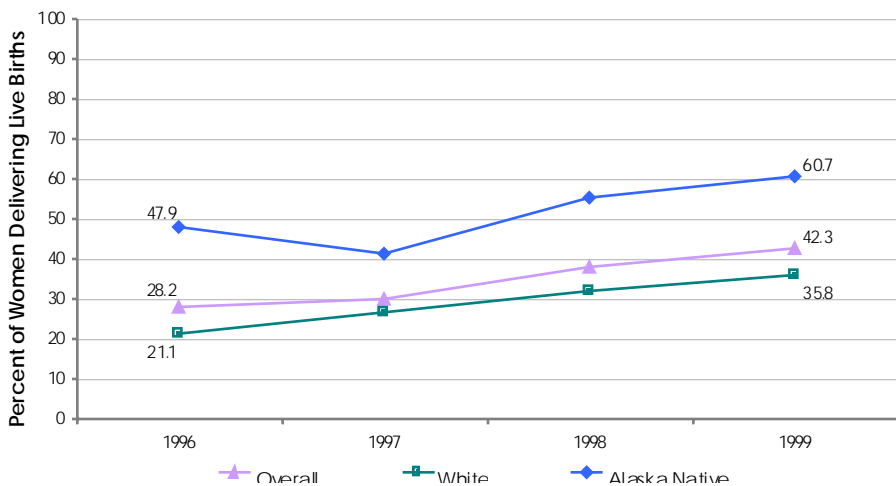
Prenatal Health: Protective Behaviors

Prenatal Care Counseling Received by Topic Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Screening for Domestic Violence by Race and Year, Alaska, 1996-1999



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Medicaid and WIC

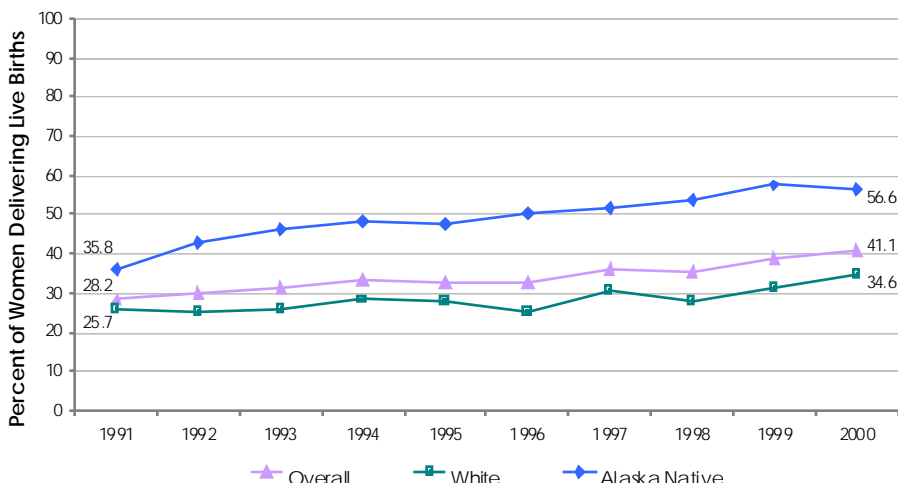
The Children's Health Insurance Program for the State of Alaska, Denali KidCare, was implemented on March 1, 1999. This health initiative represented the biggest expansion of the Medicaid program in Alaska. In addition to funding children's health, Denali KidCare expanded coverage to pregnant women. Denali KidCare recipients are automatically eligible for the Supplemental Nutrition Program for Women, Infants, and Children (WIC).

- ◆ Medicaid coverage of prenatal care (either in part or in whole) in Alaska has been steadily increasing over the past decade.
- ◆ Both Alaska Native and white women have experienced increases in Medicaid coverage of prenatal care, however, Alaska Native women have consistently higher percentages covered by Medicaid than white women.
- ◆ Prenatal WIC participation has also been steadily increasing over the past decade. Nearly 50% of women who delivered a live-born infant in 2000 received WIC services while they were pregnant.
- ◆ WIC participation among prenatal Alaska Native women in 2000 was 66.3% – a 32% increase from 1991. WIC participation rates among white women nearly doubled between 1991 and 2000, but remained constant from 1998 - 2000.

Data Source: Alaska PregnancyRisk Assessment Monitoring System.

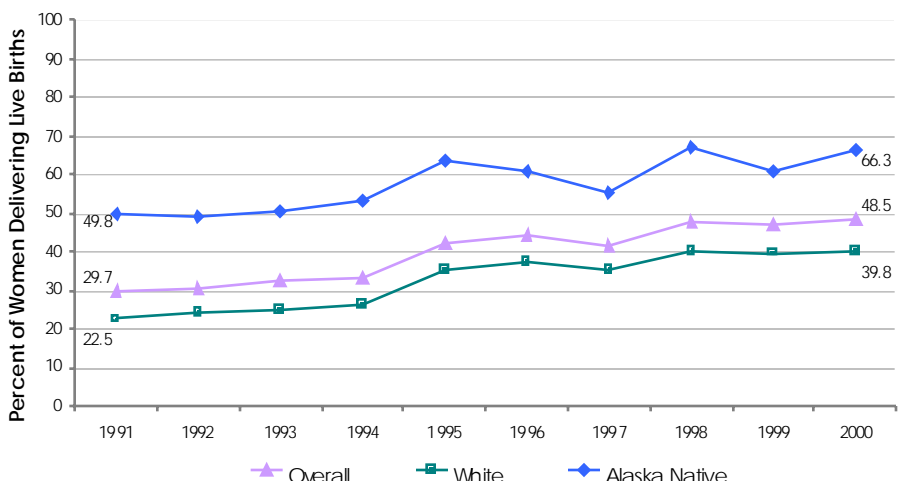
Prenatal Health: Protective Behaviors

Medicaid Coverage for Prenatal Care by Race and Year Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal WIC Participation by Race and Year Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Folic Acid

For women of childbearing age, increasing folic acid use by taking multivitamins before and during pregnancy can reduce the risk of certain birth defects of the spinal cord or brain (neural tube defects or NTDs). Women who might become pregnant should take a multivitamin with 400 micrograms of folic acid every day and eat a balanced diet that includes a variety of fruits, vegetables, and fortified breads and cereals.

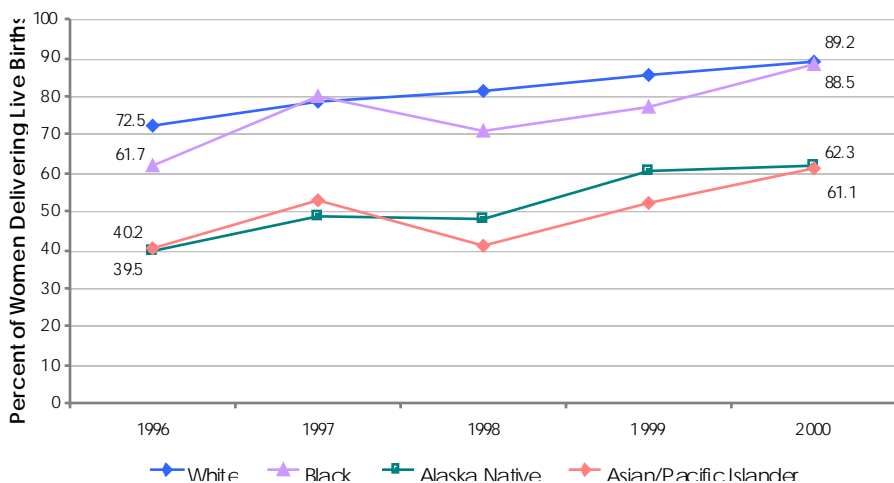
- ◆ According to the Alaska Birth Defects Registry, approximately 9 Alaskan babies are born every year with NTDs that might have been prevented by taking folic acid.
- ◆ According to the Alaska Pregnancy Risk Assessment Monitoring System, 58.1% of women who delivered a live-born infant in 2000 indicated they never took a multivitamin in the month before they got pregnant. Only 23.1% said they took a multivitamin every day of the week.
- ◆ Knowledge in Alaska about folic acid's benefits increased from 63.0% in 1996 to 80.9% in 2000. The older the mother, the more likely she is to know about the benefits of folic acid.
- ◆ Over 1996 - 2000, knowledge about the benefits of folic acid was highest among white and black mothers (89.2% and 88.5%, respectively). Just over 60% of Alaska Native and Asian/Pacific Islander mothers were knowledgeable about folic acid benefits.
- ◆ Forty-one percent of Alaskan women hear about folic acid from their doctor or other health care provider, but more women (70%) report hearing about folic acid benefits from a newspaper or magazine.¹

Data Sources: Alaska Birth Defects Registry; Alaska Pregnancy Risk Assessment Monitoring System.

¹ Alaska Folic Acid Survey December 2000.

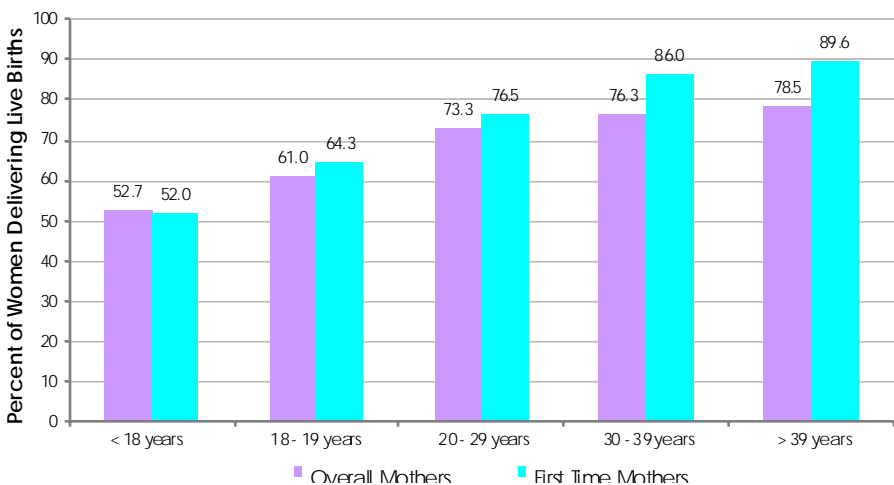
Prenatal Health: Protective Behaviors

Knowledge of Folic Acid Benefits by Race and Year Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Knowledge of Folic Acid Benefits, First Time and Overall Mothers, by Age, Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Overview of Prenatal Risk Factors

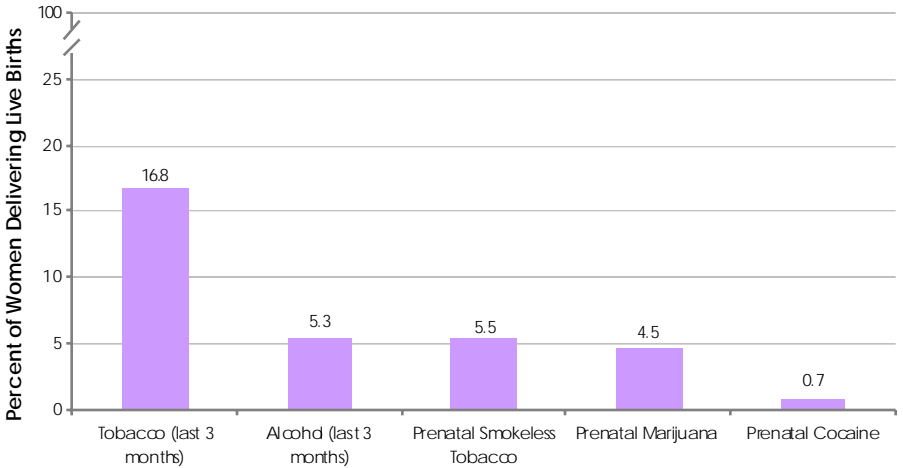
Prenatal use of substances (licit or illicit) is of concern for Alaskans. Drug abuse has a devastating impact on families and communities. When a woman abuses substances while pregnant, her unborn child can be adversely impacted in a variety of physical and developmental ways. Physical violence against women during pregnancy or surrounding the pregnancy period is recognized as a serious health concern for mothers and infants. Substance use is correlated with domestic violence, which suggests that prevention efforts in one venue may help the other.

- ◆ Nearly 17% of the prenatal population smokes.
- ◆ Alcohol, smokeless tobacco, or marijuana is used by 5% of the prenatal population.
- ◆ From 1991 - 2000, prenatal cocaine use in Alaska has remained at less than 1%.
- ◆ Their husband or partner physically abused approximately 5% of pregnant women who delivered a baby during 1996 - 2000.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

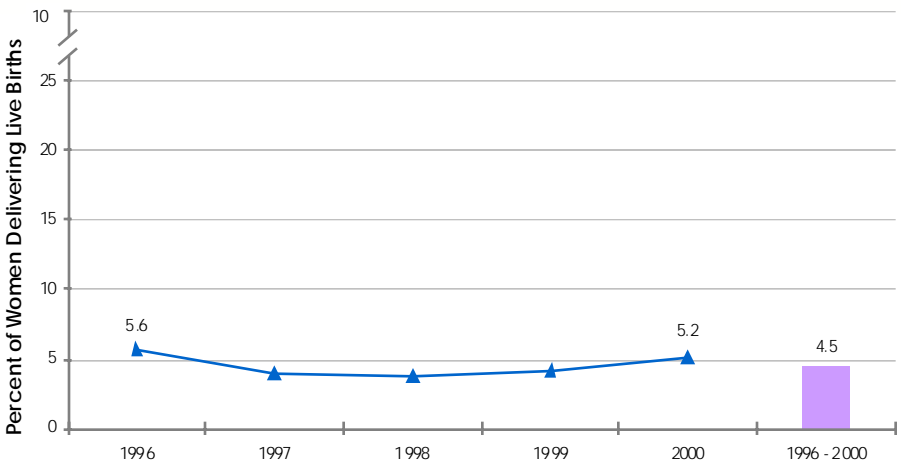
Prenatal Health: Risk Behaviors

Prenatal Substance Use Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Physical Abuse by Husband/Partner by Year Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Alcohol Use

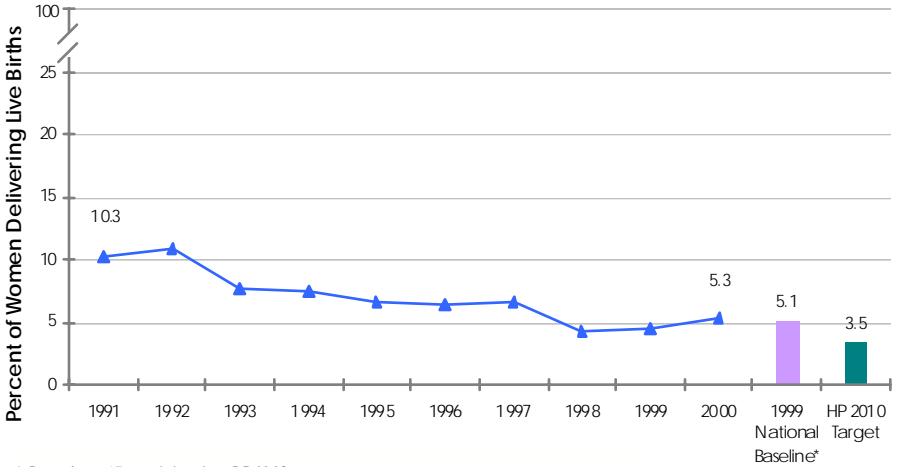
Prenatal alcohol use is the leading preventable cause of birth defects and mental retardation. Health care providers should routinely screen women of childbearing age for alcohol use and counsel them about the adverse effects of alcohol use during pregnancy. For this analysis, we use data from the Alaska Pregnancy Risk Assessment Monitoring System which collects data about alcohol use during the last three months of pregnancy.

- ◆ There has been a significant decline in prenatal alcohol use in Alaska over the past decade, with the overall prevalence (5.3% in 2000) approaching the Healthy People 2010 target of 3.5%.
- ◆ Self-reported prenatal binge drinking remains low. Less than 1% of women who delivered a baby during 1996 - 2000 indicated that they binged during pregnancy.
- ◆ Any prenatal drinking was highest among white women (any drinking can be as little as “less than 1 drink a week”), while Alaska Native women had the highest prevalence of prenatal binge drinking.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

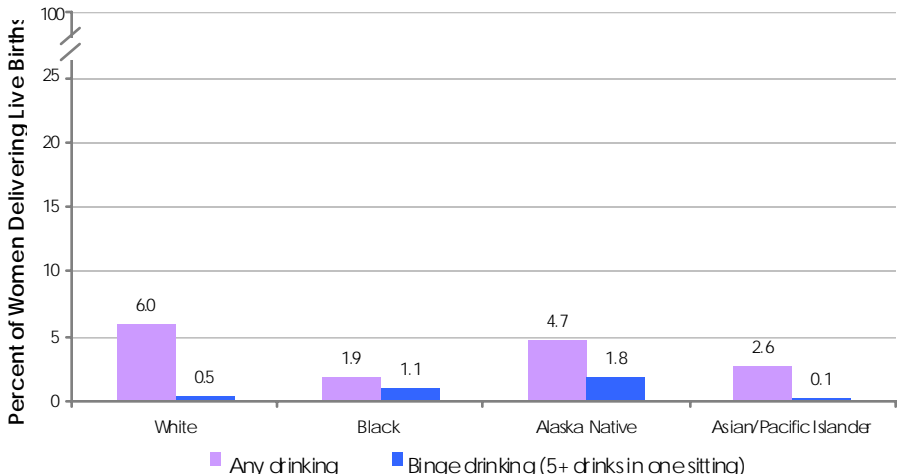
Prenatal Health: Risk Behaviors

Any Prenatal Alcohol Use (last 3 months) by Year Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Alcohol Use (last 3 months), Any and Binge, by Race, Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Tobacco Use

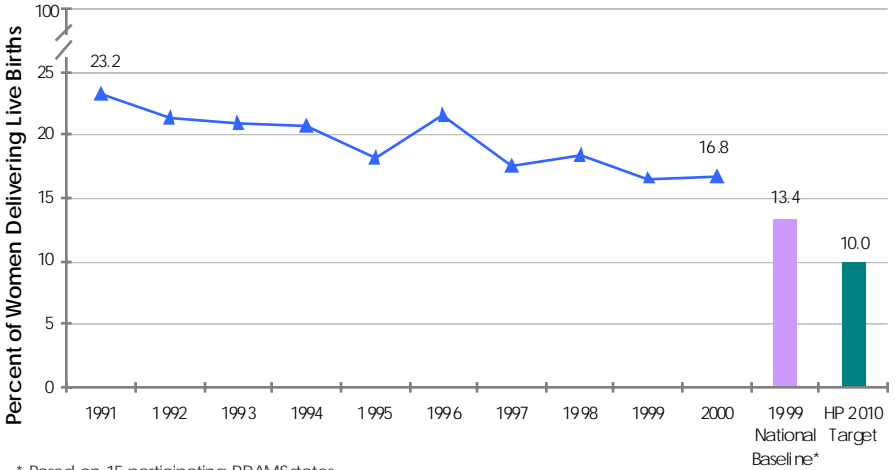
Prenatal tobacco exposure is the single largest preventable risk factor for low birth weight and prematurity. Prenatal tobacco exposure has been associated with poor motor tone and activity, reduced auditory responsiveness and lower arousal and irritability of the newborn. The data presented is here is from the Alaska Pregnancy Risk Assessment Monitoring System, which asks about cigarette smoking during the last three months of pregnancy.

- ◆ Although prenatal tobacco use has been declining over the past decade, Alaska's prevalence of prenatal tobacco use (16.8%) is still much higher than the Healthy People 2010 target of 10%.
- ◆ On average, 62% of pregnant women smoked less than half a pack a day during the last three months of their pregnancy, while 14% smoked a pack or more a day.
- ◆ Alaska Native women are twice as likely to smoke during pregnancy as white women (29% and 17%, respectively).
- ◆ While prenatal smoking during the 1990s declined for both white and Alaska Native women, a statistically significant decline was seen only among white women.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

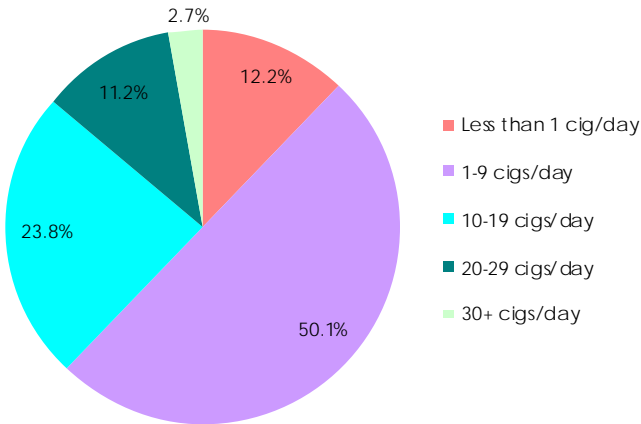
Prenatal Health: Risk Behaviors

Prenatal Tobacco Use (last 3 months) by Year Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Cigarette Smoking During Last 3 Months of Pregnancy Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Marijuana and Smokeless Tobacco

Prior to March 31, 1991, marijuana was a legal substance in Alaska. In 2000, prenatal use of marijuana was slightly less prevalent than prenatal alcohol use, but far less prevalent than cigarette smoking during pregnancy. Smokeless tobacco use is a growing public health concern. Few states besides Alaska collect information on the use of smokeless tobacco during pregnancy.

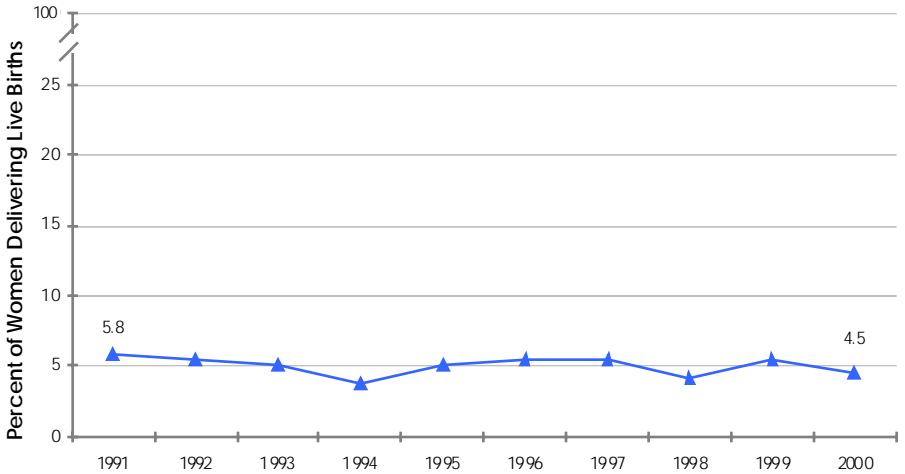
- ◆ Prenatal marijuana use in Alaska has remained fairly constant over the last decade. About 5% of Alaskan women who recently delivered a live birth report marijuana use during pregnancy compared to an estimated 3% of women in the United States.
- ◆ During 1996 - 2000, an average of 6% of women who recently delivered a live-born infant had used smokeless tobacco products during their pregnancy.
- ◆ Even though prenatal smokeless tobacco use among Alaska Natives has decreased significantly since 1996, this group had the highest rate (21.8%) for the five-year average. Less than 3% of women of other races indicated they used smokeless tobacco during pregnancy.
- ◆ The Yukon-Kuskokwim region[†] in Alaska stands out as having the highest prevalence of prenatal smokeless tobacco use (56.6%) for the 1996 - 2000 period. The region with the second highest prevalence of smokeless tobacco use is the North/Northwest region, with only 7.9%.

[†]See page 18 for regional map of Alaska.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

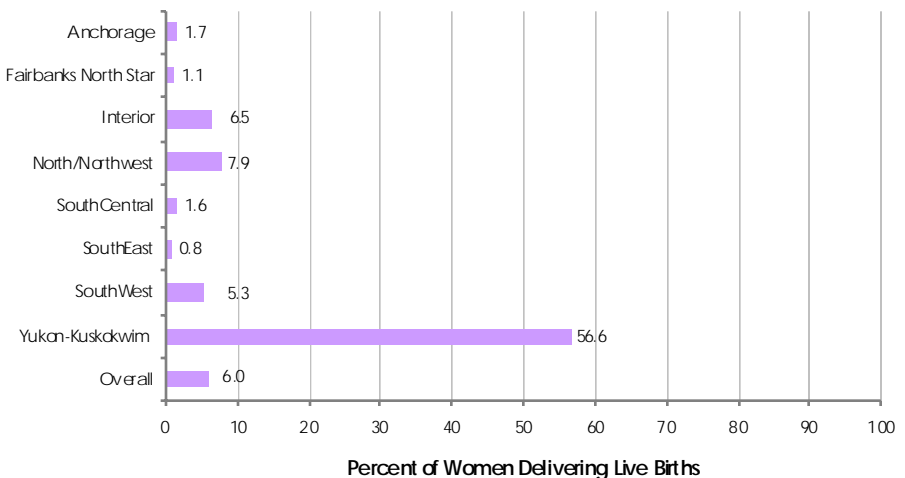
Prenatal Health: Risk Behaviors

Prenatal Marijuana Use by Year Alaska, 1991-2000



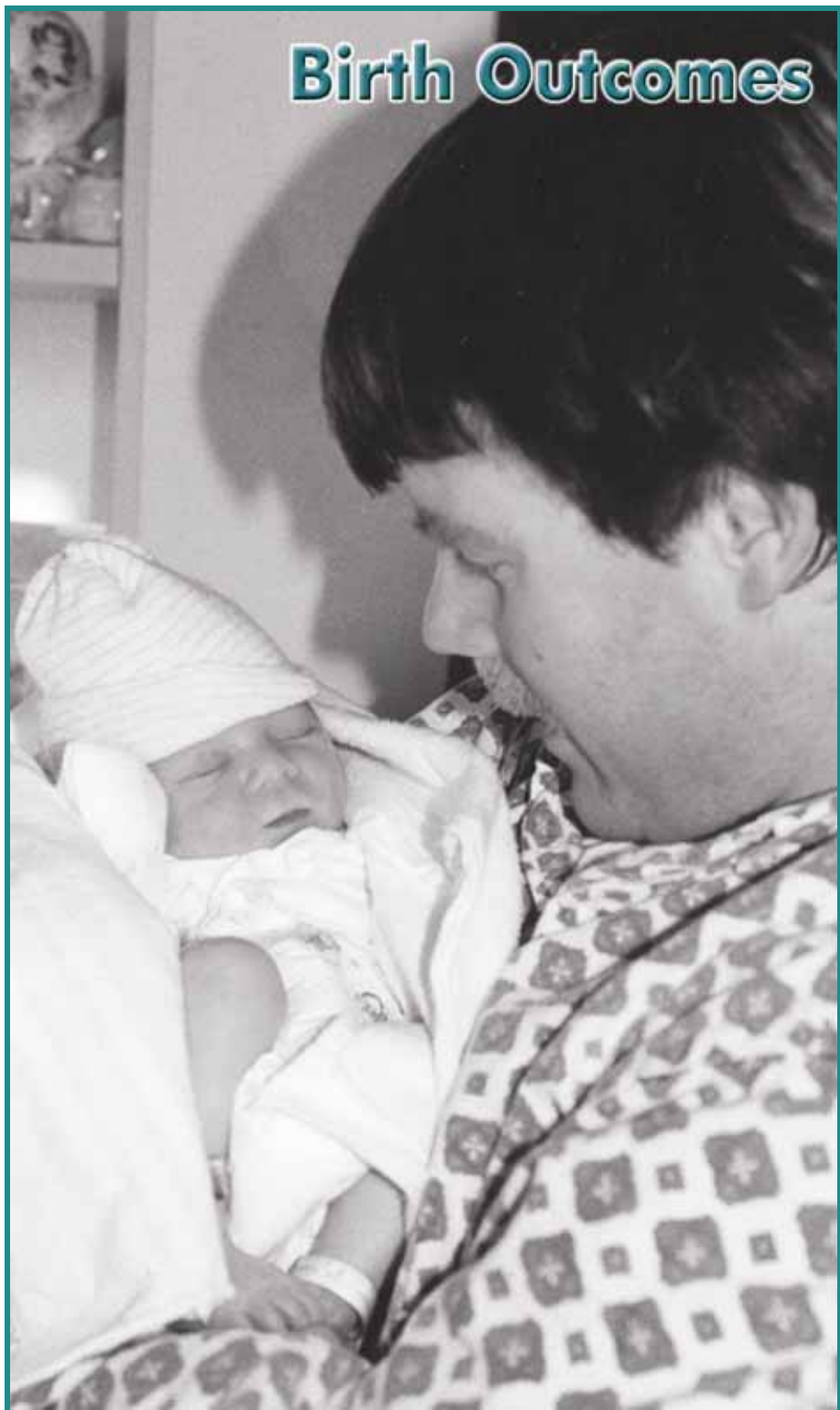
Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Prenatal Smokeless Tobacco Use by Region† Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

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.

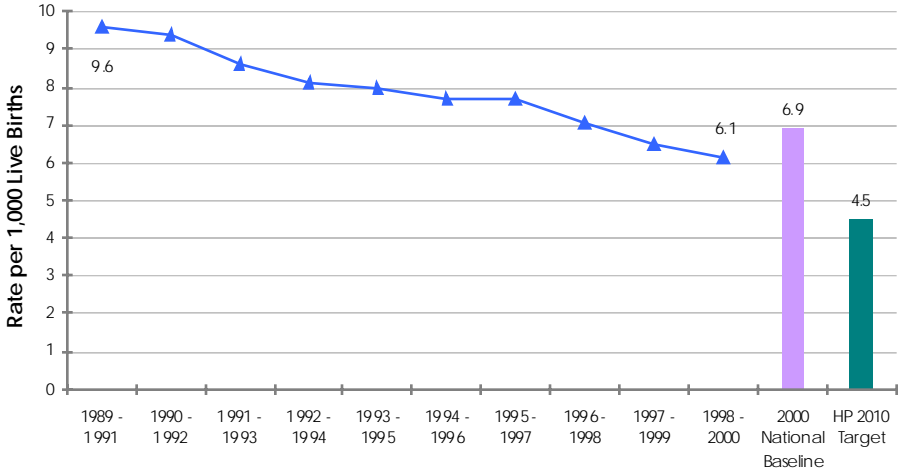
- ◆ During 1998 - 2000, Alaska's infant mortality rate was 6.1 per 1,000 live births, compared to 8.6 per 1,000 from 1989 - 1991, a decrease of nearly 30%.
- ◆ Alaska's infant mortality rate now ranks 12th in the Nation.
- ◆ Alaska's infant mortality rate for 1998 - 2000 is 12% lower than the overall 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.

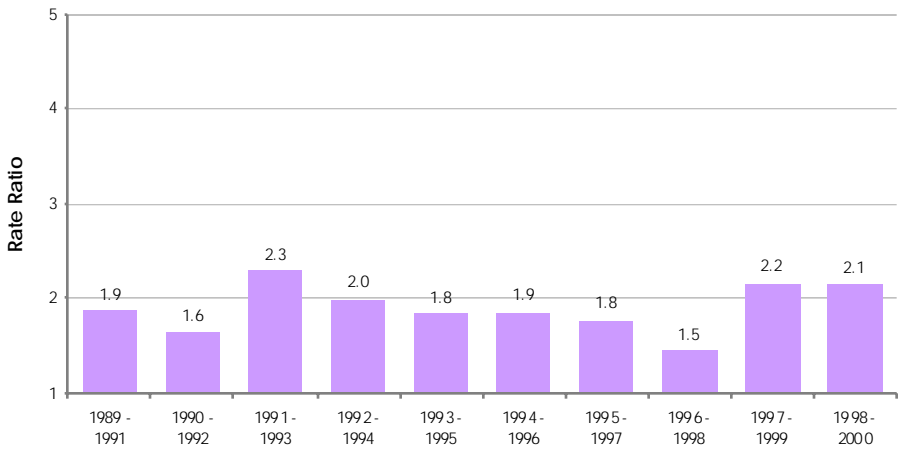
Birth Outcomes

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.

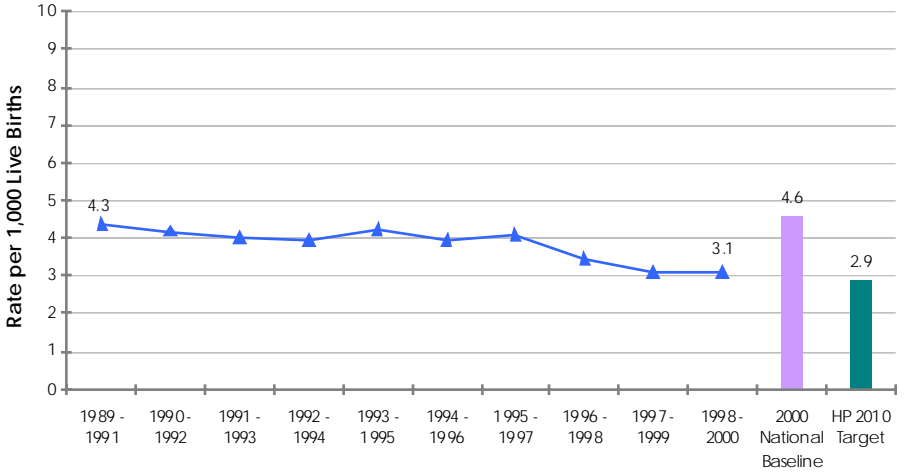
- ◆ In 1998 - 2000, Alaska's neonatal mortality rate was the lowest in the Nation (3.1 per 1,000 live births).
- ◆ Neonatal mortality in Alaska declined by almost 30% over the last decade .
- ◆ Alaska's neonatal mortality rate is consistently lower than the national average, which was 4.7 per 1,000 live 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.

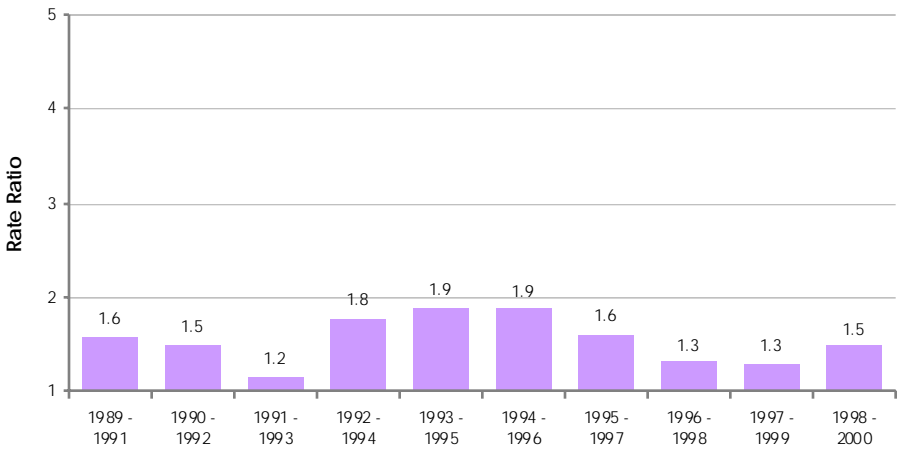
Birth Outcomes

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.

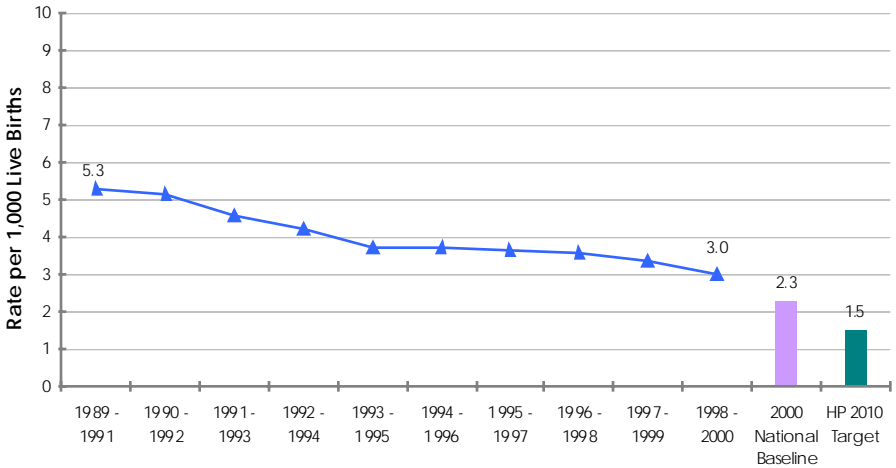
- ◆ Alaska's post-neonatal mortality rate for 1998 - 2000 was nearly 35% higher than the national rate in 2000 and twice as high as the Healthy People 2010 target.
- ◆ Post-neonatal mortality in Alaska has declined significantly over the last decade, from 5.3 per 1,000 live births in 1989 - 1991 to 3.0 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.

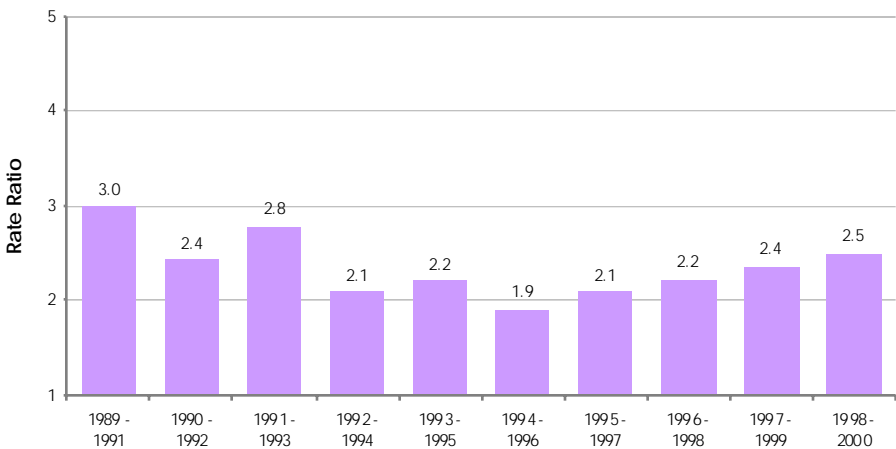
Birth Outcomes

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.

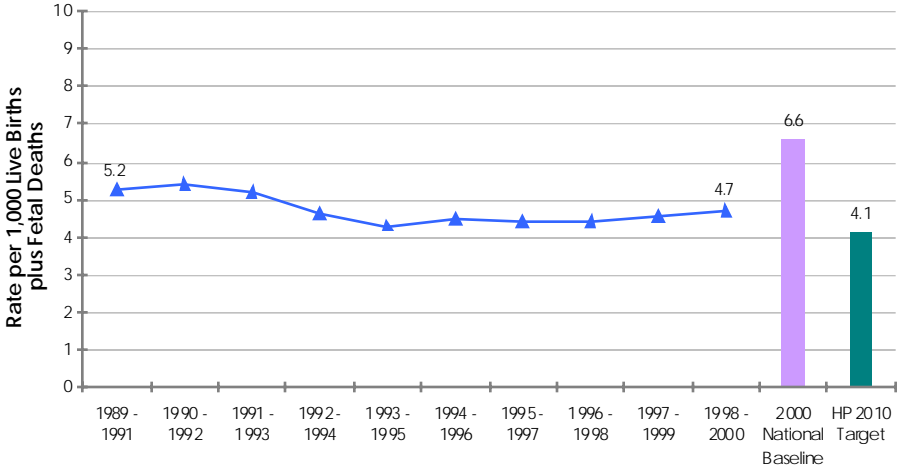
- ◆ Over the last decade, the overall fetal mortality rate for Alaska has been consistently lower than the national baseline. Alaska's fetal mortality rate in 1998 - 2000 was almost 30% lower than the national rate for 2000.
- ◆ Although lower than the national rate, fetal mortality in Alaska remains 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.

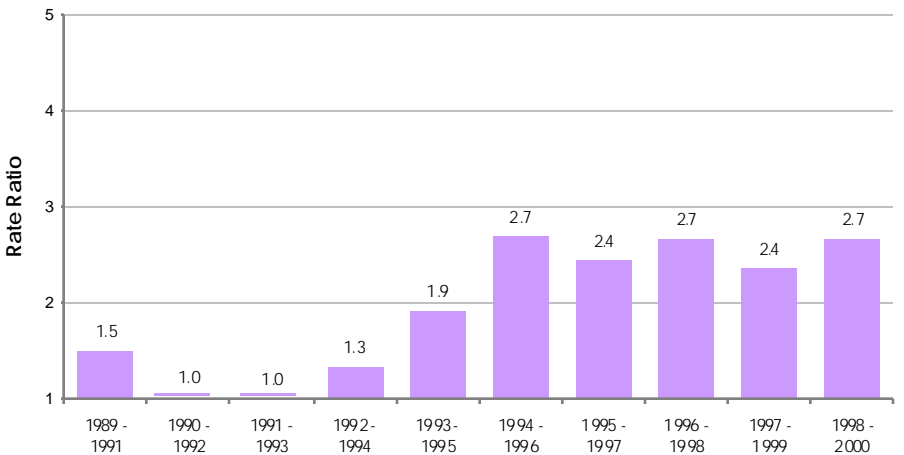
Birth Outcomes

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.

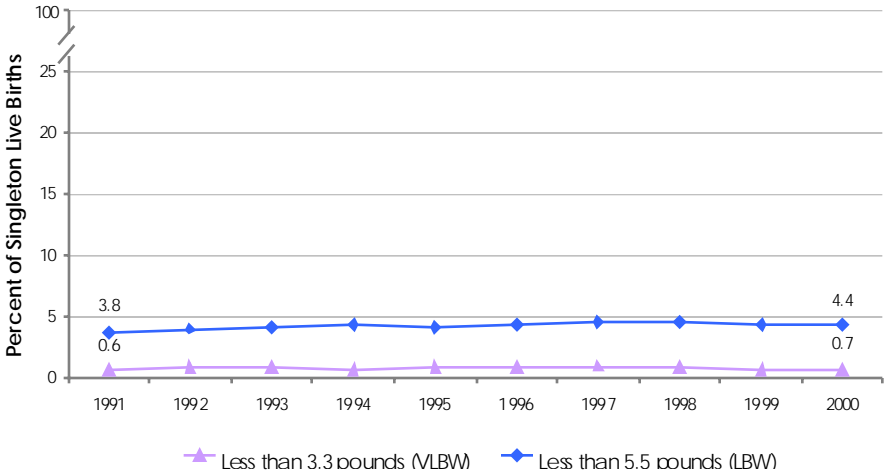
Note: The prevalence of low birth weight (LBW) and very low birth weight (VLBW) includes singleton births only.

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.

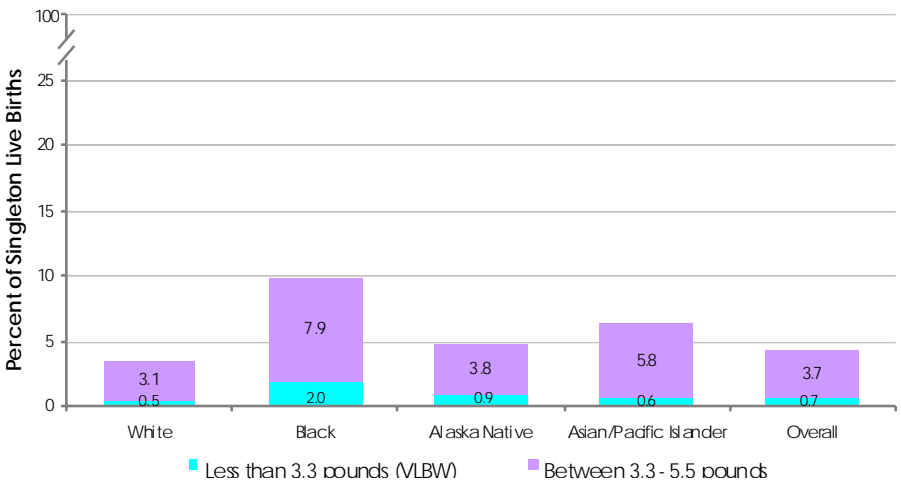
Birth Outcomes

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

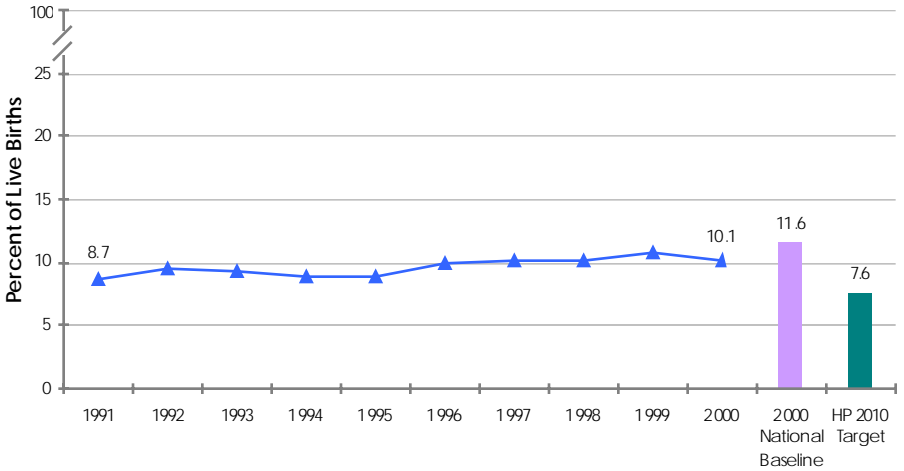
The majority of low and very low birth weight infants are born preterm. Nationally, preterm birth is the leading cause of neonatal deaths not associated with birth defects.

- ◆ 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.

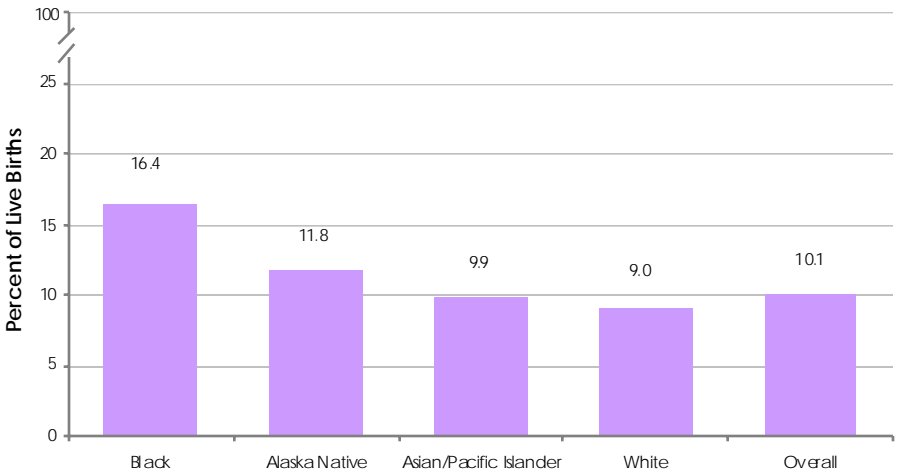
Birth Outcomes

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)

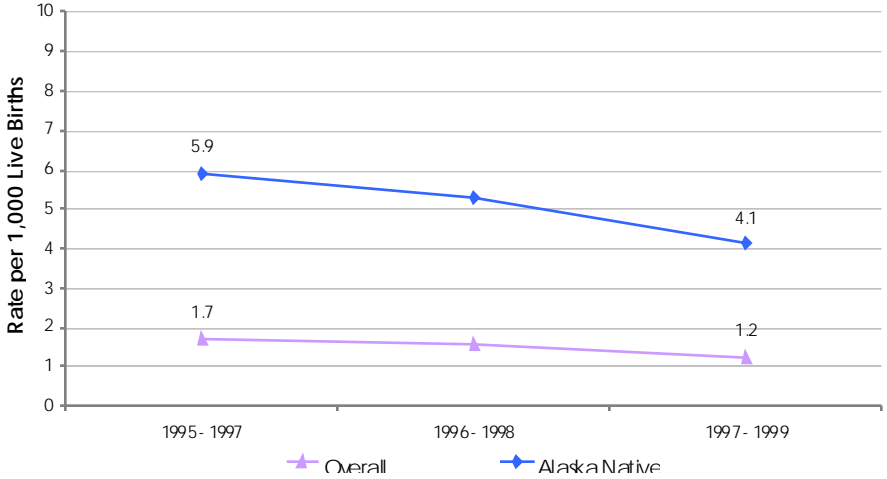
Infants who are exposed to maternal alcohol use during pregnancy are at risk for Fetal Alcohol Syndrome (FAS) and other alcohol-related birth defects. FAS is 100% preventable if a woman does not drink during pregnancy. First defined as a clinical condition in 1973, FAS has drawn considerable attention 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.

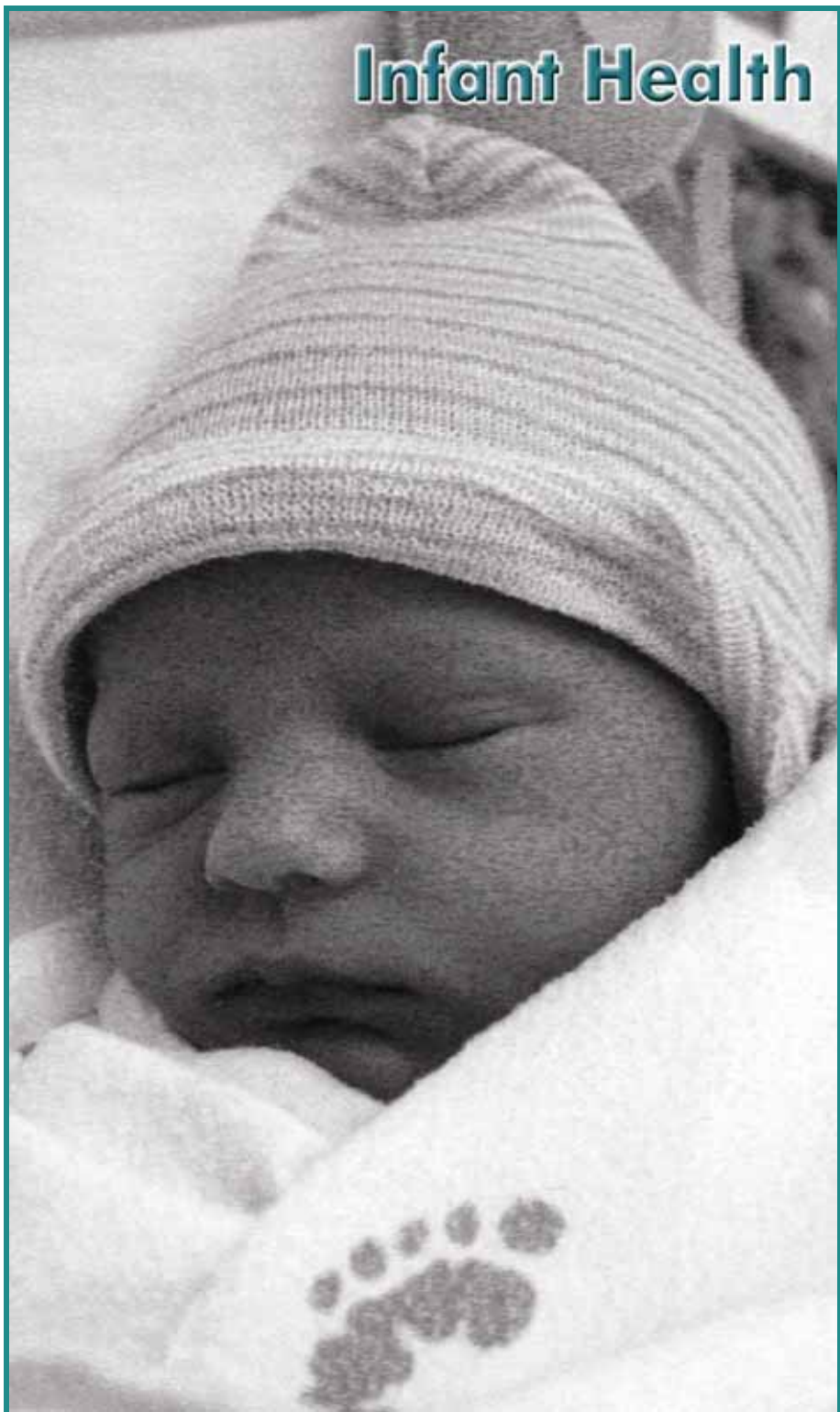
Data Source: Alaska Fetal Alcohol Syndrome Surveillance Project

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



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

Infant Health



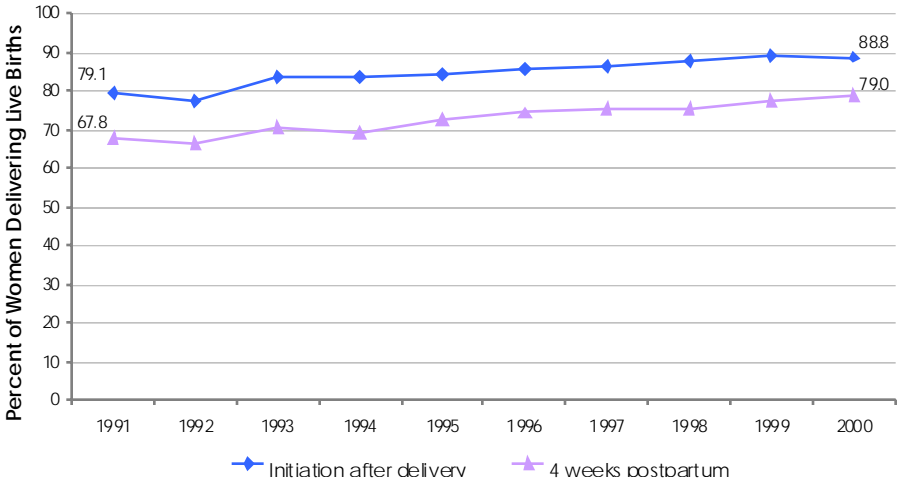
Breastfeeding

Alaska has one of the highest breastfeeding rates in the nation. According to the Mothers Survey done by the Ross Products Division of Abbott Laboratories, Oregon (88.6%), Alaska (88.5%), and Washington (87.9%) lead the nation in their in-hospital breastfeeding rates for the year 2000. Nationwide, the in-hospital breastfeeding rate is 68.4%. The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) is a statewide population-based sample of mothers of newborns that also collects breastfeeding data. PRAMS data confirm the rates shown by the Ross Survey.

- ◆ According to the Alaska PRAMS Project, Alaska has shown significant increases over the past decade in both the initiation of breastfeeding and nursing through the first month.
- ◆ Nearly 90% of Alaskan mothers who delivered a live-born infant in 2000 reported initiating breastfeeding and 79.0% were still nursing when their babies were one month old.
- ◆ The breastfeeding initiation rates for all racial groups in Alaska except blacks exceed the Healthy People 2010 objective of 75%. Race-specific breastfeeding initiation rates for 1996-2000 were 89.9% for whites, 88.8% for Asian/Pacific Islanders, 82.6% for Alaska Natives, and 70.1% for blacks.

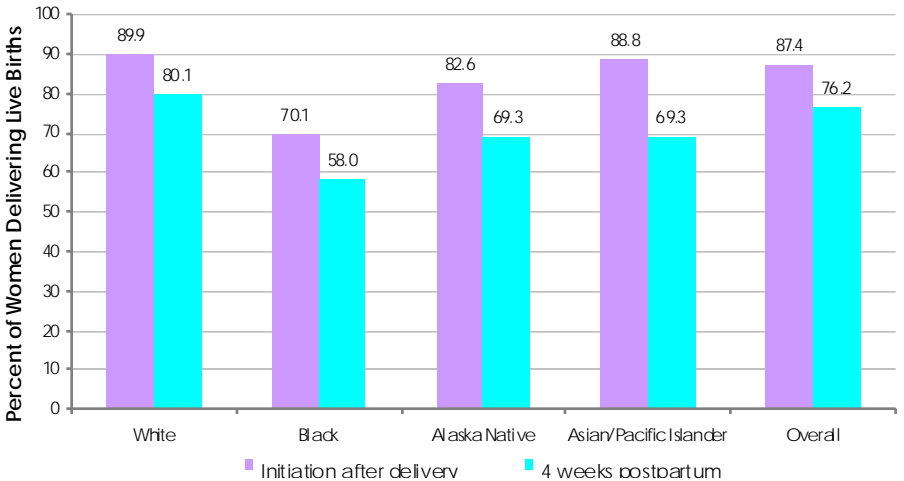
Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Breastfeeding Trends by Year of Birth Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Breastfeeding Initiation After Delivery and at Four Weeks Postpartum by Race, Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Infant Sleep Position

In 1994, a coalition of federal, state and private agencies launched a national “Back to Sleep” awareness campaign to educate parents about ways to reduce the risk of Sudden Infant Death Syndrome (SIDS) by placing their infants on their backs to sleep. This campaign was initiated in Alaska in 1996.

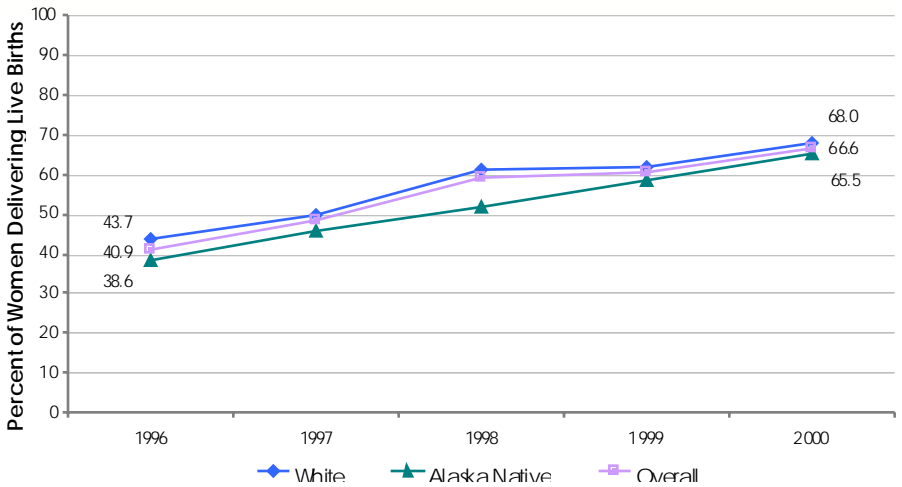
- ◆ Concurrent with the Alaska Back to Sleep campaign, rates of SIDS or asphyxia of unknown etiology declined 45% between 1992 -1996 and 1997.¹
- ◆ In Alaska during 1992 - 1997, there were 130 infant deaths where the death certificate identified SIDS as the cause of death. Among infant deaths for which sleep-related risk factor information was known, 98% involved infants that were sleeping on their stomachs, with another person, or outside of a standard infant crib.²
- ◆ Alaska Pregnancy Risk Assessment Monitoring System data for 1996 - 2000 shows that Alaskan mothers have been increasingly putting their newborns on their backs to sleep.
- ◆ Nearly 70% of mothers report that they routinely place their newborns on their backs to sleep. Only 12% put them on their stomachs. (The average age of the infant at the time the mother answered the question is 15 weeks.)
- ◆ The manner in which mothers are placing their infants down to sleep does not differ greatly by race and there have been increases among all races in putting infants to sleep on their backs.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS).

¹ Gessner, BG. Findings of the Alaska Maternal-Infant Mortality Review, 1999. Family Health Dataline. State of Alaska, Department of Health and Social Services, Section of Maternal, Child and Family Health. 2000; 6:2.

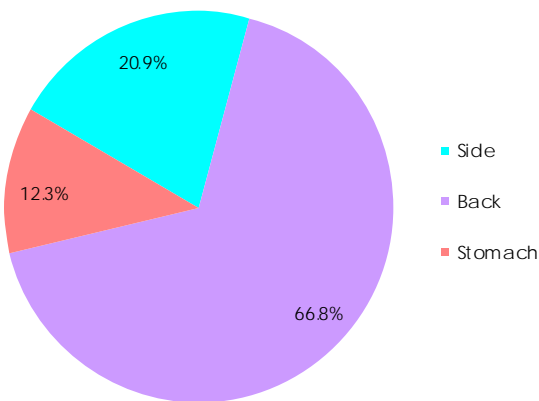
² Gessner, BG. Findings of the Alaska Maternal-Infant Mortality Review, 2000. Family Health Dataline. State of Alaska, Department of Health and Social Services, Section of Maternal, Child and Family Health. 2002; 8:1.

Prevalence of Placing Infants to Sleep on Their Backs by Race and Year, Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Distribution of How Mothers Put Their Infants Down to Sleep Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Co-Sleeping

The practice of co-sleeping (infants sleeping in the same bed with adults or older children) has been implicated as a potential risk factor for Sudden Infant Death Syndrome (SIDS). Population-based data on the prevalence of co-sleeping is lacking nationally but the Alaska Pregnancy Risk Assessment Monitoring System has collected co-sleeping data since 1991.

- ◆ The prevalence in Alaska of mothers of newborns always or almost always co-sleeping with their infants has been steadily increasing. The most recent estimate of 39.9% in 2000 is 2.5 times greater than what it was in 1991 (15.9%).
- ◆ Non-white women are more likely than whites to co-sleep with their infants. During 1996 - 2000, over one-half the population of Asian/Pacific Islanders or Alaska Native mothers always or almost always co-slept with their infant compared with 28.3% of white mothers.
- ◆ Nearly 30% of white women indicated they never co-slept with their infant, compared with 15.7% of Alaska Native, 11.0% of black, and 8.8% of Asian/Pacific Islander women.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

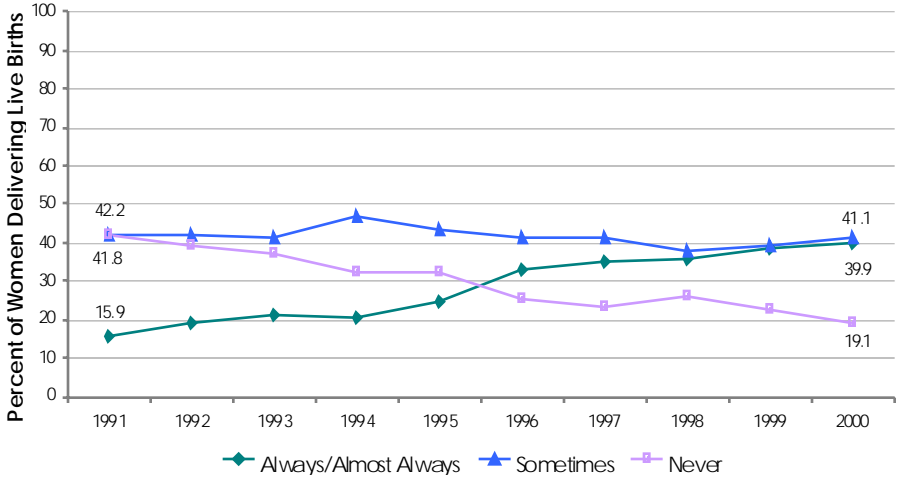
Studies in Alaska have found an association between co-sleeping and infant death only in cases where the infant was sleeping with an alcohol or drug-impaired adult.¹

Healthy infants younger than 6 months of age should be placed to sleep on their back and should sleep either in an infant crib or with a nonsmoking, unimpaired caregiver on an adult non-water mattress.

Caretakers of preterm and low birth weight infants and infants with other substantial health problems should consult their doctor for advice.

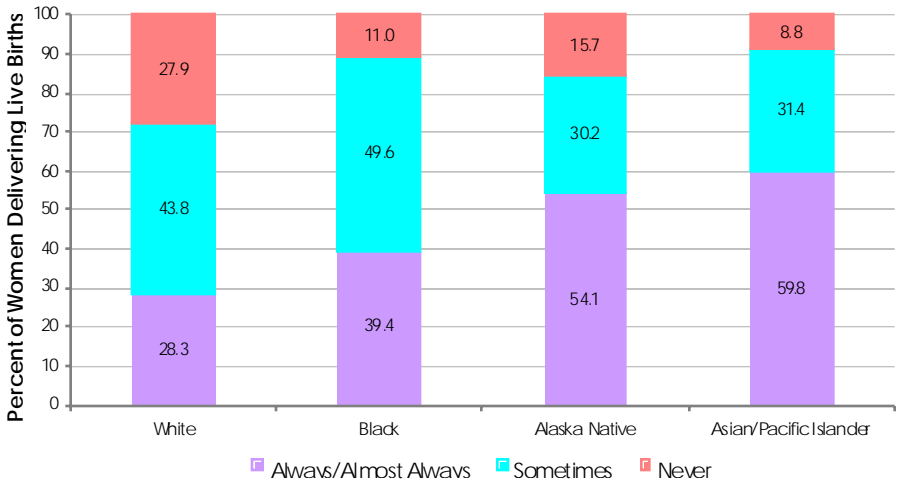
¹Gessner, BG. Findings of the Alaska Maternal-Infant Mortality Review, 2000. Family Health Datafile, State of Alaska, Department of Health and Social Services, Section of Maternal, Child and Family Health. 2002; 8:1.1.

Mother-Infant Co-Sleeping Trends by Year of Birth Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Mother-Infant Co-Sleeping Habits by Maternal Race Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

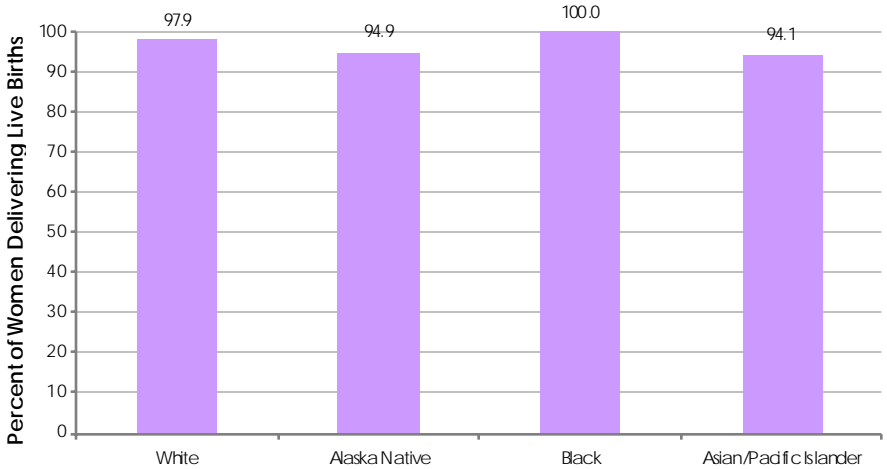
Shaken Baby Awareness

Shaking an infant can cause a variety of health problems such as brain damage, blindness, hearing loss, learning problems, seizure disorders, cerebral palsy, paralysis, or even death. In Alaska during 1998, a public service campaign sponsored by the Section of Maternal, Child and Family Health was initiated that advocated the message “Never Shake a Baby.”

- ◆ According to the Alaska Maternal-Infant Mortality Review, during the period 1994 - 2000 in Alaska there were five documented fatalities associated with shaken baby syndrome. The average age of the victim was 6 months old. The average age of the perpetrator (three were men, two were women) was 25 years old.
- ◆ Among Alaskan women who delivered a live-born infant during the year 2000, 97% had heard or read about what can happen if a baby is shaken. Knowledge about the dangers of shaking an infant was associated with higher maternal education. A higher percentage of black and white mothers of newborns (100% and 97.9%, respectively) reported shaken baby syndrome awareness than Alaska Native and Asian/Pacific Islander mothers (94.9% and 94.1%, respectively).

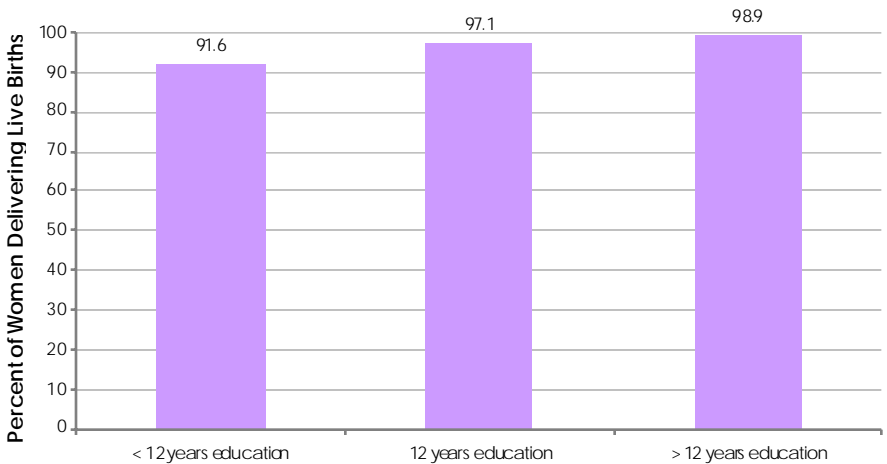
Data Sources: Alaska Maternal Infant Mortality Review; Alaska Pregnancy Risk Assessment Monitoring System.

Shaken Baby Awareness by Maternal Race Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Shaken Baby Awareness by Maternal Education Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

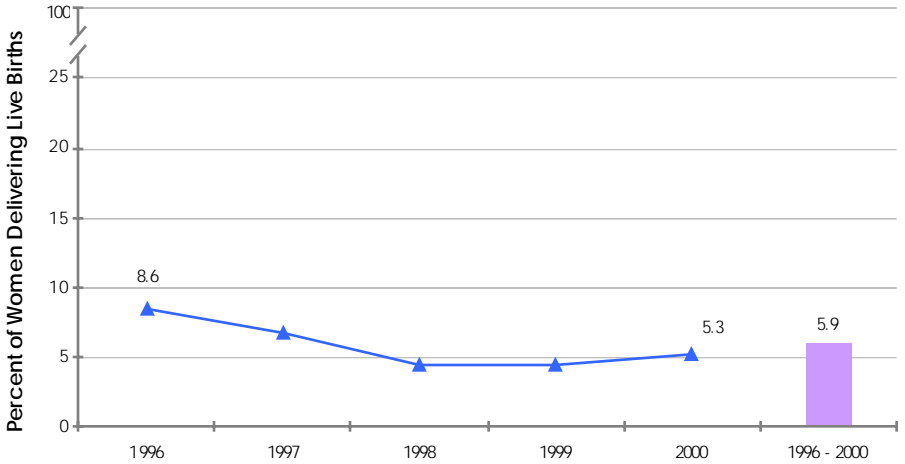
Exposure to Tobacco Smoke

Tobacco smoke is a major component of indoor air pollution. In children, exposure to second-hand smoke leads to reduced lung function, increased risk of lower respiratory tract illnesses, acute exacerbation of asthma resulting in hospitalization, increased risk for sudden infant death syndrome (SIDS) and possibly increased risk for asthma.

- ◆ Nearly 6% of women who delivered an infant during 1996 - 2000 reported that their baby is exposed to second-hand smoke during an average day. (The average age of the infant at the time the mother responded was about three months.)
- ◆ Black mothers showed the highest prevalence of any environmental tobacco smoke (ETS) exposure for their newborns at 8.2%, while Alaska Native mothers reported the lowest prevalence of infant ETS exposure at 3.6%.
- ◆ Over the last five years, there has been a decreasing trend for any infant ETS exposure both in overall prevalence (from 8.6% in 1996 to 5.3% in 2000) and in mean number of hours exposed during an average day (6.4 hours in 1996 to 4.1 hours in 2000).

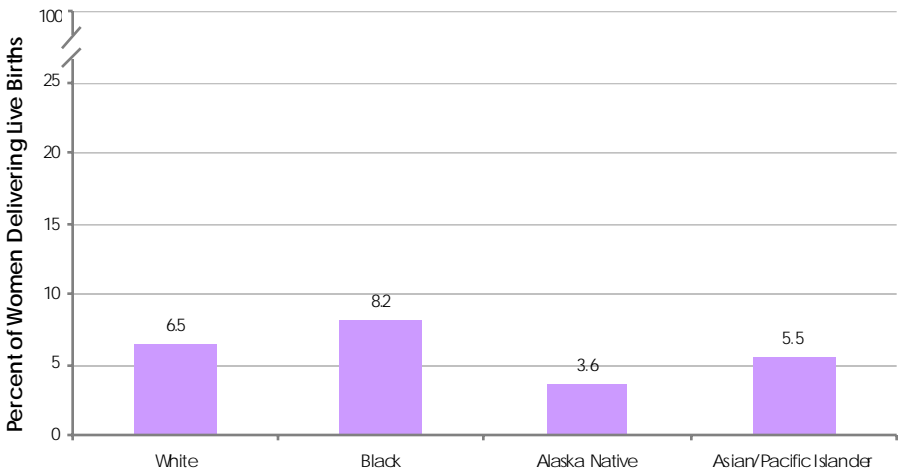
Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Infant Exposure to Second-hand Smoke by Year Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Infant Exposure to Second-hand Smoke by Race Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Infant Health and Safety Issues

Nearly 12% of Alaskan mothers indicated their newborns were **discharged from the hospital less than 24 hours after birth** in the year 2000. Over half (55.3%) of Alaskan newborns stay one to two days in the hospital after birth.

In 2000, approximately 5% of Alaskan mothers reported that their infants were **not born in a hospital**.

About 10% of Alaska-resident women who delivered a live-born infant in 2000 reported that their newborn was put in an **intensive care** unit after birth.

Seventy-six percent of Alaskan mothers of newborns said a health care provider saw their baby in the first week after leaving the hospital. At an average age of 15 weeks, nearly all (97.1%) infants have had a **well-baby** **checkup**.

Approximately 43% of all Alaska newborns were **screened** for hearing problems in 2000 and approximately 96% were tested for congenital metabolic and endocrine disorders.

Data Sources: Alaska Pregnancy Risk Assessment Monitoring System; Alaska Newborn Screening Program.

Most (93%) Alaskan mothers who delivered in 1999 indicated their newborn came home from the hospital in an **infant car seat**. A similar proportion (92%) indicated that their baby always rides in an infant car seat.

Regular **infant car seat use** varies by maternal race with Alaska Native mothers being least likely to use one. Infant car seat use in urban Alaskan areas during 1996 - 1999 mirrors that of national estimates (range 87.2% to 99.6%). Two regions[†] of the state that showed the lowest usage of infant car seats – Yukon-Kuskokwim (34.2%) and the North/Northwest (35.9%) regions – have a limited road system.

Nearly 42% of women who were surveyed during 2000 at an average of 15 weeks postpartum reported that they were currently in school or **working outside the home**.

When asked **who usually takes care of the baby** when they go to work or school, the top three responses were “husband or partner” (35.1%), “babysitter, nanny, or other child care provider” (20.9%), and “other close relative” (19.5%).

About 3.4% indicated they were able to **care for their baby at home** or they were able to **take their baby to work** with them.

Almost all mothers (97.4%) felt their newborn was always or almost always **well cared for**.

[†] See page 18 for regional map of Alaska.
Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Child Health



Child Mortality

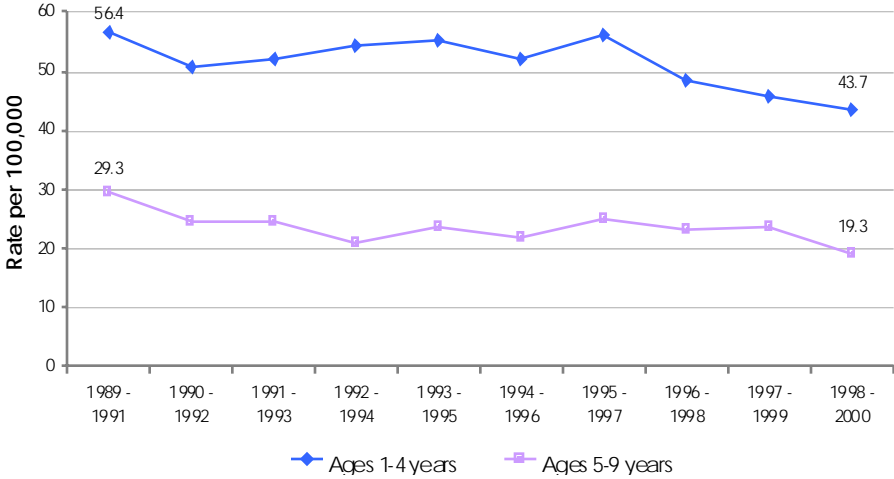
With over one-half of all child mortality attributable to unintentional injury, the majority of deaths to Alaskan children could be prevented. Unfortunately, there has not been a statistically significant decline in the child mortality rate among children ages 1 - 4 or 5 - 9 years over the last decade.

- ◆ In 1998 - 2000, Alaska's child mortality rate was 43.7 per 100,000 population for children ages 1 - 4 years and 19.3 per 100,000 for children ages 5 - 9 years. In comparison, child death rates for the nation as a whole were 32.9 and 16.4 per 100,000 respectively for children ages 1 - 4 and 5 - 9 years.
- ◆ Alaska's mortality rate for children ages 1 - 4 years is 33% higher than the national rate and almost 2.5 times the Healthy People 2010 target. Alaska's mortality rate for children ages 5 - 9 years is 18% higher than the national rate and almost 1.6 times the Healthy People 2010 target.
- ◆ In 1998-2000, 62% of all deaths to Alaskan children ages 1 - 9 years were among 1 - 4 year-olds. A similar distribution was observed nationally in 2000 with 60% of total child deaths occurring among 1 - 4 year-olds.
- ◆ The leading manner of death for Alaskan children is unintentional injury, which accounted for 54% of deaths to children ages 1 - 4 years and 62% of deaths to children ages 5 - 9 years over the last decade.
- ◆ After intentional injury, the second leading manner of death for Alaskan children over the last decade was homicide. The cause-specific mortality rate for homicide among children 1 - 4 years old was 3.5 times that of Alaskan 5 - 9 year-olds.

The Healthy People 2010 target for child deaths ages 1 - 4 years is 18.6 per 100,000 population. The Healthy People 2010 target for child deaths ages 5 - 9 years is 12.3 per 100,000.

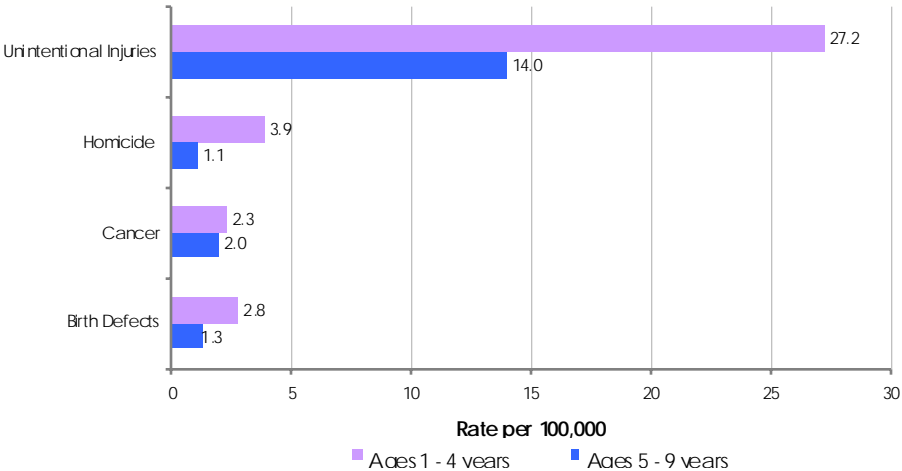
Data Source: Alaska Bureau of Vital Statistics

Child Mortality Trends by Age Group, Three-Year Moving Average, Alaska, 1991-2000



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

Most Common Causes of Child Mortality, by Age Group Alaska, 1991-2000



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

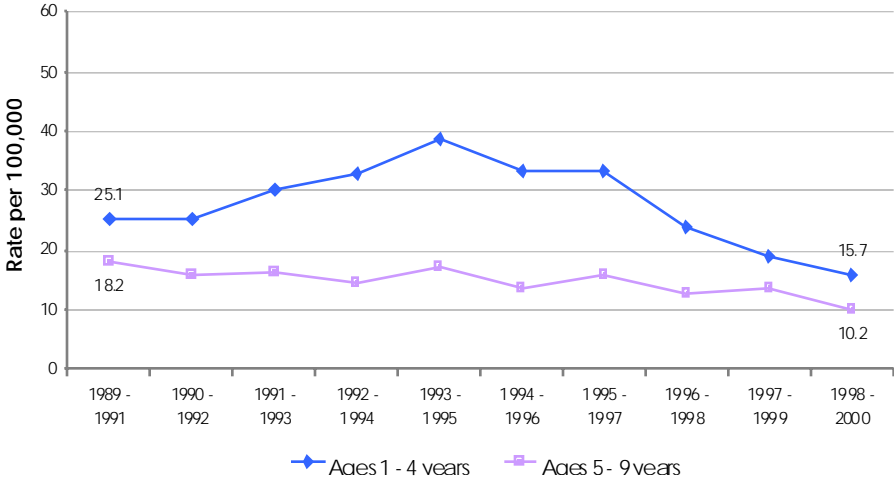
Unintentional Injury Mortality

In Alaska and in the United States (U.S.), the leading manner of death among children of all ages is injury, which accounted for 39% of deaths nationally to children ages 1 - 9 years in 2000. The most common causes of unintentional injury deaths among children are motor vehicle crashes, drowning, and fires. Over the last decade, child mortality rates for unintentional injury declined in Alaska and in the nation; but in Alaska, the declining trends are not statistically significant.

- ◆ In 1998 - 2000, Alaska's unintentional injury mortality rate was 15.7 and 10.2 per 100,000 for children ages 1 - 4 and 5 - 9 years, respectively. In comparison, unintentional injury mortality rates for U.S. children ages 1 - 4 and 5 - 9 years were 12.1 and 7.0 per 100,000 in 2000.
- ◆ Compared to national child mortality rates, Alaska's unintentional injury mortality rates are 30% higher among 1 - 4 year-olds and 46% higher among 5 - 9 year-olds.
- ◆ Over the last decade, the most common cause of unintentional injury mortality among Alaskan children was motor vehicle crashes. The cause-specific mortality rate for motor vehicle crashes among 1 - 4 year-olds (9.0 per 100,000) was nearly twice that of 5 - 9 year-olds (5.0 per 100,000).
- ◆ The second most common cause of unintentional injury mortality for Alaskan children over the last decade was exposure to smoke, fire and flames. Cause-specific mortality was nearly 4 times higher among 1 - 4 year-olds than 5 - 9 year-olds.
- ◆ Nearly one-third of all deaths among 1 - 4 year-olds in Alaska are caused by the combined effects of motor vehicle crashes (60%) and exposure to smoke, fire and flames (25%).

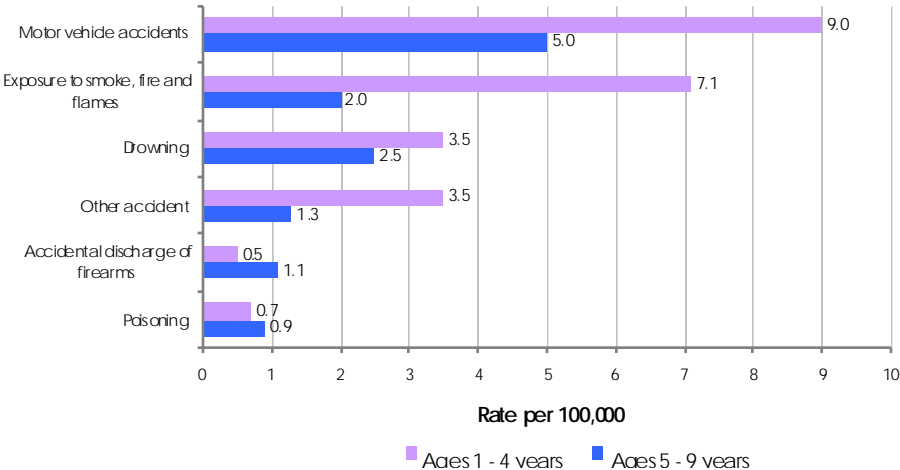
Data Source: Alaska Bureau of Vital Statistics

Unintentional Injury Mortality Trends by Age Group Alaskan Children, 1991-2000



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

Most Common Causes of Unintentional Injury Mortality by Age Group, Alaskan Children, 1991-2000



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

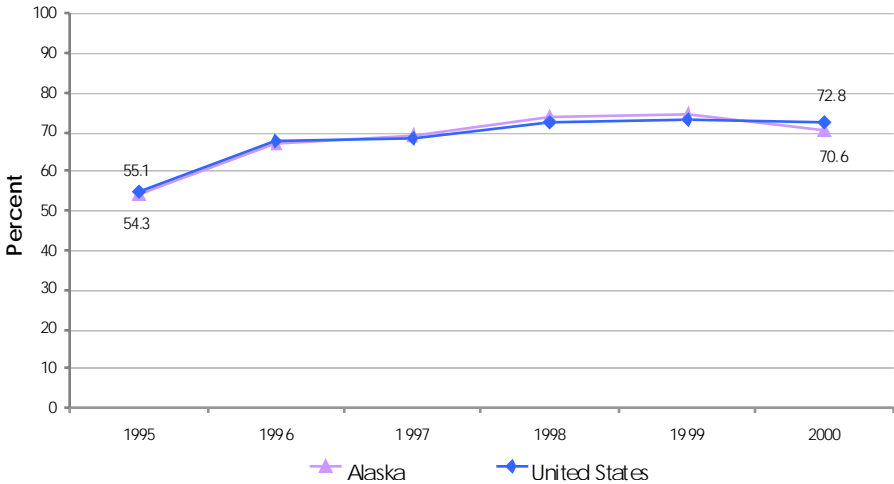
Immunization

Routine immunization against infectious diseases of childhood is, along with basic sanitation, a hallmark of public health and one of the most effective means of preventing widespread outbreaks of disease. Immunization coverage is an important indicator of health care accessibility and quality. The Healthy People 2010 goal for the nation is 90% immunization coverage among children ages 19 - 35 months old, for five childhood vaccines: diphtheria, tetanus, pertussis (DTP); polio (OPV); measles, mumps, rubella (MMR); haemophilus influenza (Hib); and hepatitis B. The completed vaccine series is referred to as the 4:3:1:3:3 series, based on the number of age-appropriate doses recommended for each vaccine.

- ◆ From 1995 - 2000, the percentage of Alaskan children ages 19-35 months that have completed the 4:3:1:3:3 series has increased 30%.
- ◆ Results from the 2000 National Immunization Survey results showed that 70.6% of Alaskan two year olds were appropriately immunized, ranking Alaska at 42nd in the nation.

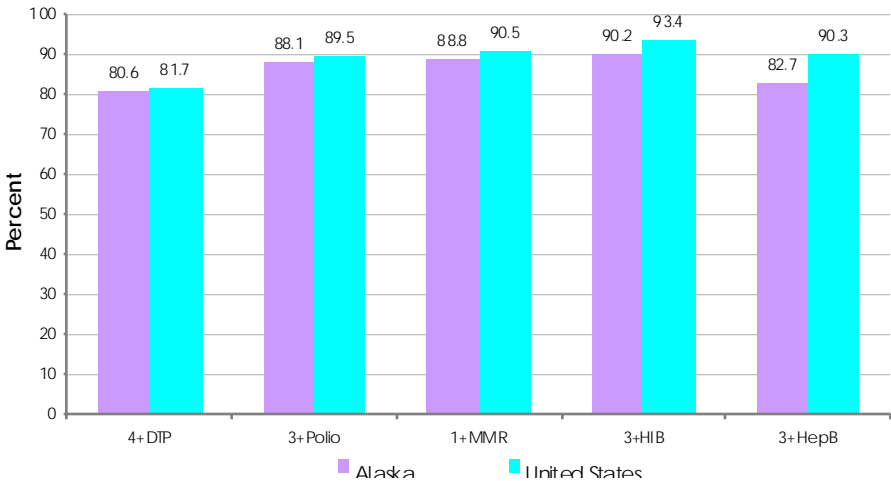
Data Source: National Immunization Survey, 2000.

Completed Combination Immunization Series for Children 19-35 Months, Alaska and United States, 1995-2000



Data Sources: National Immunization Survey. Prepared by MCH Epidemiology Unit.

Child Immunization by Vaccine Series Alaska and United States, 2000



Data Source: National Immunization Survey. Prepared by MCH Epidemiology Unit.

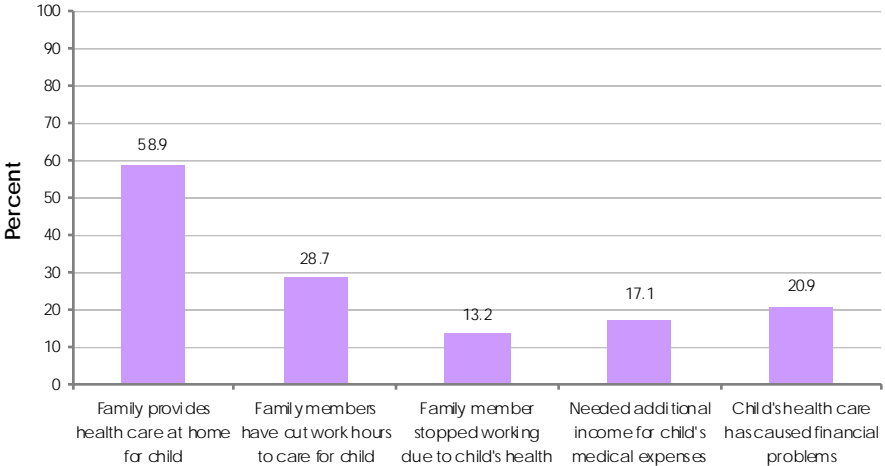
Special Health Care Needs

According to a recent national survey, 10.5% of children in Alaska have special health care needs (CSHCN). Of those children, 63% are boys and 37% are girls. An estimated 17.4% of households in Alaska have children with special needs and 40.2% of those households are below the 200% federal poverty level.

- ◆ Most (93.5%) CSHCN have a usual health care source.
- ◆ Approximately 13.6% of CSHCN were not insured in the past 12 months and 8.1% of CSHCN are considered uninsured by the National Center for Health Statistics (NCHS) definition. Of those that are insured, 46.3% indicated that their health benefits don't always meet their child's needs.
- ◆ Twelve percent of CSHCN had health care delayed or forgone in the past 12 months. Of those:
 - 70.4% indicated that they did not have money to pay their provider.
 - 34.5% indicated that the type of care needed was not provided in their area.
 - 40% indicated that the care needed was not covered by their health plan.
- ◆ About 18% of CSHCN indicated that getting a referral to a specialist was a problem in the past 12 months.

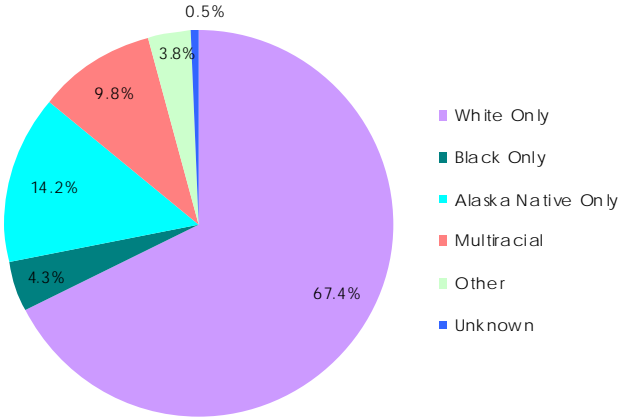
Data Source: National State and Local Area Integrated Telephone Survey (SLAITS), 2000, provisional data unadjusted for 2000 census estimates.

Children with Special Health Care Needs, Financial Impact on Family, Alaska, 1998-2000



Data Source: National State and Local Area Integrated Telephone Survey (SLATS), 2000, provisional data unadjusted for 2000 census estimates. Prepared by MCH Epidemiology Unit.

Children with Special Health Care Needs by Race Alaska, 1998-2000



Data Source: National State and Local Area Integrated Telephone Survey (SLATS), 2000, provisional data unadjusted for 2000 census estimates. Prepared by MCH Epidemiology Unit.

EPSDT and WIC Participation

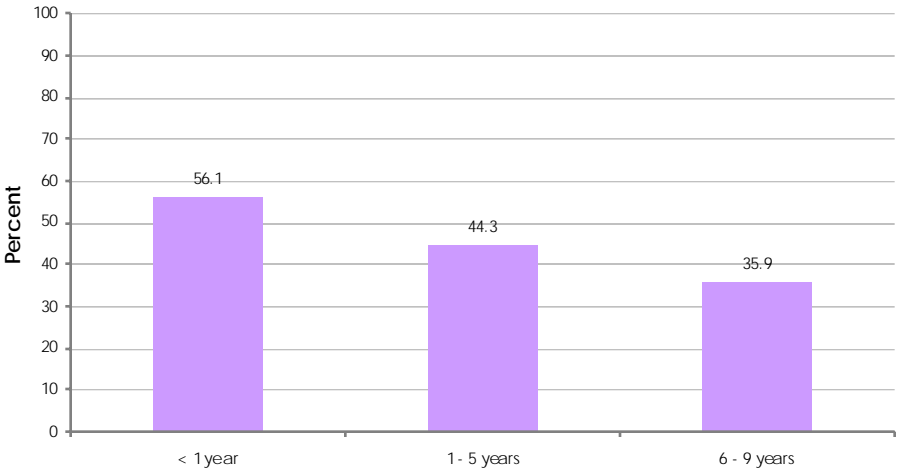
Many low-income families in the State of Alaska receive well-child care and nutritional support through the Early and Periodic Screening, Diagnosis and Treatment Program (EPSDT) and the Supplemental Nutrition Program for Women, Infants and Children (WIC). EPSDT provides well-child medical exams and assessments to ensure children receive the preventive medical and specialty care they require. WIC provides nutrition counseling, monthly dietary supplementation, food vouchers, growth assessments and referrals, to new and pregnant mothers of children 0 - 5 years of age.

- ◆ Half the population of Alaska-resident women (51%) who had a baby during 1996 - 1999 indicated that they used WIC services for their newborn. According to the Alaska Pregnancy Risk Assessment Monitoring System, Alaska Native (70%) and black women (69%) were most likely to use these services.
- ◆ Approximately 56% of infants under one year of age, 44.3% of children ages 1 - 5 years, and 35.9% of children ages 6 - 9 years were eligible* for EPSDT well-child care in 2000.
- ◆ According to the annual EPSDT Report to the Federal Center for Medicaid and State Operations, 81.7% of infants under one year of age, 48.3% of children ages 1 - 5 years, and 18.2% of children ages 6 - 9 years who were eligible* for EPSDT services during 2000 received at least one initial or periodic well-child screening paid through Medicaid or Denali KidCare (Alaska's State Child Health Insurance [S-CHIP] program).
- ◆ Approximately 24% of children ages 1 - 5 years, and 47% of children ages 6 - 9 years who were eligible* for EPSDT care received dental services, including cleanings, fluoride, dental exams and treatment.

*Note: EPSDT and WIC "Eligible" means "Enrolled" at some point in time during the Federal fiscal reporting period for 2000. EPSDT and WIC do not monitor population-based eligibility.

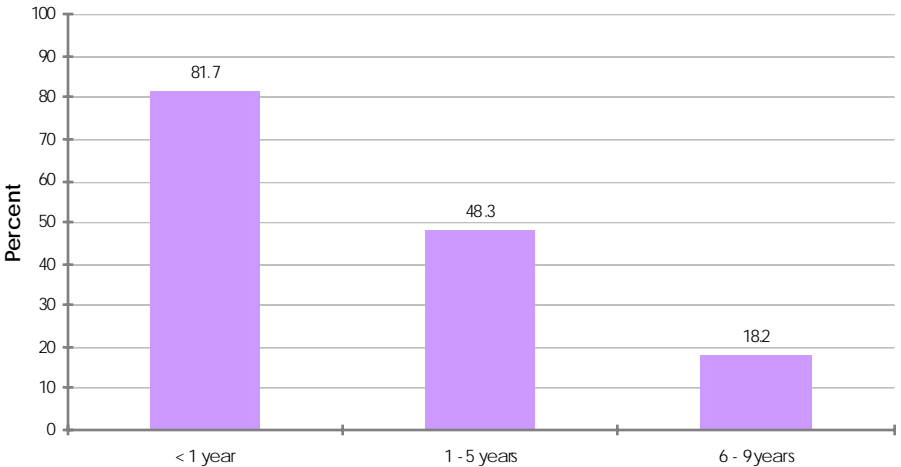
Data Sources: Alaska Pregnancy Risk Assessment Monitoring System; Department of Health and Social Services Annual EPSDT Report to the Federal Center for Medicaid and State Operations; Alaska WIC Management Information System.

EPSTD Enrollment by Age Alaska, 2000



Data Source: Early and Periodic Screening, Diagnosis and Treatment Program, Alaska Department of Labor July 1 2000 population estimates. Prepared by MCH Epidemiology Unit.

EPDST-Eligible Children Receiving at least One Well-Child Medical Screening, Alaska, 2000



Data Source: Early and Periodic Screening, Diagnosis and Treatment Program, Alaska Department of Labor July 1 2000 population estimates. Prepared by MCH Epidemiology Unit.

Fetal Alcohol Syndrome (FAS)

Fetal Alcohol Syndrome (FAS) is an irreversible congenital condition characterized by facial deformities, developmental delays, central nervous system impairments and growth deficiencies. FAS among Alaskan children is of considerable concern. Among states that have conducted population-based FAS surveillance, Alaskan children have the highest reported prevalence of FAS.¹ The Alaska FAS Surveillance Project uses a standardized surveillance case definition to confirm the presence of FAS based on specific deficiencies in each of these categories. Because certain tests for developmental delays are not reliable until age three years or later, most FAS cases are not diagnosed at birth and many are not diagnosed until after the child enters school.

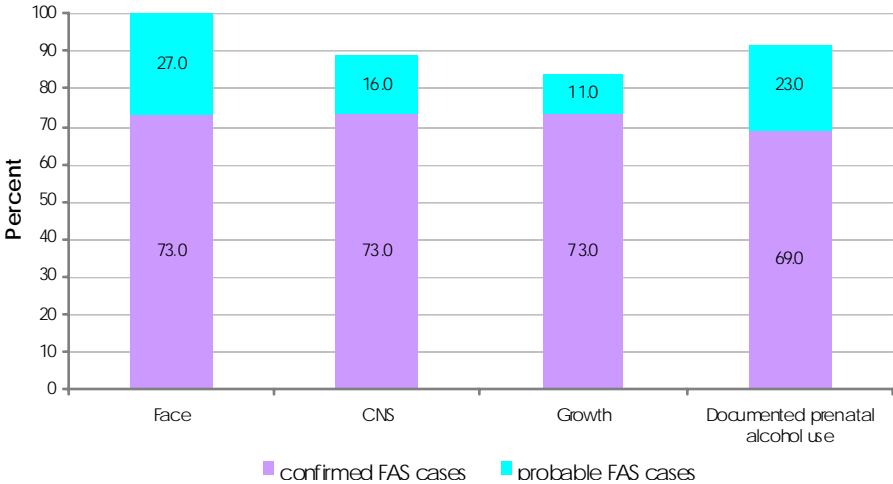
Of children born during 1995 - 1999 who met the surveillance case definition¹ for FAS:

- All had facial deformities characteristic of FAS as defined by the FAS surveillance definition.
- 89% had structural and or functional central nervous system (CNS) impairments.
- 84% had growth deficiencies.
- 92% had documented maternal alcohol use during pregnancy.

Data Source: Alaska Fetal Alcohol Syndrome Surveillance Project.

¹ CDC. *Fetal alcohol syndrome - Alaska, Arizona, Colorado, and New York, 1995-1997*. MMWR 2002; 51(20): 433-435.

Percent of FAS Children Meeting Various Surveillance Criteria Alaska, Birth Years 1995-1999



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

Child Health Issues

Asthma is one of the leading causes of childhood morbidity in the developed world and the most common chronic childhood disease in the United States. A recent study evaluated asthma prevalence among Alaskan children enrolled in Medicaid during 1998-1999. Based on this study, 6.9% of Medicaid enrollees under 20 years of age had one or more claims for asthma-related care or medication. Several similar studies of Medicaid populations suggest that asthma prevalence in other states is 1.5 to 2 times higher than in Alaska.¹

Iron deficiency anemia in early childhood is associated with potentially permanent cognitive and developmental deficits. The estimated prevalence of anemia among Alaska Native children in a study conducted in Hooper Bay, Alaska was more than twice the average in the United States. Based on evidence suggesting that some childhood anemia may be related to infection with *Helicobacter pylori*, an investigation is underway in 2003 to determine if *H. pylori* eradication therapy will lead to resolution of iron deficiency and anemia.²

Approximately 60% of Alaskans are either overweight or obese, and the prevalence is on the rise both nationally and in Alaska. Alaska currently ranks fifth in the Nation for **obesity**. Overweight and obesity are also increasing nationally among children. While some population-based self-reported survey data exists for Alaskans ages 18 and older, very little is known about the prevalence of obesity among Alaskan children.³

Approximately 4% of Alaskan adults are estimated to have diagnosed **diabetes** and it is the seventh leading cause of death. Very little is known about the prevalence of diabetes for the population of Alaskans ages less than 18 years of age.

Despite the dramatic improvements in reductions in **dental caries** (dental decay) in the last half-century with community water fluoridation, fluoridated dentifrice (toothpaste), other topical fluorides, and increased access to dental care, dental caries remains the most common disease of childhood.⁴ A 1999 screening of dental clinic users in Alaska Native health corporation dental programs indicates that Alaska Native pre-school age children experience about four times the rate of caries of all children in the United States.⁵ Statewide baselines for the prevalence of childhood caries in Alaska are not currently available. Alaska's Oral Health Program is seeking funding to conduct oral health screening to establish statewide and regional baselines for caries prevalence and rates of untreated caries.

Data Sources: Section of Maternal, Child and Family Health, Alaska Diabetes Control Program, Section of Epidemiology.

¹ Gessner, B. Asthma Prevalence Among Alaska Residents Less Than 20 years of Age Enrolled in Medicaid. Family Health Dataline. State of Alaska, Department of Health and Social Services, Section of Maternal, Child, and Family Health, 2001; 7:1.

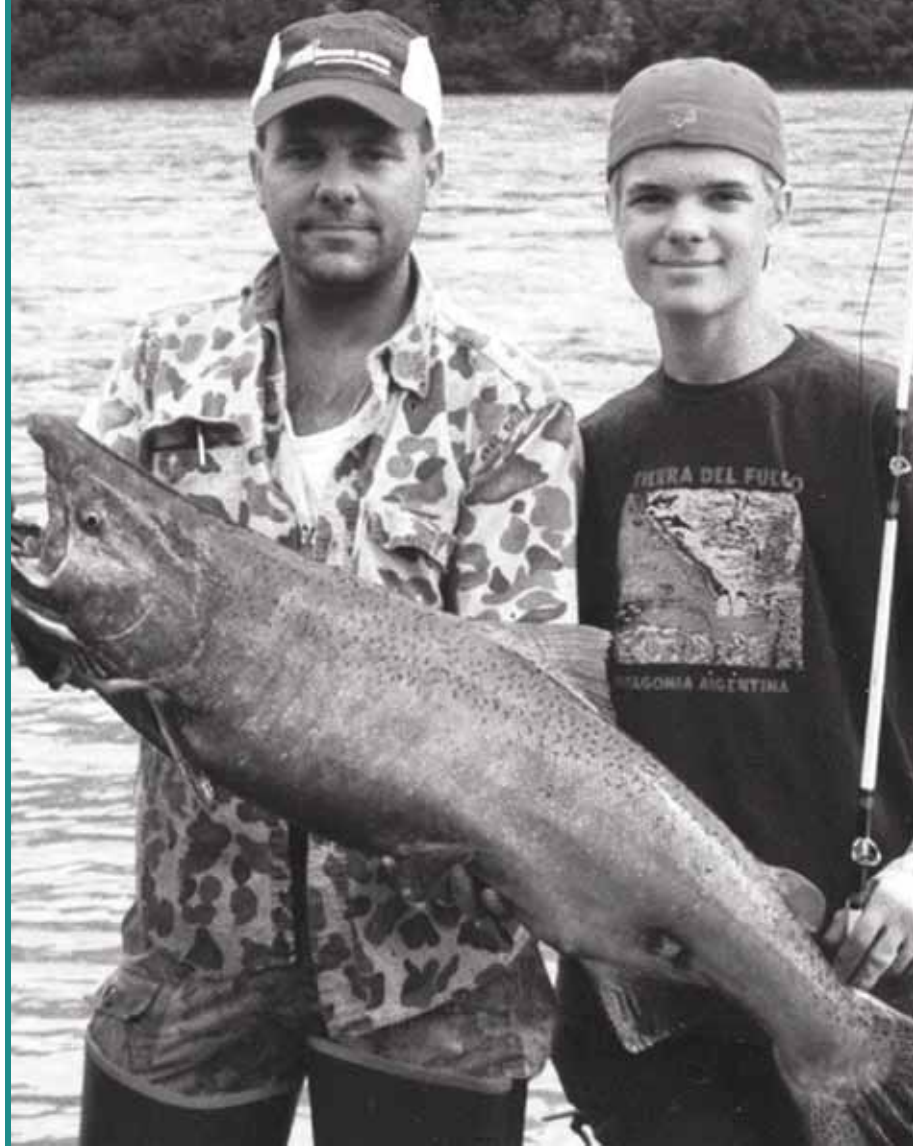
² Centers for Disease Control and Prevention (CDC). Iron Deficiency Anemia in Alaska Native Children, Hooper Bay Alaska. MMWR 1999; 48 (32): 714-716.

³ Healthy Alaskans 2010 Volume I: Targets for Improved Health, April 2002.

⁴ U.S. Dept. of Health and Human Services. Oral Health in America: A Report of the Surgeon General, Rockville, MD. U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research. National Institutes of Health, 2000.

⁵ An Oral Health Survey of American Indian and Alaska Native Dental Patients: Findings, Regional Differences and National Comparisons. Indian Health Service, 1999.

Adolescent and Teen Health



Adolescent Mortality

Nationally, unintentional injury, assault and suicide account for 51% of deaths among adolescents ages 10 - 14 years in 2000. Over the last decade, 67% of deaths among Alaskan adolescents were in these three categories. Unfortunately, there has been no statistically significant decline in the mortality rate among Alaskan adolescents over the last decade.

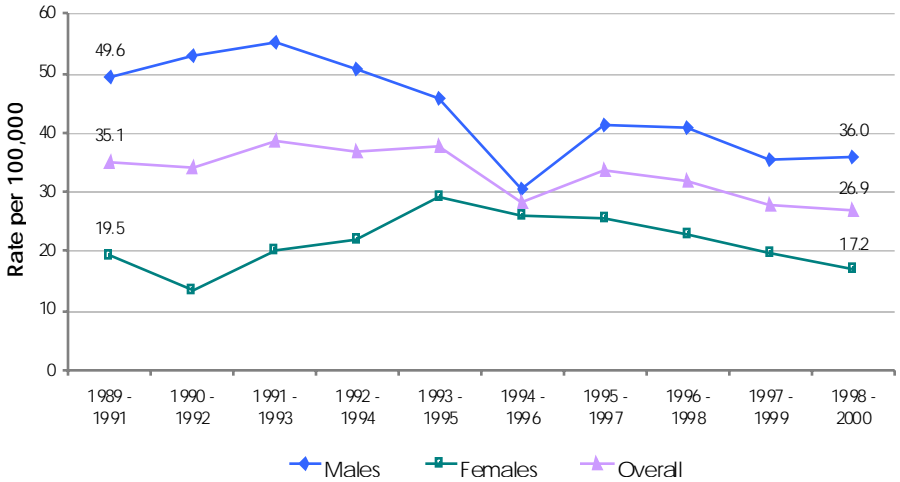
- ◆ In 1998 - 2000, Alaska's adolescent mortality rate (ages 10 - 14 years) was 36.0 and 17.2 per 100,000 population for males and females, respectively. Nationally, the rate was 25.0 and 16.6 per 100,000 for males and females, respectively, in 2000.
- ◆ Alaska's adolescent mortality rate is 29% higher than the national rate and almost 1.6 times the Healthy People 2010 target.
- ◆ The leading manner of death among Alaskan adolescents over the last decade was unintentional injury, accounting for 53% of adolescent deaths. Unintentional injuries to male and female adolescents account for 38% and 15%, respectively, of total adolescent mortality.
- ◆ Male adolescents are almost 2.5 times more likely to die from unintentional injuries than females.
- ◆ The second leading manner of death among Alaskan adolescents over the last decade was suicide, which accounted for nearly 8% of adolescent mortality.
- ◆ The suicide rate for adolescent males in Alaska is more than twice that of adolescent females.

Data Source: Alaska Bureau of Vital Statistics

The Healthy People 2010 target for adolescent mortality (ages 10 - 14 years) is 16.8 per 100,000.

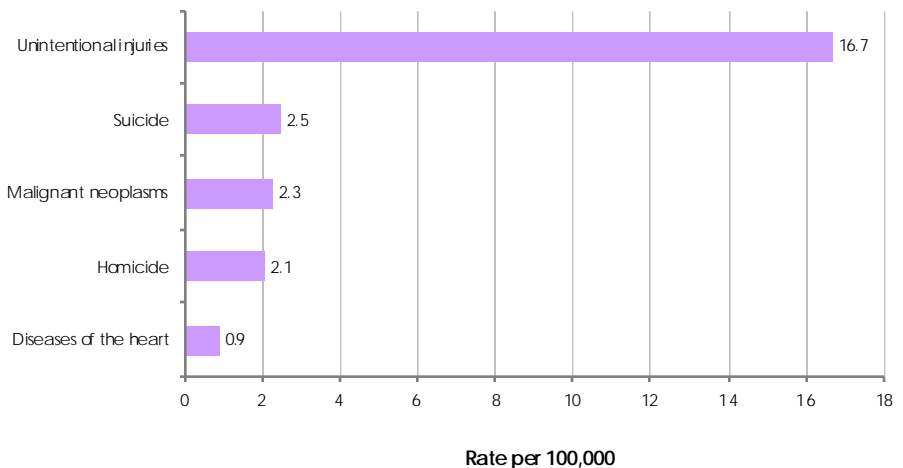
Adolescent and Teen Health

Adolescent Mortality Trends for Males and Females Ages 10-14, Alaska, 1991-2000



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

Most Common Causes of Adolescent Mortality Alaska, 1991-2000



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

Injury Mortality, Adolescents

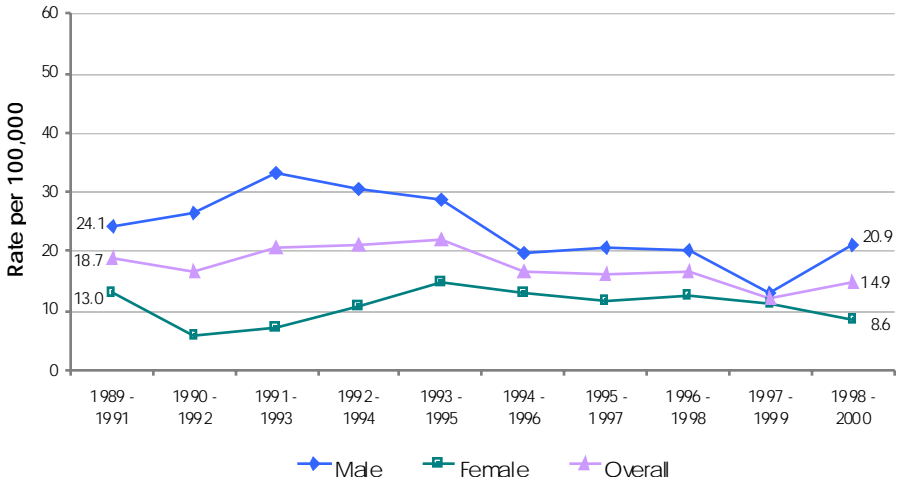
Unintentional injury is the leading manner of death among adolescents (ages 10 - 14 years) in both Alaska and the nation. Over the last decade, 53% of all Alaskan adolescent deaths were due to unintentional injury. Unfortunately, there has been no decline in the Alaskan adolescent mortality rate due to unintentional injury over the last decade.

- ◆ In 1998 - 2000, Alaska's unintentional injury mortality rates for adolescents were 20.9 and 8.6 per 100,000 for males and females, respectively. Nationally, unintentional injury deaths among adolescent males and females were 10.2 and 5.7 per 100,000 in 2000.
- ◆ Adolescent mortality due to unintentional injury is 46% higher in Alaska than in the nation as a whole.
- ◆ Unintentional injuries account for 56% of deaths among males ages 10 - 14 years and 46% of deaths among females of the same age group.
- ◆ The leading cause of unintentional injury deaths to Alaskan adolescents over the last decade was motor vehicle crashes, accounting for 48% of unintentional injury deaths among adolescents.
- ◆ Adolescent males are almost 2.5 times more likely to die from motor vehicle crashes than females.
- ◆ Over the last decade, the second leading cause of adolescent mortality due to unintentional injury was drowning, which accounts for nearly 13% of deaths among Alaskan adolescents.

Data Source: Alaska Bureau of Vital Statistics.

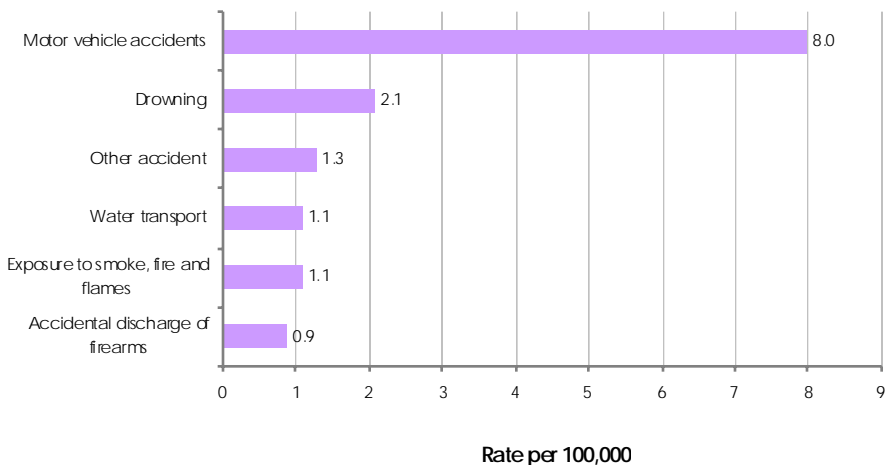
Adolescent and Teen Health

Unintentional Injury Mortality Trends by Sex, Ages 10-14 Alaska, 1991-2000



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

Most Common Causes of Adolescent Mortality Due to Unintentional Injuries, Alaska, 1991-2000



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

Teen Mortality

Nationally, unintentional injury, assault, and suicide account for 76% of deaths among teens ages 15 - 19 in 2000. Over the last decade, 87% of deaths among Alaskan teens resulted from these three manners of death. Although largely preventable, there has been no statistically significant decline in the overall mortality rate among Alaskan teens over the last decade.

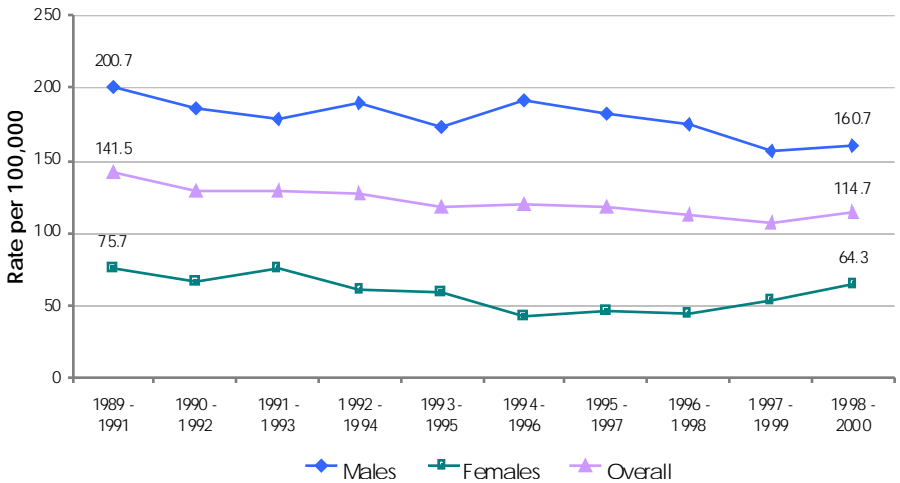
- ◆ In 1998 - 2000, Alaska's teen (ages 15 - 19 years) mortality rates were 160.7 and 64.3 per 100,000 for males and females, respectively. Nationally, the teen death rates for males and females were 94.9 and 40.0 per 100,000 population, respectively, in 2000.
- ◆ Alaska's teen mortality is 68% higher than the national rate and almost 3 times the Healthy People 2010 target.
- ◆ Unintentional injuries accounted for 44% of teen mortality over the last decade. Unintentional injury accounted for 43% of male and 47% of female mortality among Alaskans ages 15 - 19 years.
- ◆ Males in the 15 - 19 year-old age group are almost 2.7 times more likely to die from unintentional injuries than females.
- ◆ The second leading manner of death among Alaskan teens over the last decade was suicide, which accounted for 33% of deaths to teens ages 15 - 19 years.
- ◆ Male teens in Alaska are almost 4.5 times more likely to commit suicide and 3.2 times more likely to be a victim of homicide than females in the same age group.

Data Source: Alaska Bureau of Vital Statistics.

The Healthy People 2010 target for teen deaths ages 15 - 19 years is 39.8 per 100,000.

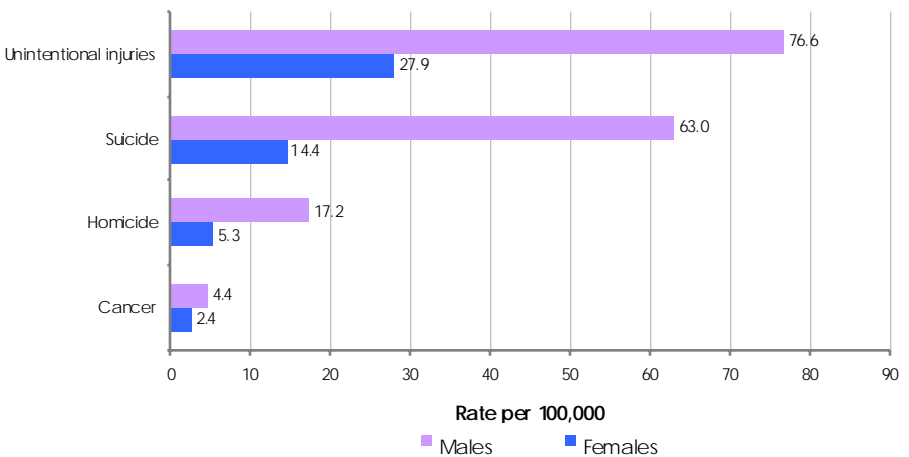
Adolescent and Teen Health

Teen Mortality Trends by Sex, Ages 15 -19 Alaska, 1991-2000



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

Most Common Causes of Teen Mortality Alaska, 1991-2000



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

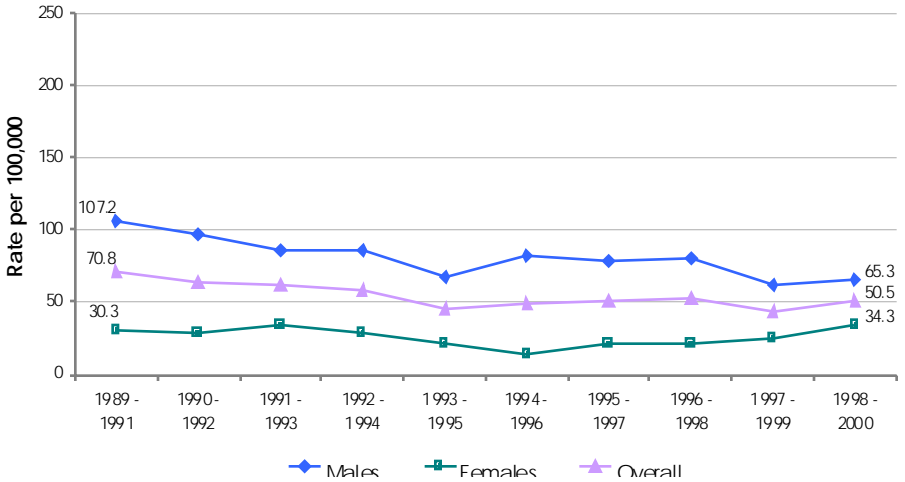
Injury Mortality, Teens

Teenagers in Alaska and the nation have higher unintentional injury mortality rates than any other age group. Nationally, unintentional injury accounts for 50% of deaths among teens ages 15 - 19 years with the leading cause of death being motor vehicle crashes. Over the last decade, 44% of deaths among Alaskan teens were caused by unintentional injury, with more than half of them due to motor vehicle crashes.

- ◆ In 1998 - 2000, Alaska's unintentional injury mortality rates were 65.3 and 34.3 per 100,000 population for males and females in the 15 - 19 age group, respectively. Nationally, unintentional injury deaths among teens ages 15 - 19 years were 46.6 and 20.7 per 100,000 for males and females, respectively, in 2000.
- ◆ Alaska's teen unintentional injury mortality rate among 15 - 19 year-olds is almost 50% higher than the national rate (40% and 66% higher for Alaskan males and females, respectively).
- ◆ The leading cause of unintentional injury deaths to Alaskan teens over the last decade was motor vehicle crashes, accounting for more than one-half of all unintentional injury deaths and one-fourth of overall deaths among teens ages 15 - 19 years.
- ◆ Motor vehicle crashes are the cause of 21% of male and 28% of female deaths among 15 - 19 year-olds. Although motor vehicle crashes account for a higher proportion of female mortality, Alaskan males in this age group have a much higher death rate and are 2.3 times more likely to die from motor vehicle crashes than females.
- ◆ The second leading cause of unintentional injury deaths to Alaskan teens over the last decade was drowning. Male teens in Alaska are more than 9 times more likely to die as a result of drowning than females in the same age group.

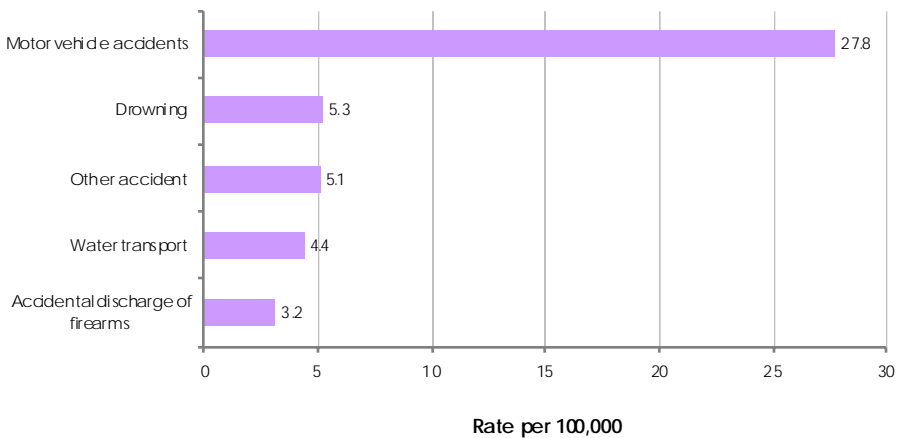
Adolescent and Teen Health

Unintentional Injury Mortality Trends by Sex Ages 15 -19, Alaska, 1991-2000



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

Most Common Causes of Teen Mortality Due to Unintentional Injuries, Ages 15 -19, Alaska, 1991-2000



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

Suicide and Homicide

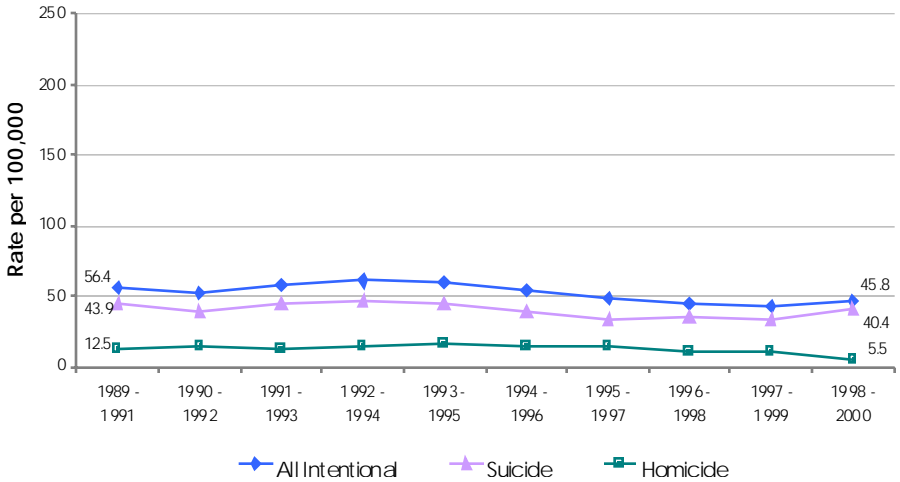
After unintentional injury, suicide and homicide are the most frequent manner of death for Alaskans ages 15 - 19 years. Alaska's suicide rate among teenagers is the highest in the nation and has remained unchanged over the last decade. Suicide and homicide mortality are strongly associated with sex and race.

- ◆ During 1998 - 2000, intentional injury mortality among teens ages 15 - 19 years in Alaska (45.8 per 100,000 population) was almost 3 times higher than the 2000 national rate (17.8 per 100,000).
- ◆ Teen homicide rates declined by over 50% over the last decade in Alaska. In 1998 - 2000, Alaska's homicide rate for ages 15 - 19 years was 1.7 times lower than the national rate for 2000.
- ◆ Teen males are significantly more likely to die from homicide than females in Alaska and Alaska Native males are at greatest risk.
- ◆ While homicide rates for Alaska teens declined over the last decade, there has been no decline in the suicide rate for Alaskans ages 15 - 19 years. The Alaska teen suicide rate (1998 - 2000) is almost 5 times the national rate for 2000.
- ◆ Alaska Native teens are far more likely to commit suicide than non-Natives. The suicide rate for Alaska Native males ages 15 - 19 years during the period 1991 - 1999 (187 per 100,000) was 6 times higher than the suicide rate for non-Native males.

Data Source: Alaska Bureau of Vital Statistics.

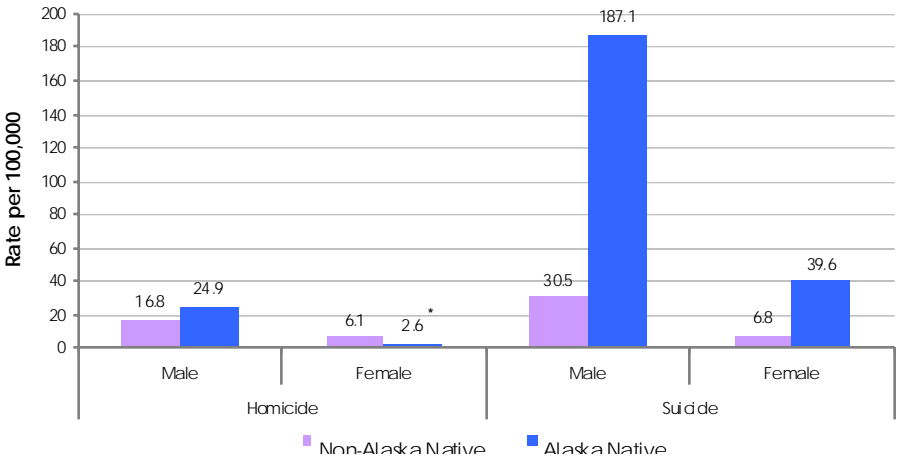
Adolescent and Teen Health

Homicide and Suicide Trends, Ages 15-19 Alaska, 1991-2000



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

Homicide and Suicide by Sex and Race, Ages 15-19 Alaska, 1991-1999



* Use with caution. This rate was calculated based on one event.

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

Teen Births

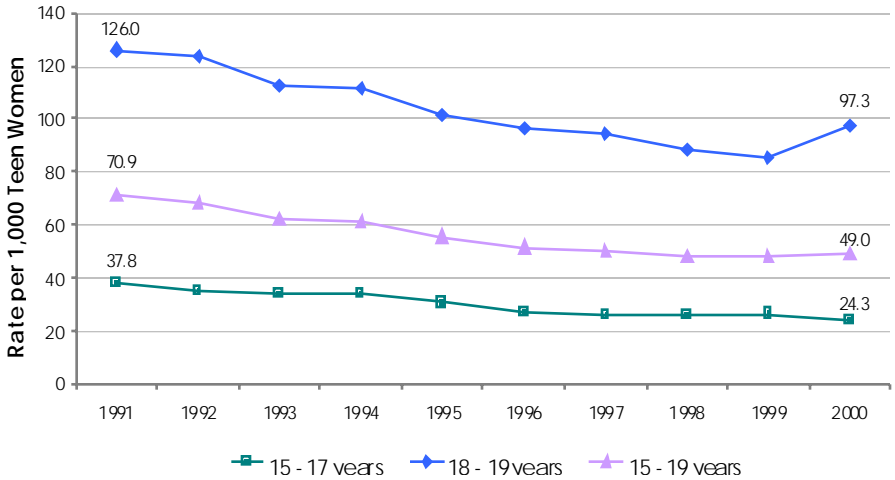
Teenage mothers are less likely to receive adequate prenatal and postnatal care, and more likely to experience labor and delivery complications. Babies born to teen mothers are at a higher risk of low birth weight and infant mortality.

- ◆ Over the last decade, the birth rates for Alaska teens ages 15 - 17 years and 18 - 19 years have declined significantly, with average annual decreases of approximately 5% and 4%, respectively.
- ◆ The birth rate among Alaska teenagers ages 15 - 19 years declined 31% during 1991 - 2000. The teen birth rate among younger teens (15 - 17 years) declined 36%, from 37.8 per 1,000 population in 1991 to 24.3 in 2000.
- ◆ Although there was also a statistically significant decline in the birth rate for 18 - 19 year-olds over the decade, there was a sharp increase in the birth rate for older teens between 1999 - 2000, from 85 to 97.3 per 1,000.
- ◆ Older teens have much higher birth rates than younger teens. Two-thirds of babies born to teen mothers are among teenagers ages 18 - 19 years.
- ◆ Since 1991, the national birth rate among teenagers ages 15 - 17 years and 18 - 19 years has been declining and, in 2000, reached record lows of 27.4 and 79.2 births per 1,000, respectively. Alaska has consistently exceeded the nation in the decline of teen births among 15 - 17 year-olds; but in spite of significant declines among older teens, the birth rate for 18 - 19 year-olds has remained higher than the national rate.
- ◆ Both the Alaska Native and white teen birth rates have significantly declined over the last decade (29% and 41%, respectively), but there is still a large racial disparity. In 1999, the Alaska Native teen birth rate was 2.5 times that of white teens.

Data Source: Alaska Bureau of Vital Statistics.

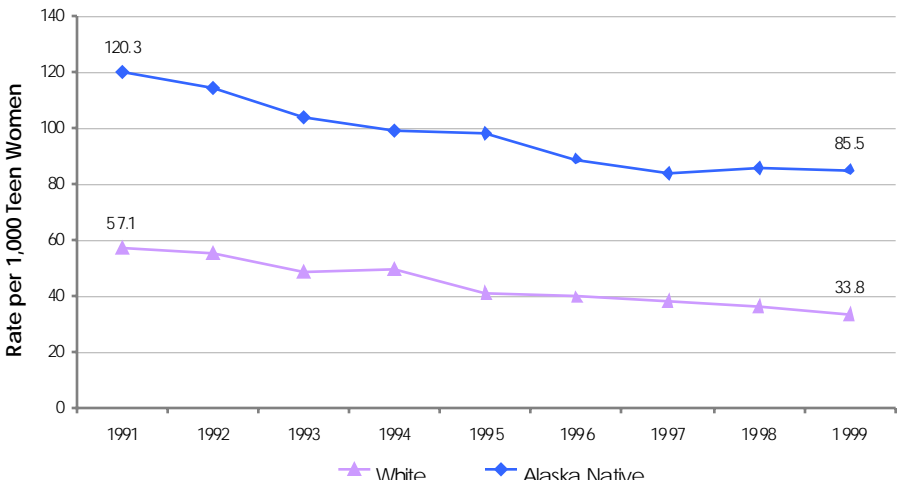
Adolescent and Teen Health

Teen Birth Rate by Age Group and Year Alaska, 1991-2000



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

Teen Birth Rate by Race and Year, Ages 15 - 19 Alaska, 1991-1999



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

Adolescent and Teen Health Issues

In January 2002, the Section of Maternal, Child and Family Health Adolescent Health Program conducted an “Anchorage Adult Opinion about Youth” telephone survey.

Ninety-one percent of Anchorage adults reported that they believed it was **important for schools** to teach social skills related to self-discipline, self-control, managing behavior, getting along with others, and respecting other cultures.

More than 80% supported increasing **funding for after-school** programs for children and youth.

Nearly 90% of Anchorage adults believe today’s youth will make Alaska a better place and 80% believe that most Anchorage youth generally **act responsibly**.

Data Source: January 2002 Anchorage Adult Opinion about Youth Telephone Survey (MCFH Adolescent Health Program).

Adolescent and Teen Health

Currently, Alaska does not have statewide instruments that collect data on positive measures of adolescent health and well-being. Factors indicative of youth becoming fully prepared to take on the **responsibilities of adulthood** are important in evaluating the health status of Alaska's youth. In the spring of 2003 statewide surveys are being implemented to collect this type of data.

A series of protective factor (**assets**) questions have been added to the 2003 Youth Risk Behavior Survey to measure how much youth feel supported, cared for, and connected to others.

A statewide phone survey is being conducted to identify **adult perceptions**, attitudes and actions related to providing support, nurturance and guidance for children and youth.

Individual communities are surveying their youth to assess how many assets and **protective factors** are present.

Data Source: January 2002 Anchorage Adult Opinion about Youth Telephone Survey (MCFH Adolescent Health Program).

Maternal Health



Maternal Mortality

Maternal deaths are rare, sentinel events that alert us to important medical and social issues that affect women and families.

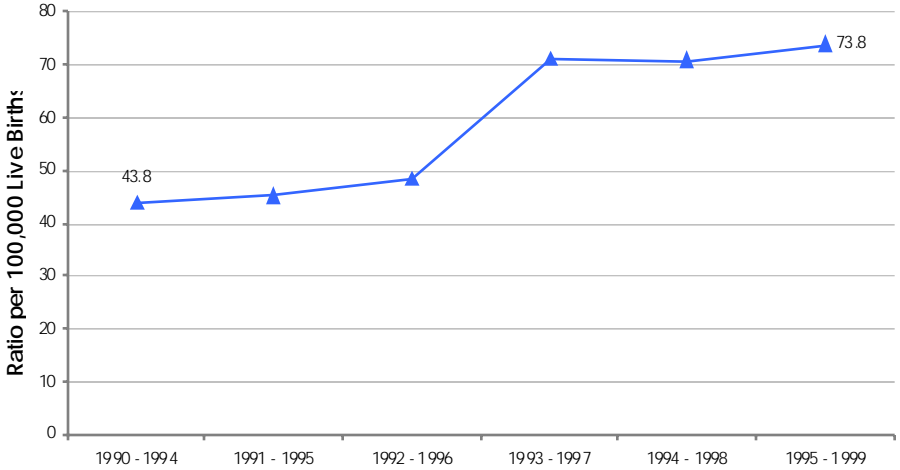
Pregnancy-associated deaths are those deaths that occur during pregnancy or within one year of pregnancy, due to any cause.

Pregnancy-related deaths are pregnancy-associated deaths that are caused by conditions directly related to pregnancy and childbirth.

- ◆ Pregnancy-associated mortality increased in Alaska between 1990 and 1999. The ten-year average ratio of pregnancy-associated deaths to live births is high in Alaska (58 per 100,000 population) compared to other states who have measured this indicator.
- ◆ According to the Alaska Maternal and Infant Mortality Review, as many as 77% of pregnancy-associated and 50% of pregnancy-related deaths are preventable. Alcohol abuse contributes to almost 30% of pregnancy-associated mortality in Alaska.
- ◆ Unintentional injury is the leading cause of pregnancy-associated death in Alaska and accounted for almost one third of maternal deaths during the 1990s.
- ◆ Alaska Native women are at higher risk of post-delivery mortality for all manners of death except pregnancy-related mortality.

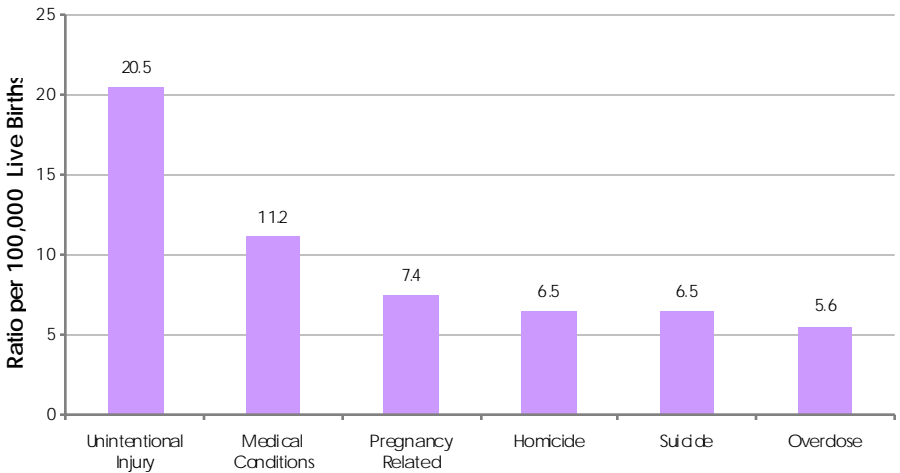
Data Source: Alaska Maternal-Infant Mortality Review.

Pregnancy-Associated Mortality by Year of Death, Five-Year Moving Average, Alaska, 1994-1999



Data Source: Alaska Maternal-Infant Mortality Review, MCH Epidemiology Unit.

Pregnancy-Associated Mortality by Manner of Death, Alaska, 1994-1999



Data Source: Alaska Maternal-Infant Mortality Review, MCH Epidemiology Unit.

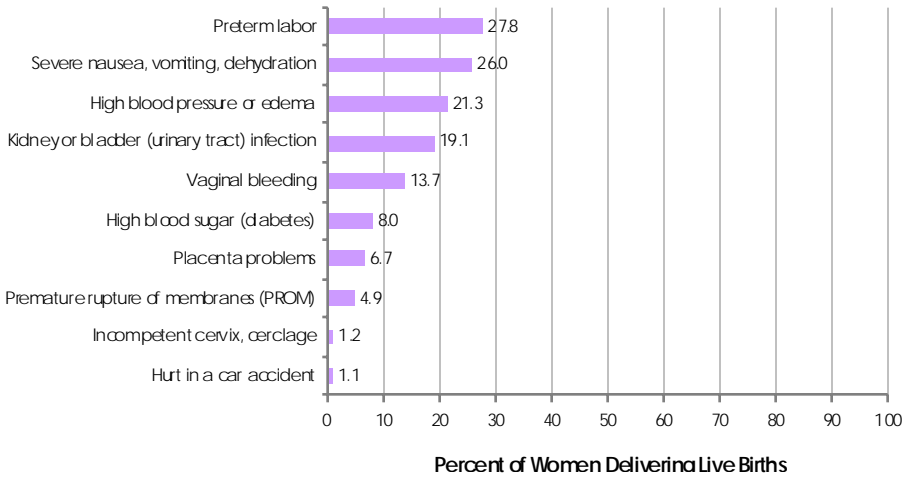
Maternal Morbidity

Illnesses and health conditions related to pregnancy can result in short or long-term maternal morbidity, especially if not appropriately treated through adequate prenatal and post-delivery care. Maternal morbidity during pregnancy and after delivery contributes to perinatal mortality, chronic health problems for mothers and infants, increased health care expenditures and decreased quality of life.

- ◆ Approximately 33% of women who delivered a live-born infant in 2000 indicated they did not have any of the conditions listed in the bar chart on the facing page.
- ◆ The most prevalent self-reported prenatal condition for women who delivered a live-born infant in Alaska during 2000 was preterm labor (27.8%), followed by severe nausea, vomiting, and dehydration (26.0%).
- ◆ Of the women who indicated they had at least one of these conditions, 38.5% went to the hospital or emergency room and stayed less than 1 day because of the condition(s). About thirteen percent (12.9%) went to the hospital and stayed 1 to 7 days, 4.5% went to the hospital and stayed more than 7 days, and 30.0% stayed in bed at home more than 2 days because of their doctor's or nurse's advice.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Self-Reported Prenatal Conditions Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Pre-Pregnancy Body Mass Index (BMI)

Nationally, overweight and obesity have been significantly increasing over the past decade and Alaska is no exception. Overweight and obesity (having a body mass index of 25 or greater) are associated with certain types of cancer, heart disease, stroke and diabetes. When considered in conjunction with a pregnancy, pre-pregnancy obesity has been found to be an independent risk factor for different adverse pregnancy and neonatal outcomes.¹

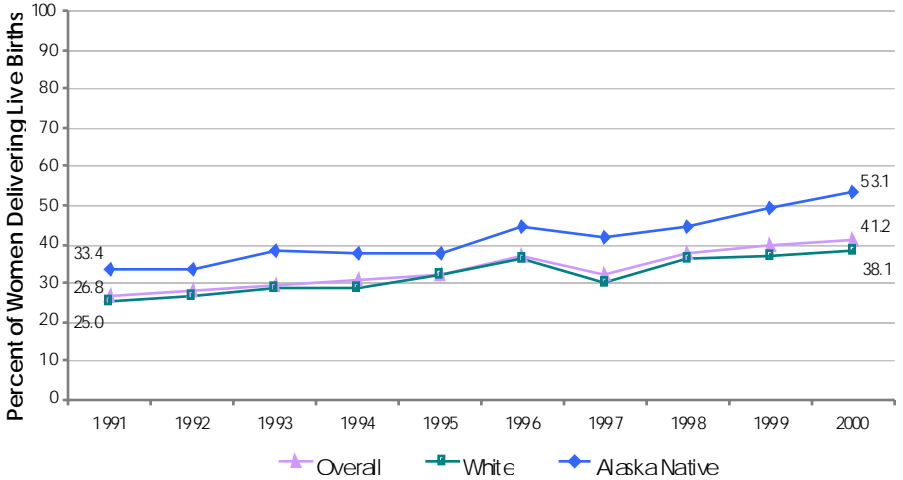
- ◆ Over 40% of Alaskan women who delivered a live birth in 2000 were overweight or obese prior to becoming pregnant. The prevalence of pre-pregnancy overweight/obesity increased from 26.8% to 41.2% over the last decade.
- ◆ Alaska Native women have the highest prevalence of pre-pregnancy overweight/obesity. In 2000, 53.1% of Alaska Native women were overweight or obese before they got pregnant with their new baby.
- ◆ Asian/Pacific Islander women show the lowest prevalence of pre-pregnancy overweight/obesity in Alaska (23.6%).
- ◆ The proportion of women who reported a normal pre-pregnancy body mass index decreased from 60.6% in 1991 - 1995 to 49.7% in 1996 - 2000.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

¹Bo S, Menato G, Signorile A, et al. Obesity or diabetes: what is worse for the mother and for the baby? *Diabetes Metab* 2003 Apr; 29(2 Pt 1):175.

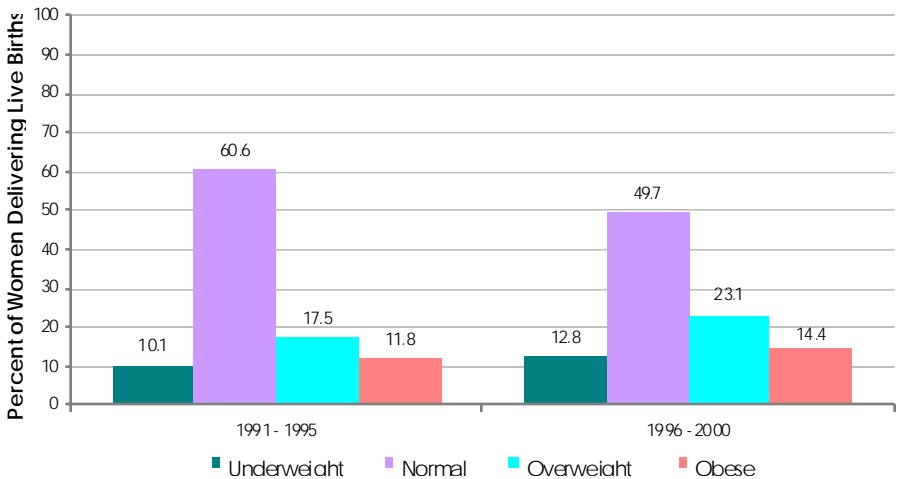
Maternal Health

Pre-pregnancy Overweight or Obesity by Race and Year Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Pre-pregnancy Body Mass Index (BMI) Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Maternal Mental Health

Although one in ten new mothers experiences various degrees of postpartum depression, it still remains one of the least well known of postpartum conditions. Postpartum depression can occur within days of the delivery or appear gradually, sometimes up to a year later.

- ◆ Over one-fourth of Alaskan women who delivered a live-born infant in 2000 indicated that their prenatal period was a “moderately hard time”, a “very hard time”, or “one of the worst times of my life”.
- ◆ Among mothers of newborns, 67% indicated that a health care worker talked with them about “baby blues” or postpartum depression either during pregnancy or after delivery.
- ◆ About sixty percent of Alaskan mothers of newborns indicated they were somewhat depressed in the months after their delivery and nearly 6% said they were “very depressed”.
- ◆ Twenty percent of mothers who reported postpartum depression said they wanted to see a mental health professional, and 9% indicated that they had already seen one.

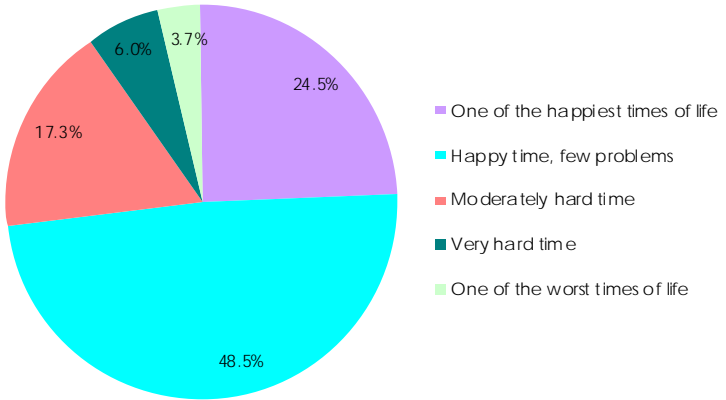
Data Source: Alaska Pregnancy Risk Assessment Monitoring System, 2000

Maternal Life Stressors 12 Months Before Delivery of a Live Birth Alaska, 2000

	%
Moved to a new address	40.2
Lot of bills that couldn't be paid	27.2
Argued with husband/partner more than usual	26.8
Close family member sick	22.9
Someone close had problem with drinking or drugs	18.8
Someone close died	18.0
Separated or divorced from husband/partner	12.2
Husband/partner lost job	11.0
Husband/partner said he didn't want pregnancy	10.5
Lost job	8.7
Husband/partner went to jail	7.7
In a physical fight	5.1
Homeless	3.3

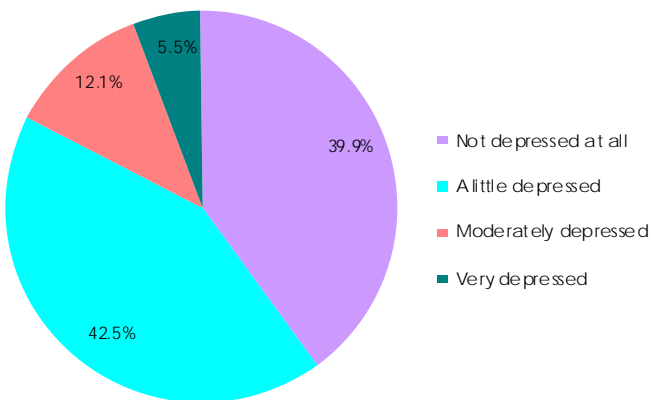
Source: Alaska PRAMS 2000 data

Prenatal Emotional State of Women Delivering Live Births Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Postpartum Depression Among Women Delivering Live Births, Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Postpartum Alcohol Use

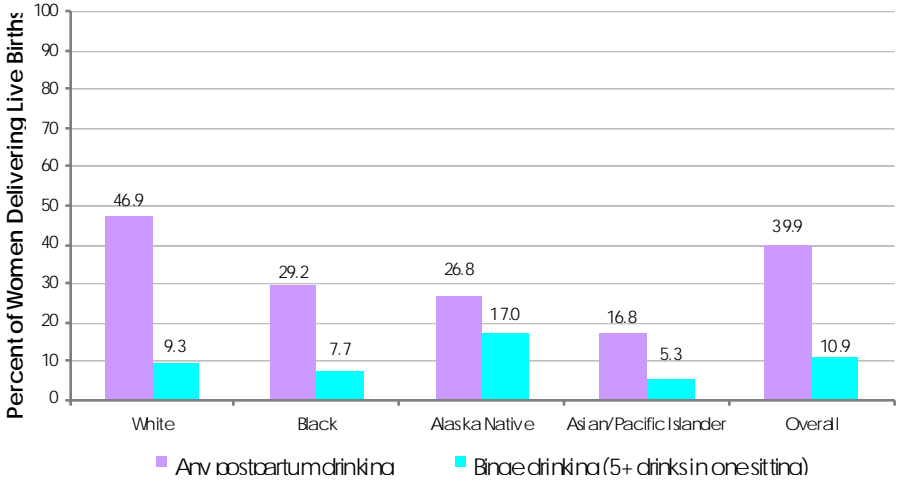
Postpartum alcohol consumption can negatively affect the well-being of mothers and families. There was no significant change in the prevalence of postpartum alcohol use in Alaska during 1996 - 2000 for women that report drinking some amount of alcohol.

- ◆ Overall, 39.9% of postpartum Alaskan women drank some amount of alcohol in 1996 - 2000.
- ◆ Approximately 11% of postpartum women indicated that they binged (had five or more alcoholic drinks at one sitting) at least once since their new baby was born. (On average, women were 3.5 months postpartum when surveyed.)
- ◆ Alaska Native women reported the highest prevalence of postpartum binge drinking (17.0%), while Asian/Pacific Islander women reported the lowest (5.3%).
- ◆ Only one-fourth of mothers under 20 years indicated they had consumed alcohol since the birth of their baby, while at least 40% of mothers 20 and older indicated they had drunk alcohol since delivery.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

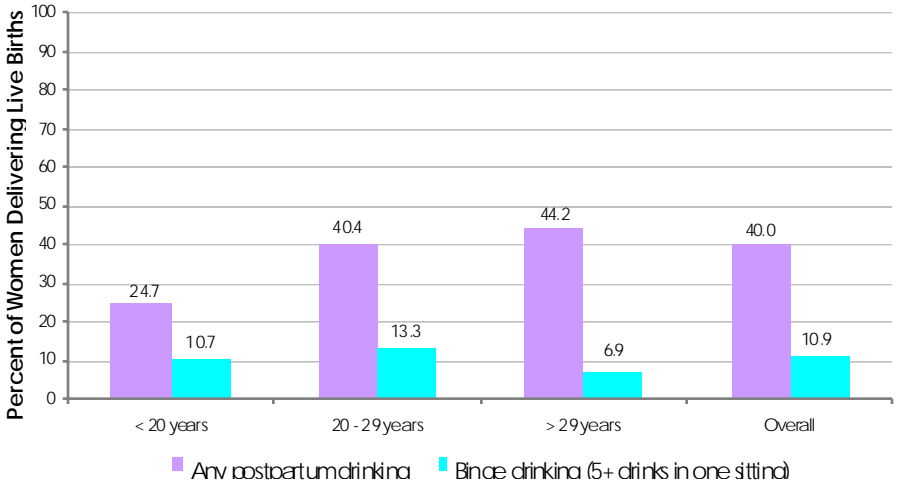
Maternal Health

Postpartum Drinking (Any and Binge) by Maternal Race Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Postpartum Drinking (Any and Binge) by Maternal Age Alaska, 1996-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Postpartum Tobacco Use

Smoking tobacco is a demonstrated risk factor for cancer, heart disease, high blood pressure and other leading causes of female mortality and morbidity. Maternal cigarette smoking has adverse effects on the health of children through exposure to second-hand smoke. Because smoking during pregnancy contributes to a number of adverse birth outcomes, and because pregnant women have frequent contact with the health care system, it is important to promote smoking cessation during pregnancy.

- ◆ On average, 26% of postpartum women in Alaska smoke cigarettes. Alaska Native women are almost twice as likely to smoke than white women.
- ◆ The number one barrier to quitting smoking among women smokers who would like to quit (80% of postpartum women) was the craving for a cigarette (85.4%). If cost were not an issue, 74.2% would use a nicotine patch, gum, nasal spray, or inhaler to aid them in quitting smoking.
- ◆ Approximately 3% of women who had smoked at least 100 cigarettes in their lifetime and gave birth during 1996-1999 indicated that they took classes on how to stop smoking while they were pregnant. Alaska Native women had the highest prevalence of taking prenatal smoking cessation classes (5%).

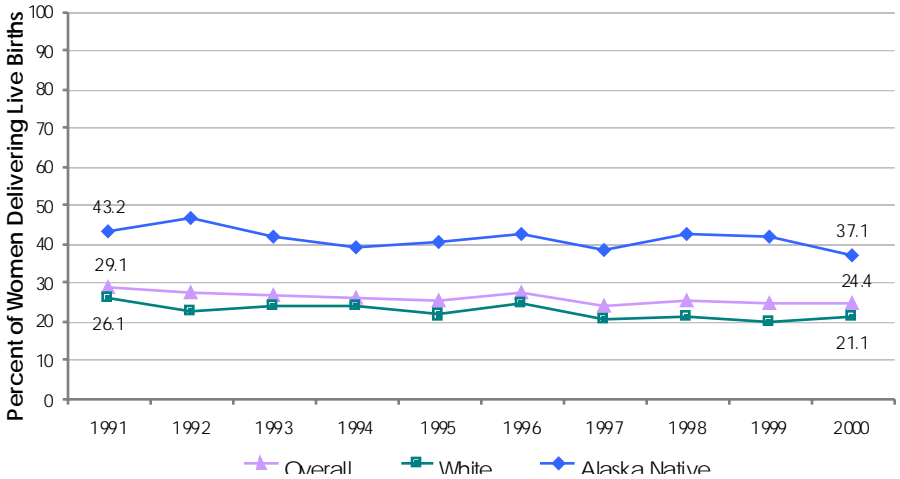
Data Source: Alaska Pregnancy Risk Assessment Monitoring System, 1991 - 2000

Aids to Quitting Smoking Among Postpartum Women Alaska, 2000

	%
Nicotine patch, gum, nasal spray, or inhaler	74.2
Zyban, or other non-nicotine prescription medicine	53.3
A quit smoking class or group	33.8
Books, pamphlets, videotapes, or audiotapes	29.6
A telephone helpline to quit smoking	23.9
Something else	25.9

Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Postpartum Tobacco Use by Race and Year Alaska, 1991-2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Barriers to Quitting Smoking Among Postpartum Women Alaska, 2000

Barrier	%
Craving for a cigarette	85.4
Loss of a way to handle stress	64.6
Other people around me smoke	62.9
Fear of gaining weight	48.8
Costs of medicines, products, or classes to help you quit	41.1
Lack of support from others to quit smoking	31.1
Some other reason	9.4

Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Physical Abuse Before Pregnancy

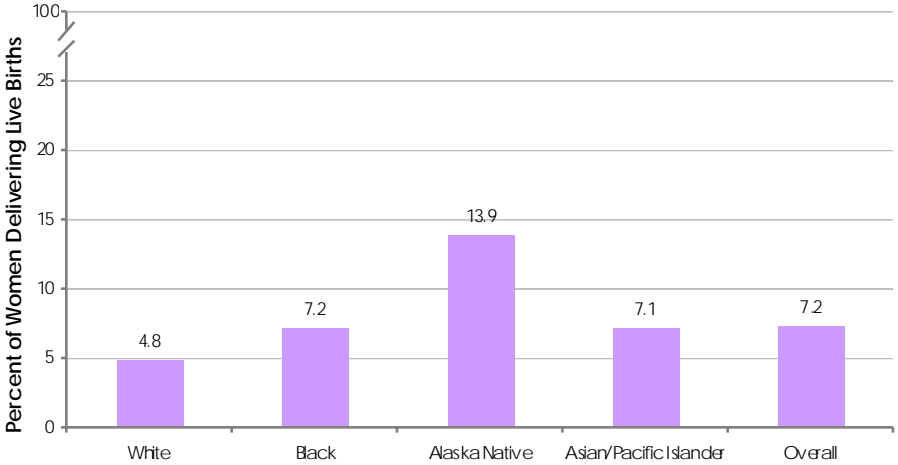
Domestic violence is a leading cause of injuries to women. In Alaska, domestic violence may account for one-half or more of female homicides. A growing body of scientific research has identified numerous long-term health effects of living in an abusive relationship.

- ◆ Overall, 7.2% of women who delivered a live-born infant during 1996 - 1999 experienced physical abuse during the 12 months before they got pregnant. Of those women, 76% indicated that their husband or partner was the abuser.
- ◆ Eighty-nine percent of women who experienced physical abuse during the 12 months before they got pregnant mentioned one person as the abuser. Eleven percent of abused women mentioned two or three different persons.
- ◆ Approximately 5% of white women reported pre-pregnancy physical abuse in 1996 - 1999. Alaska Native women were three times more likely than white women to have been abused, and black women and Asian/Pacific Islander women were 1.5 times more likely than white women to have been abused before pregnancy.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

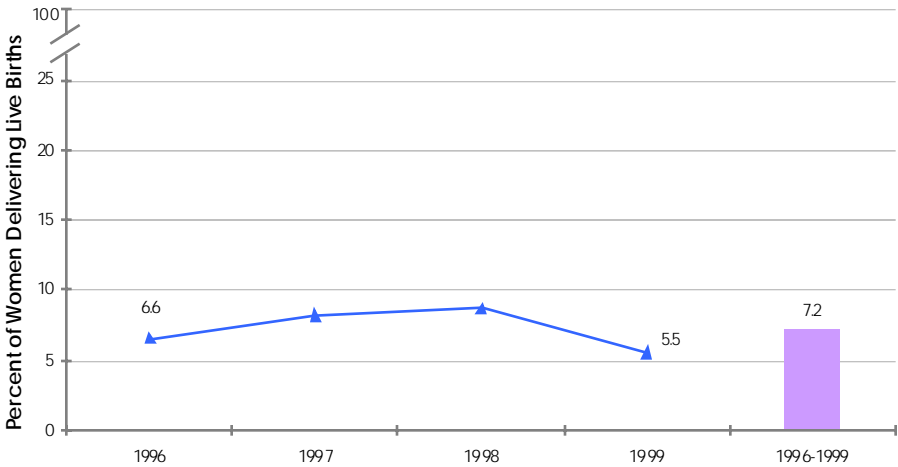
Maternal Health

Physical Abuse (by Anyone) 12 Months Before Pregnancy by Race, Alaska, 1996-1999



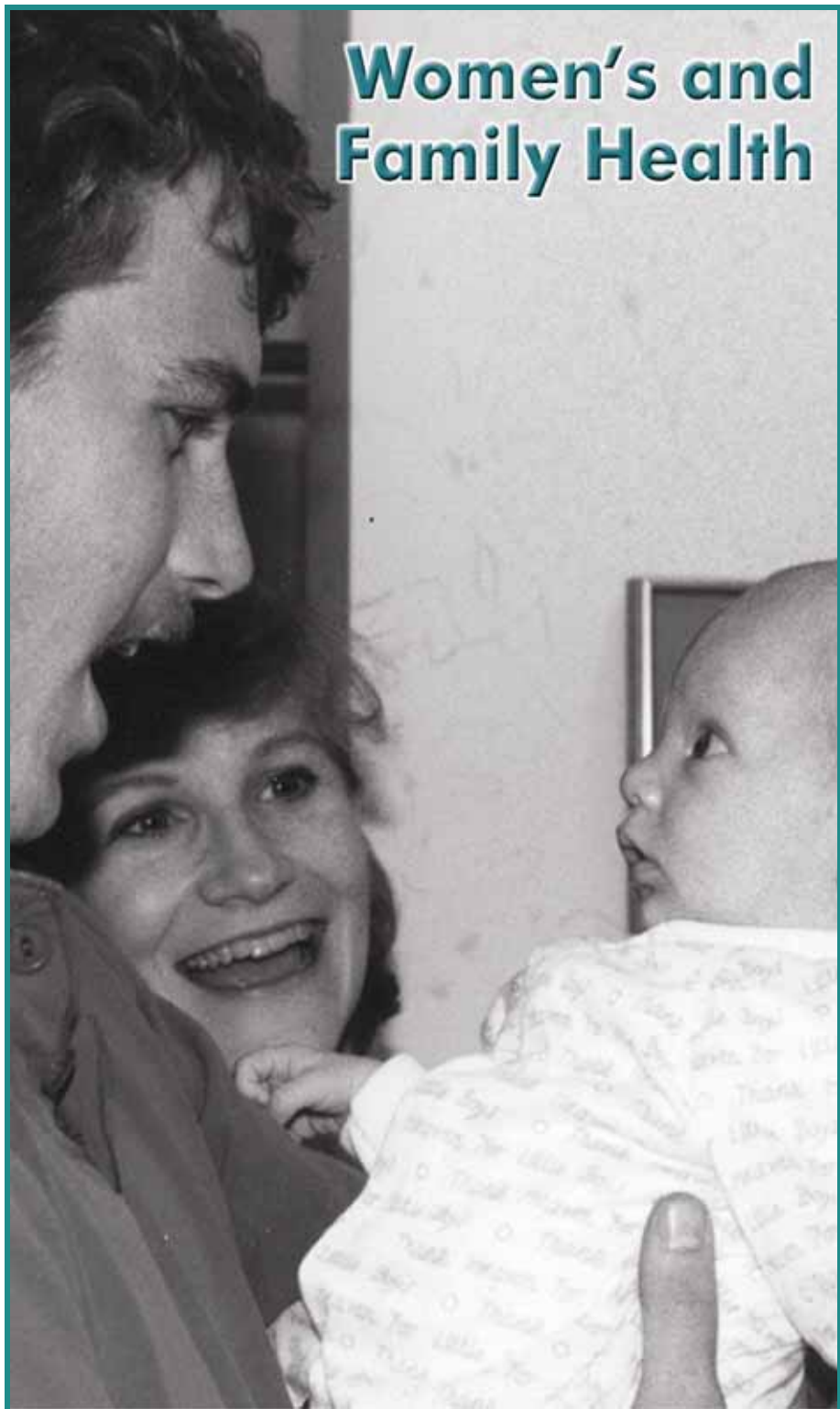
Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Physical Abuse (by Anyone) 12 Months Before Pregnancy by Year, Alaska, 1996-1999



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Women's and Family Health



Female Mortality

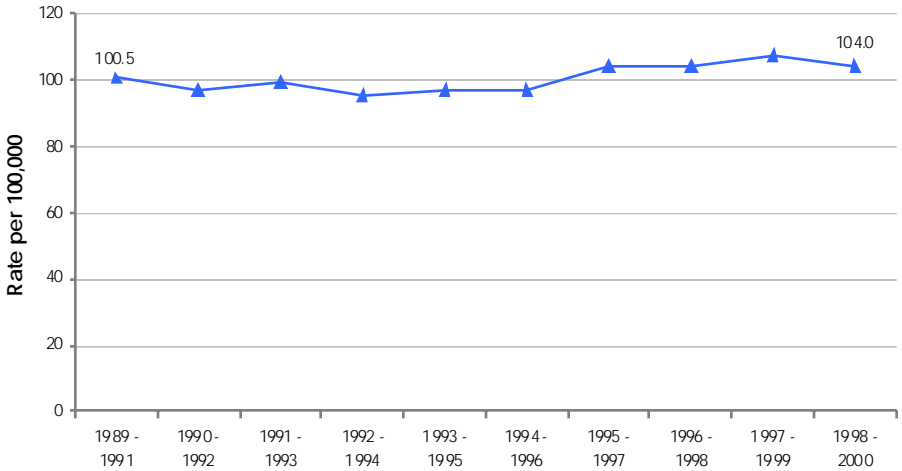
As a sentinel event, mortality is an acceptable indicator for learning about a population's health status. As with other Alaskan populations, women of childbearing age are substantially affected by unintentional injuries, the leading manner of death in this population. As women get older, the mortality rate due to unintentional injury decreases, and death rates associated with cancer become more prevalent. Over the last decade there has been no significant change in the overall mortality rate for Alaskan females ages 15 - 44 years.

- ◆ In 1998 - 2000, the mortality rate for Alaskan women of childbearing age (15 - 44 years) was 104 per 100,000 population, considerably higher than the national average of 88.6 per 100,000 in 2000. Alaska's female mortality rate among 15 - 44 year-olds is 17.4% higher than the national rate.
- ◆ In 1998 - 2000, more than one-fourth (27%) of all deaths among Alaska women of childbearing age were caused by unintentional injuries. The unintentional injury mortality rate for this population was about 20% higher than the national rate for 2000.
- ◆ Malignant neoplasm (cancer), made up 18% of all deaths among Alaskan women ages 15 - 44 years. Over the last decade, suicide and homicide among this age group were the third and fourth leading causes of death, comprising 12% and 7% of total mortality, respectively.

Data Source: Alaska Bureau of Vital Statistics.

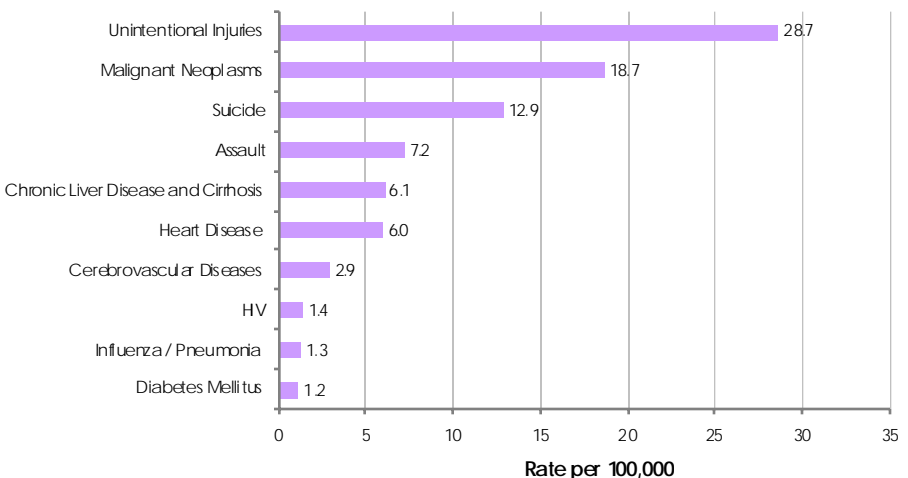
Women's and Family Health

Female Mortality Rate by Three-Year Moving Average, Ages 15-44, Alaska, 1991-2000



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

Most Common Causes of Female Mortality, Ages 15-44, Alaska, 1991-2000



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

Unintentional Injury Mortality

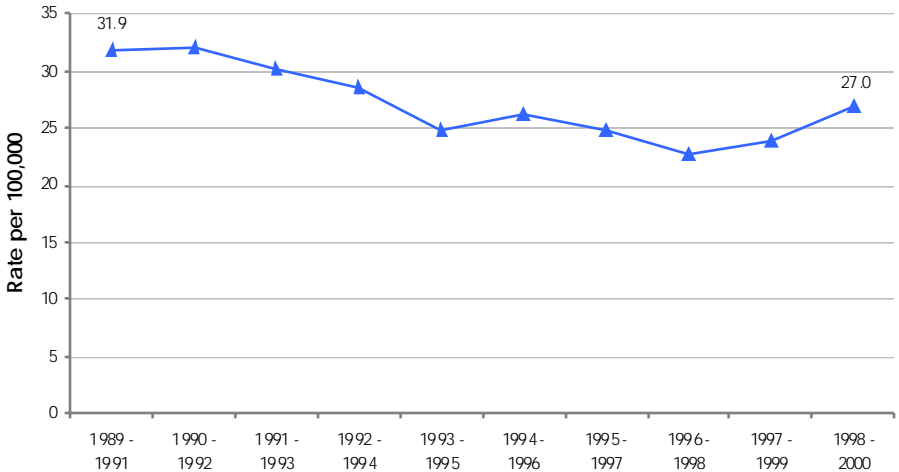
Unintentional injury accounts for almost 20% of deaths among females of childbearing age (15 - 44 years) in the United States, with motor vehicle crashes the leading cause of unintentional injury mortality. Although largely preventable, unintentional injury deaths among women of childbearing age have not declined in Alaska over the last decade and the unintentional injury mortality rate is much higher than the national average.

- ◆ In 1998 - 2000, Alaska's unintentional injury mortality rate was 27 per 100,000 for females age 15 - 44 years, compared to 17.2 per 100,000, the national rate in 2000. Alaska's unintentional injury mortality rate among females of childbearing age was almost 60% higher than the national rate.
- ◆ The leading cause of unintentional injury deaths among Alaskan females over the last decade was motor vehicle crashes, accounting for almost one-half (45%) of all unintentional injury deaths in this population.
- ◆ Motor vehicle crashes resulting in death to females ages 15 - 44 years account for 12% of all deaths to this group.
- ◆ The second leading cause of unintentional injury deaths to Alaskan females over the last decade was poisoning. Deaths due to poisoning accounted for 21% of all unintentional injury deaths and 6% of deaths overall among women of childbearing age.

Data Source: Alaska Bureau of Vital Statistics.

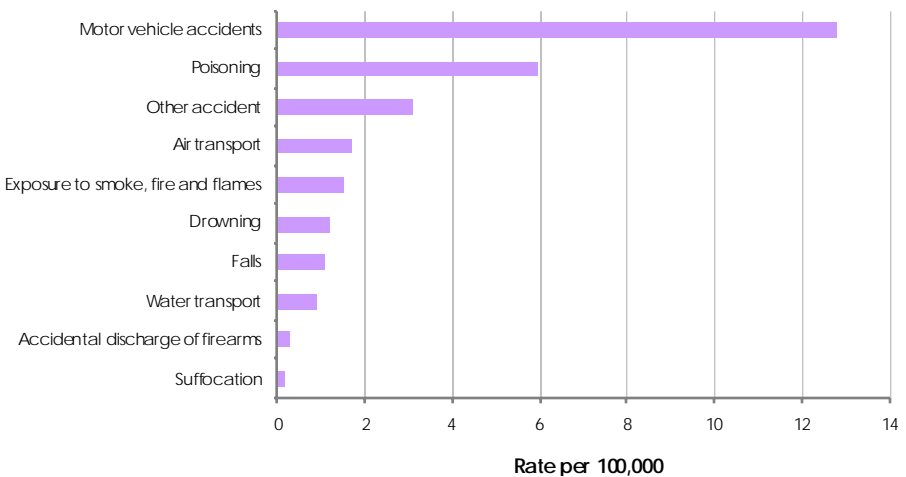
Women's and Family Health

Female Mortality Due to Unintentional Injury by Three-Year Moving Average, Ages 15-44, Alaska, 1991-2000



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

Most Common Causes of Female Mortality Due to Unintentional Injuries, Ages 15-44, Alaska, 1991-2000



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

Healthy Parenting

Research has suggested that home visits by a health care worker can improve maternal and infant outcomes. Effective programs should be culturally sensitive, intensive and adequately staffed and financed. Taking parenting classes, whether during pregnancy or after delivery of the child, helps prepare parents for childrearing.

- ◆ Of women who had a baby during 1996 - 1999, 13.4% indicated that they took parenting classes during their pregnancy. Black mothers were most likely to have taken parenting classes prenatally (21.0%) and Asian/Pacific Islander mothers were least likely (8.3%).
- ◆ Of women who had a baby during 1996 - 1999, 13.1% had home visits by a health care worker or nurse while they were pregnant. Alaska Native women had the lowest prevalence (10.8%), while black or Asian/Pacific Islander mothers had the highest prevalence of prenatal home visits (nearly 20%).
- ◆ Forty-two percent of women surveyed at an average of 15 weeks postpartum, indicated that they were currently in school or working outside the home. When asked who usually takes care of the baby the top three responses were “husband or partner” (35.1%), “babysitter, nanny, or other child care provider” (20.9%), and “other close relative” (19.5%).

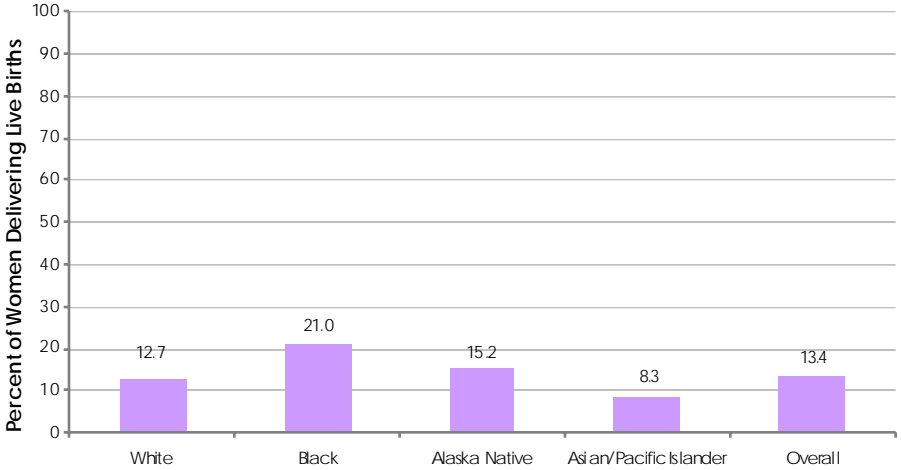
Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Working Smoke Alarm in the Home Among Families With Newborns by Maternal Race, Alaska, 1996-1999	%
White	97.1
Alaska Native	89.7
Black	97.6
Asian/Pacific Islander	91.5
Overall	95.1

Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

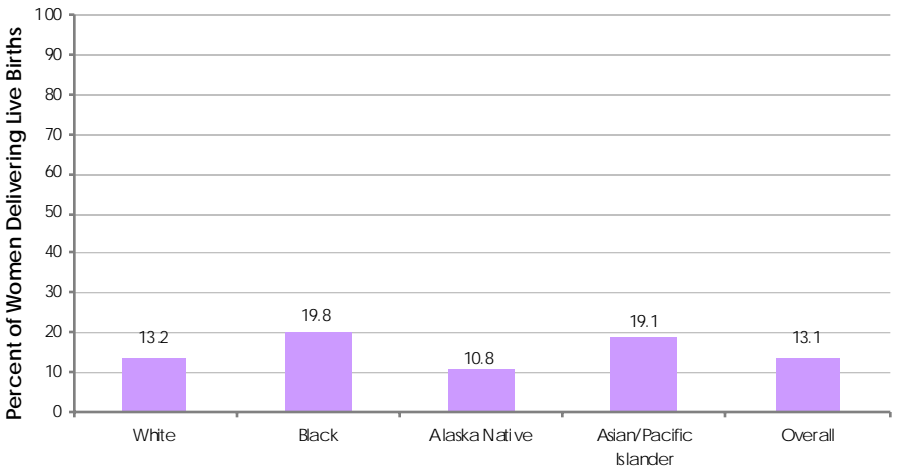
Women's and Family Health

Participation in Parenting Classes During Pregnancy by Maternal Race, Alaska, 1996-1999



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Home Visits by a Health Care Worker During Pregnancy by Maternal Race, Alaska, 1996-1999



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Domestic Violence

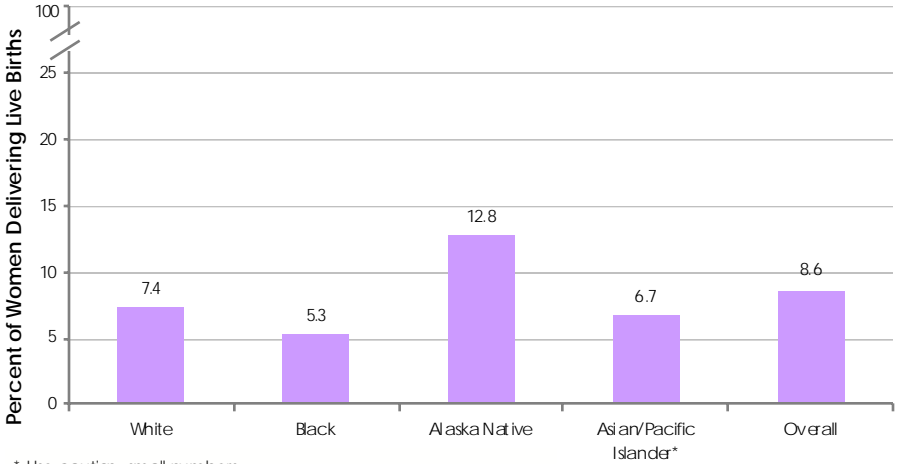
The working definition of domestic violence has traditionally been limited to the issue of physical abuse. In recent years, this definition has broadened in nature to encompass the core issue surrounding domestic violence situations, that of power and control by an intimate partner. Beginning in the year 2000, the Alaska Pregnancy Risk Assessment Monitoring System began to collect data on the presence of a controlling partner in the mother's life. Specifically, it asks whether her husband or partner threatened her, limited her activities against her will, or made her feel unsafe in any other way.

- ◆ Nearly 9% of women who recently delivered a live-born infant in 2000 indicated that they had a controlling partner. Alaska Native women were most likely to have a controlling partner (12.8%), followed by white women (7.4%).
- ◆ Women with a high school education (11.6%) or less than a high school education (12%) were 2.5 times more likely to have a controlling partner than women with more than a high school education (4.5%).
- ◆ According to the Alaska Pregnancy Risk Assessment Monitoring System, approximately 800 Alaska-resident women who delivered a live-born infant during 1996-1999 were the victims of sexual assault.
- ◆ Alaska Native and black women were nearly 3 times as likely as white women to indicate they had been forced to have sexual activities when they did not want to, either during their most recent pregnancy or since their new baby was born.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Women's and Family Health

Mothers of Newborns who are Involved with a Controlling Partner by Race, Alaska, 2000



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

Breast and Cervical Health

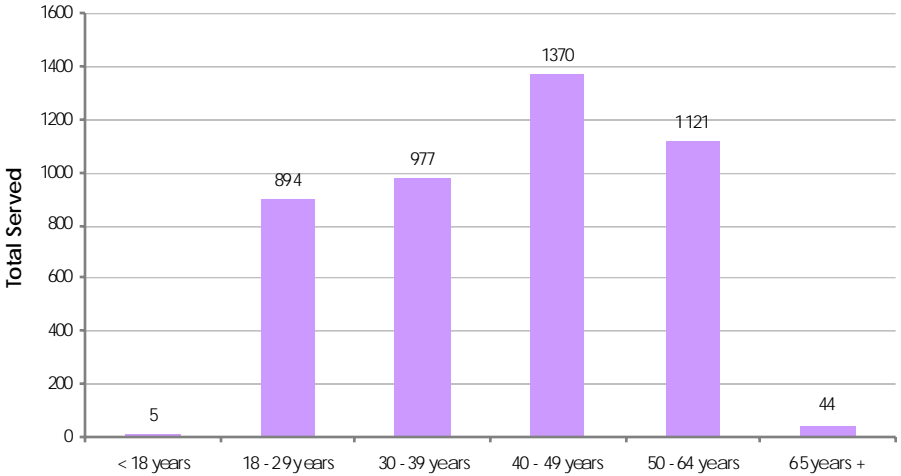
According to the Department of Health and Social Services, Division of Public Health, Section of Maternal Child and Family Health, Women's and Adolescent Health Unit, the Breast and Cervical Health Check (BCHC) program reports that 4,411 woman received BCHC services in Alaska during 2000.

- ◆ Regular mammograms are recommended after age 40 and most women seen by the BCHC program during 2000 were 40 - 64 years old. Younger women also utilized BCHC services with women ages 18 - 39 years comprising 42% of clientele in 2000.
- ◆ Most women who received services through BCHC were white. Alaska Natives were under-represented among women receiving BCHC services.

Data Source: Breast and Cervical Health Check program, Section of Maternal Child and Family Health.

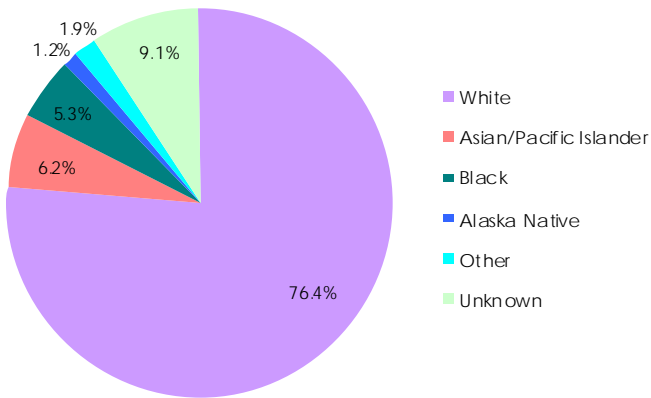
Women's and Family Health

Breast & Cervical Health Check, Women Receiving Services, Alaska, 2000



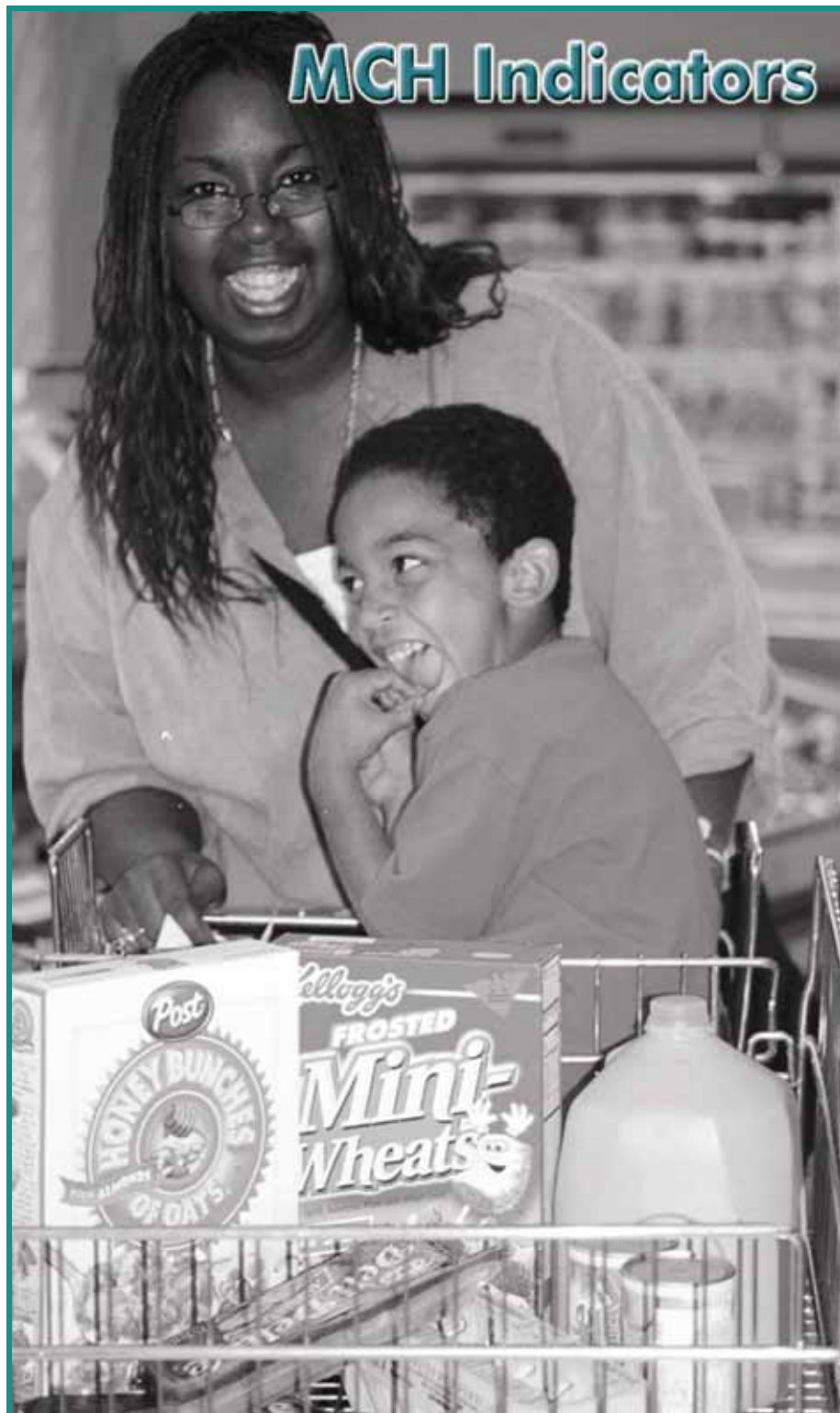
Data Source: Alaska Breast and Cervical Health Check Program. Prepared by MCH Epidemiology Unit.

Breast & Cervical Health Check, Women Receiving Services by Race, Alaska, 2000



Data Source: Alaska Breast and Cervical Health Check Program. Prepared by MCH Epidemiology Unit.

MCH Indicators



Maternal Child Health Indicators

Indicator	Year(s)				
	1989-91	1990-92	1991-93	1992-94	1993-95
Infant mortality per 1,000 live births*	9.6	9.4	8.6	8.1	8.0
Alaska Natives*	16.6	14.8	13.2	12.5	12.2
Post-neonatal mortality*	5.3	5.2	4.6	4.2	3.7
Child mortality (age 1 - 4 years) per 100,000*	-	50.9	51.9	54.5	55.3
Fetal Alcohol syndrome (FAS) cases per 1,000 live births*					
Overall*	DNC	DNC	DNC	DNC	DNC
Alaska Native*	DNC	DNC	DNC	DNC	DNC
White*	DNC	DNC	DNC	DNC	DNC
Fetal Alcohol syndrome (FAS) cases per 1,000 live births**	1977-80	1981-84	1985-88	1989-92	-
Alaska Native**	1.4	3.8	4.1	2.5	-
Non-Native**	0.1	0.1	0.2	0.3	-
Risk Factors	1991	1992	1993	1994	1995
Percent of mothers putting infants to sleep on their backs	DNC	DNC	DNC	DNC	DNC
Percent of mothers of newborns experiencing physical abuse in last 2 years	15.7	13.1	14.1	13.3	15.5
Percent low birth weight infants (< 2500 grams) among low income women	7.4	---	---	6.8	6.9
Teenage births per 1,000 females					
Ages 15 - 17 years	37.8	35.2	34.2	33.7	30.6
Ages 18 - 19 years	126.0	123.3	112.5	111.9	101.2
Percent of prenatal substance use					
Tobacco (last trimester only)	23.2	21.3	20.9	20.8	18.2
Alcohol (last trimester only)	10.3	10.9	7.7	7.4	6.6
Marijuana, prenatal	5.8	5.5	5.0	3.7	5.1
Cocaine, prenatal	0.6	0.6	0.7	0.6	0.8
Percent of mothers receiving a adequate prenatal care					
Overall	75.5	76.5	77.4	77.9	77.5
Teenage mothers	64.6	66.7	66.9	68.1	65.3
Alaska Native mothers	61.4	65.0	65.3	66.4	65.5
Percent of children ages < 18 years without health insurance	---	---	---	---	---
Percent of children with special needs with a medical home	---	---	---	---	---

*HA—Healthy Alaskans; HP—Healthy People

Healthy Alaskans 2000

Year(s)					HA ¹ 2000 Target	HP ¹ 2000 Target	U.S. Value (Year)
1994-96	1995-97	1996-98	1997-99	1998-00			
7.7	7.7	7.0	6.5	6.1	<9.1	7.0	6.9 (2000)
11.3	11.1	9.8	9.4	9.5	<12.0	8.5	8.3 (2000)
3.7	3.6	3.6	3.4	3.0	<4.0	2.5	2.3 (2000)
52.0	56.0	48.3	45.7	45.4	---	---	32.9 (2000)
DNC	1.7	1.6	1.2	-	<0.25	0.1	0.67 (1993)
DNC	5.9	5.3	4.1	-	---	2.0	DNA
DNC	0.4	0.4	0.3	-	---	---	DNA
-	-	-	-	-			
-	-	-	-	-	---	2.0	DNA
-	-	-	-	-	---	---	DNA
1996	1997	1998	1999	2000			
40.8	48.2	59.6	60.5	64.7	---	---	35 (1996)
16.5	DNC	DNC	DNC	DNC	---	---	---
7.2	7.2	7.5	7.0	7.0	<6.5	5.0	7.3 (1995)
26.9	26.2	26.4	26.5	24.3	---	---	27.4 (2000)
96.4	94.2	88.3	85.0	97.3	---	---	79.2 (2000)
21.5	17.6	18.3	16.6	16.8	<15	10.0	14 (1995)
6.4	6.6	4.3	4.4	5.3	<5	5.0	19 (1993)
5.5	5.4	4.2	5.4	4.5	<4	0.0	3 (1993)
1.5	0.4	0.3	0.4	0.7	0.0	0.0	1 (1993)
73.3	72.2	73.3	71.5	72.8	>90	90.0	83 (2000)
61.3	62.0	62.5	59.2	61.3	>80	---	69 (2000)
60.3	57.2	55.8	52.9	56.4	>80	90.0	69 (2000)
10.9	---	---	15.1	17.3	8.0	---	---
---	2.0	3.5	5.9	6.8	8.0	---	---

Jan-03

Family Planning Indicators

Indicator	Year				
	1991	1992	1993	1994	1995
Percent of live births due to unintended pregnancies	43.0	46.0	43.0	43.0	41.0
Teenage births per 1,000 females					
Ages 15 - 17 years	37.8	35.2	34.2	33.7	30.6
Ages 18 - 19 years	126.0	123.3	112.5	111.9	101.2
Teenage births (ages 15 - 19 years) per 1,000 females					
Overall	70.9	68.0	62.4	61.6	55.6
White adolescents	57.1	55.8	48.5	50.0	41.3
Alaska Native adolescents	120.3	114.6	104.3	99.5	98.3
Percent of high school youth (grades 9-12) who have ever engaged in sexual intercourse					
Boys	---	---	---	---	47.8
Girls	---	---	---	---	46.4
Ages ≤ 15 years	---	---	---	---	34.8
Ages 16 - 17 years	---	---	---	---	49.6
Ages 18+ years	---	---	---	---	68.4
Percent of middle school youth (grades 7-8) who have ever engaged in sexual intercourse	---	---	---	---	23
Percent of sexually active high school youth that used contraception at most recent intercourse					
Boys	---	---	---	---	75.0
Girls	---	---	---	---	66

1 HA—Healthy Alaskans; HP—Healthy People

Healthy Alaskans 2000

Year					HA ¹ 2000 Target	HP ¹ 2000 Target	U.S. Value (Year)
1996	1997	1998	1999	2000			
42.0	41.0	43.0	42.5	43.2	<25	30.0%	49 (1995)
26.9	26.2	26.4	26.5	24.3	<25	---	26.9 (2000)
96.4	94.2	88.3	85.0	97.3	<90	---	78.1 (2000)
51.6	50.3	48.4	47.8	49.0	<50	---	47.7 (2000)
39.8	38.4	36.9	33.8	---	---	---	43.2 (2000)
89.3	83.7	86.0	85.5	---	---	---	58.3 (2000)
---	---	---	42.2	---	---		52.2 (1999)
---	---	---	43.8	---	---		47.7 (1999)
---	---	---	27	---	35		---
---	---	---	51	---	40		---
---	---	---	59	---	---		---
---	---	---	16	---	---		---
---	---	---	71.0	---	>80		81 (1997)
---	---	---	73.0	---	>80		85 (1997)

Jan-03

Healthy People 2010

Indicator Objectives	Data Source	Estimate Year(s)	Alaska 2010 Target ¹
Reduce fetal and infant deaths	BVS		
Fetal deaths at 20 or more weeks of gestation per 1,000 live births and fetal deaths		4.2 (1994-98)	3.8
Reduce infant deaths	BVS		
All infant deaths (within 1 year)		7.4 (1994-98)	4.5
Neonatal deaths (within the first 28 days of life)		3.7 (1994-98)	2.5
Postneonatal deaths (between 28 days and 1 year)		3.7 (1994-98)	2.3
Reduce infant deaths due to:	MIMR		
All reportable birth defects		1.8 (1993-7)	1.5
SIDS and unexplained asphyxial deaths (SUIDS)		1.7 (1993-97)	1.0
Reduce child deaths	BVS		
Children ages 1 - 4 years		50.4 (1994-98)	34.0
Children ages 5 - 9 years		23.2 (1994-98)	17.0
Reduce adolescent and young adult deaths	BVS		
Adolescents ages 10 - 14 years		31.0 (1994-98)	14.0
Adolescents ages 15 - 19 years		112.9 (1994-98)	70.0
Young adults ages 20 - 24 years		170.6 (1994-98)	90.0
Reduce maternal deaths	MIMR		
Pregnancy - associated deaths		53.1 (1990-99)	50.0
Pregnancy - related deaths		7.4 (1990-99)	4.0
Increase maternal prenatal care	BVS		
Beginning in first trimester of pregnancy		80.5 (1998)	85.0
Adequate prenatal care* (APNCU index)		80.5 (1998)	75.0
Reduce low and very low birth weight	BVS		
Low birth weight (LBW)		4.6 (1994-98)	4.0
Very low birth weight (VLBW)		1.1 (1994-98)	0.8
Reduce preterm births	BVS		
Total preterm (<37 wks gestation)		9.6 (1994-98)	8.6
Increase percentage of infants put down to sleep on their backs	PRAMS		
Total infants put down to sleep on their backs		59 (1998)	70.0
Reduce spina bifida and other neural tube defects	ABDR		
Neural tube defects per 10,000 live births		8.3 (1996-98)	5.0
Increase in the proportion of women who take folic acid in vitamins, pills or supplements	Alaska Folic Acid Survey #1		
Women of childbearing age, aged 15 - 44 years, who know they consume vitamin supplements containing folic acid		41 (1999)	75.0

Healthy People 2010

Indicator	Data Source	Estimate Year(s)	Alaska 2010 Target ¹
Objectives			
Cigarette smoking (last 3 months of pregnancy)	PRAMS	18.7 (1998)	15.0
Marijuana (during pregnancy)		4.1 (1998)	3.5
Cocaine (during pregnancy)		.2 (1998)	0.0
Reduce fetal alcohol syndrome	FAASP		
Children with fetal alcohol syndrome		1.2 (1996-98)	0.5
Increase mothers who breastfeed	PRAMS		
Ever initiated breastfeeding		88 (1998)	95.0
Breastfeeding at 1 month postpartum		75 (1998)	
Decrease the proportion of live births that occur as a result of an unintended pregnancy	PRAMS		80.0
Live births resulting from unintended pregnancy		43 (1998)	35.0
Reduce the proportion of births occurring within 24 months of a previous birth.	BVS		
Increase the proportion of people who use contraception that are over age 18 and at risk of unintended pregnancies	BRFSS		
Females over 18 using contraception		70 (1998)	85.0
Reduce the proportion of females delivering live births despite use of a reversible contraceptive method	PRAMS		
Females delivering live births despite using a reversible contraception method		23 (1998)	10.0
Increase access to emergency contraception through health care providers, pharmacies and telephone protocol.	Alaska Emergency Contraception Project		
Reduce births among adolescent females	BVS		
Births to females ages 15 - 17 years		26.5 (1998)	25.0
Increase adolescents never engaging in sexual intercourse before age 15	YRBS		
High school students		77 (1999)	85.0
Middle school students		84 (1999)	90.0
Increase percent of adolescents never engaging in sexual intercourse	YRBS		
High school students		57 (1999)	65.0
Increase contraceptive use at last intercourse by high school students	YRBS		
Percent of high school students using condom at last intercourse		56 (1999)	75.0
Percent of high school students using condom or hormonal method at last intercourse		70 (1999)	85.0

*Three-year moving average for Alaska data

**Four year average for Alaska data

¹ Healthy People 2010 targets were adjusted to better reflect Alaska goals.

MCHB Reporting Requirements

State Performance Measures		
State Performance Measure #	Indicator	Estimate (Year)
1	Percentage of Unintended Births (Risk Factor)	42.5 (1999)
2	Rate of substantiated reports of harm to children per hundred children age 0 to 18. (Risk Factor)	20.6 (2001)
3	Percentage of Women Who Smoke Prenatally. (Risk Factor)	16.6 (1999)
4	Percentage of Women Who Drink Prenatally. (Risk Factor)	4.4 (1999)
5	Percentage of Women experiencing Physical Abuse by husbands/partners surrounding prenatal period. (Risk Factor)	5.5 (1999)
6	Percentage of mother putting infant down to sleep in the supine position (on their backs). (Risk Factor)	60.5 (1999)
7	Percentage of people experiencing intimate partner violence during their lifetime. (Risk Factor)	23 (1999)
8	Percentage of people who eat five or more daily servings of vegetables and fruits. (Risk Factor)	23.7 (2000)
9	The prevalence at of birth of neural tube defects per 10,000 live births. (Risk Factor)	9.4 (2000)
10	Percentage of high school youth who feel supported at school. (Risk Factor)	42.6 (1998)

National Outcome Measures		
National Outcome Measure #	Indicator	Estimate (Year)
1	Infant mortality rate per 1,000 live births.	6.6 (1996-2000)
2	The ratio of the black infant mortality rate to the white infant mortality rate.	1.7 (1996-2000)
3	Neonatal mortality rate per 1,000 live births.	3.3 (1996-2000)
4	Postneonatal mortality rate per 1,000 live births.	3.4 (1996-2000)
5	Perinatal mortality rate per 1,000 live births plus fetal deaths.	7.2 (1996-2000)
6	Child death rate per 100,000 children aged 1 through 14.	30.2 (1996-2000)

MCHB Reporting Requirements

National Performance Measures		
National Performance Measure #	Indicator	Estimate (Year)
1	Percent of State SSI beneficiaries less than 16 years old receiving rehabilitative services from the State CSHCN* Program. (Capacity)	0.0 (2001)
2	The degree to which the State CSHCN* Program provides or pays for specialty and sub-specialty services, including care coordination, not otherwise accessible or affordable to its clients. (Capacity)	6 (2001)
3	Percent of CSHCN* in the State who have a "medical/health home". (Capacity)	9.6 (2001)
4	Percent of newborns in the State with at least one screening for each of PKU, hypothyroidism, galactosemia, hemoglobinopathies [(e.g. the sickle cell disease) (combined)]. (Risk Factor)	99.7 (2001)
5	Percent of children through age 2 who have completed immunizations for Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, Hepatitis B. (Risk Factor)	70.6 (2000)
6	Birth rate for teenagers ages 15 through 17 (per 1,000). (Risk Factor)	24.1 (2000)
7	Percent of third grade children who have received protective sealants on at least one permanent molar tooth. (Risk Factor)	17.2 (2001)
8	Death rate to children ages 14 years and younger caused by motor vehicle crashes (per 100,000). (Risk Factor)	5.3 (1998-2000)
9	Percent of mothers who breastfeed their infants at hospital discharge. (Risk Factor)	89 (1999)
10	Percent of newborns who have been screened for hearing impairment before hospital discharge. (Risk Factor)	61.2 (2001)
11	Percent of CSHCN* in the State CSHCN* program with a source of insurance for primary and specialty care. (Capacity)	86.1 (2001)
12	Percent of children without health insurance. (Capacity)	17.3 (2000)
13	Percent of potentially Medicaid-eligible children who have received a service paid by the Medicaid Program. (Process)	83.7 (2001)
14	The degree to which the State assures family participation in program and policy activities in the State CSHCN* program. (Process)	15 (2001)
15	Percent of very low birth weight births. (Risk Factor)	0.8 (2000)
16	Suicide rate for youths ages 15 through 19 (per 100,000). (Risk Factor)	40.3 (1998-2000)
17	Percent of very low birth weight infants delivered at facilities for high-risk deliveries. (Risk Factor)	69.6 (2000)
18	Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester. (Risk Factor)	80.5 (2000)

*Children with Special Health Care Needs

Appendix



Acronyms

ABDR: Alaska Birth Defects Registry

AFASSP: Alaska Fetal Alcohol Syndrome Surveillance Project

APNCU: Adequate Prenatal Care Utilization

BCHC: Breast and Cervical Health Check

BMI: Body Mass Index

BRFSS: Behavioral Risk Factor Surveillance System

BVS: Alaska Bureau of Vital Statistics

CSHCN: Children with special health care needs

DNA: Data not available

DNC: Data not collected

DTP: Diphtheria, tetanus, pertussis

EPSDT: Early and Periodic Screening, Diagnosis and Treatment

ETS: Environmental Tobacco Smoke

FAS: Fetal Alcohol Syndrome

FASSP: Alaska Fetal Alcohol Syndrome Surveillance Project

FASSNET: Fetal Alcohol Syndrome Surveillance Network

HA: Healthy Alaskans

HiB: Haemophilus influenza

HIV: Human Immunodeficiency Virus

HP: Healthy People

HRSA: Health Resources and Services Administration

LBW: Low Birth Weight

MCFH: Alaska Section of Maternal, Child and Family Health

MCH: Maternal and Child Health

MCHB: Federal Maternal and Child Health Bureau

MIMR: Alaska Maternal - Infant Mortality Review

MMR: Measles, mumps, rubella

NCHS: National Center for Health Statistics

NTD: Neural tube defect

OPV: Oral polio vaccine

PRAMS: Pregnancy Risk Assessment Monitoring System

SIDS: Sudden Infant Death Syndrome

VLBW: Very Low Birth Weight

WIC: Supplemental Nutrition Program for Women, Infants and Children

YRBS: Youth Risk Behavior Survey

Glossary

Adequate Prenatal Care: This measure is calculated using the Kotelchuck Index, also known as the Adequate Prenatal Care Utilization (APNCU) Index. It assesses prenatal care based upon the following birth certificate information: trimester of entry, number of prenatal visits, and gestational age of infant at birth.

Adolescent: Age from 10 through 14 years.

Alaska Native: This race category includes Alaska Natives and American Indians for purposes of this publication.

Binge Drinking: Five or more alcoholic drinks in a sitting.

Body Mass Index: Body Mass Index (BMI) measures one's height to weight ratio. It is calculated by the person's weight in kilograms divided by the square of the height in meters. Specific classifications are given below.

Underweight	$\text{BMI} < 19.8 \text{ kg/m}^2$
Normal weight	$19.8 \leq \text{BMI} < 25 \text{ kg/m}^2$
Overweight	$25 \leq \text{BMI} < 30 \text{ kg/m}^2$
Obese	$\text{BMI} \geq 30 \text{ kg/m}^2$

Child: Age from one through nine years.

Childbearing Age: Women who are between the ages of 15 through 44 years.

Children with special health care needs (CSHCN): Those children who have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions and who require health and related services of a type or amount beyond that required by children generally. Includes children from birth to 21 years old.

Controlling partner: Husband or partner threatens the woman, limits activities against the woman's will, or makes the woman feel unsafe in any other way.

Death Year Cohort: This method is used to calculate all infant mortality rates. This method uses the number of deaths to infants <1 year as a numerator and the number of births for the same year as a denominator.

Fetal Alcohol Syndrome (FAS): FAS is caused by maternal alcohol use during pregnancy and diagnosed on the basis of a combination of growth deficiency, central nervous system dysfunction, facial dysmorphology and maternal alcohol use during pregnancy. In this publication FAS is defined using the Fetal Alcohol Syndrome Surveillance Network (FASSNet) criteria for a case and probable case of FAS. The surveillance case definition was based on criteria from the 1996 Institute

of Medicine report on FAS and adapted for use by FASSNet.

Fetal Period: Period of time from 20 weeks gestation to 7 days after birth.

Infant: Age from birth up to one year.

Low Birth Weight (LBW): An infant, at time of birth, weighing less than 2500 grams, or 5.5 pounds.

Moving Average: Using moving averages helps to smooth out the year to year variability that is often observed when dealing with small numbers. This smoothing technique increases the stability of the rate so that trends can be more easily detected and more meaningful comparisons can be made. An example of a three-year moving average for the year 1991, the rate is comprised of data from 1989-1991; 1992 is comprised of data from 1990-1992, and so forth.

Neonatal Period: Period of time from birth up to 28 days after birth.

Normal weight: See Body Mass Index

Obese/ Obesity: See Body Mass Index

Overweight: See Body Mass Index

Physical abuse: Pushing, hitting, slapping, kicking, or any other way of physically hurting someone. (Definition used for the PRAMS Phase 3 data source during 1996-1999. Data collection in 2000 added the term “choke”. Data collection from 1991-1996 [Phase 2 data only] left the burden of interpretation of being “physically hurt” up to the respondent.)

Post-neonatal Period: Period of time from 28 days up to 1 year of age.

Postpartum Period: The period of time from birth up to 6-weeks after birth.

Pregnancy-Associated Death: Female death that occurs during pregnancy or within one year of pregnancy, due to any cause.

Pregnancy-Related Death: A pregnancy-associated death that is caused by conditions directly related to pregnancy and childbirth.

Pregnancy Risk Assessment Monitoring System (PRAMS): PRAMS is a

Glossary

population-based survey of Alaska resident women who have recently delivered a live-born infant. It was initiated by the State of Alaska Division of Public Health, Section of Maternal, Child and Family Health in late 1990. PRAMS was developed by the Centers for Disease Control and Prevention (CDC) Division of Reproductive Health to gather information on the health risk behaviors and circumstances of pregnant and postpartum women. It is currently active in 33 states.

A systematic, stratified sampling approach is used to select approximately 160 mothers of newborns each month from the State of Alaska's live birth records for infants between two and six months of age. Questions cover the prenatal and postpartum period. Up to three mailed questionnaires are used to solicit a response. Phone follow-up for women who do not respond by mail was first initiated in 1997. Prevalences reflect statewide estimates for Alaska-resident women delivering a live-born infant during the specified time period. The response rate for the year 2000 was 80%.

Prenatal Care: Health care services provided to a woman between conception and delivery that are pregnancy-related.

Preterm Birth: Birth occurring at less than 37 weeks gestation.

Prevalence: Prevalence measures the number of people in a specified population that have the given characteristic at a given time.

Rate Ratio: The rate ratio expresses the relationship between two rates in the form of $x : y$ or x/y . A rate ratio equal to one indicates that there is no difference in the two rates being compared.

Rate: A rate is defined as the number of events in a specified time period divided by the number of people in the population in a specified period.

Sexual assault: Someone close to the woman forced her to have sexual activities when she did not want to.

Sudden Infant Death Syndrome (SIDS): Sudden, unexplained death of an infant from an unknown cause.

Teen: Age from 15 through 19 years.

Underweight: See Body Mass Index

Very Low Birth Weight (VLBW): An infant, at time of birth, weighing less than

1500 grams, or 3.3 pounds.

Indicator Definitions

Crude Birth Rate

Crude birth rate is expressed as the number of births to females in the population per 1,000.

Numerator: Number of births to females.

Denominator: Total number of females.

Data Source: Alaska Bureau of Vital Statistics, 1980-2000.

Fertility (ages 15-44 years)

Fertility rate is expressed as the number of births to females of childbearing age (ages 15-44 years) per 1,000 females in that age group.

Numerator: Number of live births to females of childbearing age (15-44 years).

Denominator: Total number of females in age group.

Data Source: Alaska Bureau of Vital Statistics, 1980-2000.

Live Births Despite Use of a Contraceptive Method

Percent of mothers of newborns who indicated that they were doing something to keep from getting pregnant when they got pregnant with their new baby. Methods defined for the respondent were rhythm, use of the pill, Norplant®, shots (Depo-Provera®), condoms, diaphragm, foam, IUD, having their tubes tied, or their partners having a vasectomy.

Numerator: Number of women who indicated that they were doing something to keep from getting pregnant when they got pregnant with their new baby.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2000.

Unintended Pregnancies

Percent of women who delivered a live-born infant who had a mistimed or unwanted pregnancy.

Numerator: Number of women who indicated, postpartum, that just before getting pregnant, they wanted to be pregnant either later or never.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS),

1991-2000.

Mothers Receiving Adequate Prenatal Care

Percent of mothers receiving adequate prenatal care. This measure is calculated using the Adequate Prenatal Care Utilization (APNCU) Index. It assesses prenatal care based upon the following birth certificate information: trimester of entry into prenatal care, number of prenatal visits, and gestational age of infant at birth.

Numerator: Number of women receiving adequate prenatal care as defined by APNCU Index.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1991-2000.

Mothers Receiving Prenatal Care in the First Trimester

The percent of mothers receiving prenatal care in the first trimester.

Numerator: Number of women receiving prenatal care in the first trimester.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1991-2000.

Prenatal Screening for Domestic Violence

Percent of women who were screened prenatally for domestic violence.

Numerator: Number of women who indicated, postpartum, that their prenatal care provider ever asked whether they had been hurt or threatened by their partner.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-1999.

Medicaid Coverage for Prenatal Care

Percent of women who indicated Medicaid paid for a portion of their prenatal care.

Numerator: Number of women who indicated Medicaid paid either in part or in whole for their prenatal care.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Indicator Definitions

Prenatal WIC Participation

Percent of women who participated in the WIC program during their pregnancy.

Numerator: Number of women who indicated that they were on WIC (the special supplemental nutrition program for women, infants, and children) during their pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Knowledge of Folic Acid Benefits

Percent of women who had heard or read that taking the vitamin folic acid can help prevent some birth defects.

Numerator: Number of women who indicated they had heard or read that taking the vitamin folic acid can help prevent some birth defects.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

Prenatal Physical Abuse by Husband/Partner

Percent of women who were physically abused by their husband or partner during their pregnancy.

Numerator: Number of women who indicated their husband or partner physically abused them (i.e. pushed, hit, slapped, kicked, or otherwise hurt them) during their pregnancy. (NOTE: Data collection in 2000 added the term “choked”.)

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

Prenatal Substance Use

Alcohol (Any Use)

Percent of women who consumed any alcohol during the last 3 months of their pregnancy.

Numerator: Number of women who drank any alcohol during the last 3 months of their pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Alcohol (Binge)

Percent of women who consumed 5 or more alcoholic drinks in one sitting during the last 3 months of their pregnancy.

Numerator: Number of women who drank 5 alcoholic drinks or more in one sitting during the last 3 months of their pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

Tobacco

Percent of women who smoked cigarettes during the last 3 months of their pregnancy.

Numerator: Number of women who smoked cigarettes during the last 3 months of their pregnancy. (NOTE: The question was asked of women who had smoked at least 100 cigarettes in their lifetime. Data collection in 2000 changed the time frame for smoking at least 100 cigarettes ever to the past two years.)

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Smokeless Tobacco

Percent of women who used smokeless tobacco (chew or snuff) during pregnancy.

Numerator: Number of women who used smokeless tobacco (chew or snuff) during pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS),

Indicator Definitions

1996-2000.

Marijuana

Percent of women who used marijuana during pregnancy.

Numerator: Number of women who used marijuana during pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

(Percentages presented for 1996 are Phase 3 data.)

Cocaine

Percent of women who used cocaine during pregnancy.

Numerator: Number of women who used cocaine during pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

(Percentages presented for 1996 are Phase 3 data.)

Infant Mortality

Infant mortality is expressed as the number of deaths to infants less than one year of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, infant mortality rates are presented in three-year moving averages. Infant's race is determined by mother's race as listed on the infant's birth certificate. If race is unknown it is excluded from the denominator.

Numerator: Number of deaths to infants less than one year of age.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Neonatal Mortality

Neonatal mortality is expressed as the number of deaths to infants from birth up to 28 days of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, neonatal mortality rates are presented in three-year moving

averages. If race is unknown it is excluded from the denominator.

Numerator: Number of deaths to infants from birth up to 28 days of age.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Post-neonatal Mortality

Post-neonatal mortality is expressed as the number of deaths to infants from 28 days to less than one year of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, post-neonatal mortality rates are presented in three-year moving averages. If race is unknown it is excluded from the denominator.

Numerator: Number of deaths to infants ages 28 days to less than one year.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Fetal Mortality

Fetal mortality is expressed as the number of deaths from 20 weeks gestation up to 7 days of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, fetal mortality rates are presented in three-year moving averages. If race is unknown it is excluded from the denominator.

Numerator: Number of deaths from 20 weeks gestation up to 7 days of age.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Low Birth Weight (LBW)

The percent of infants born weighing less than 2,500 grams (5.5 pounds).

Numerator: Number of infants born weighing less than 2,500 grams.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1991-2000.

Very Low Birth Weight (VLBW)

The percent of infants born weighing less than 1,500 grams (3.3 pounds).

Indicator Definitions

Numerator: Number of infants born weighing less than 1,500 grams.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1991-2000.

Preterm Births

The percent of infants born at less than 37 weeks gestation.

Numerator: Number of infants born at less than 37 weeks gestation.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1991-2000.

Fetal Alcohol Syndrome (FAS)

The prevalence for FAS in Alaska is expressed as the number of cases of FAS per 1,000 live births. Infant's race is determined by mother's race as listed on the infant's birth certificate. Due to the small number of events experienced in Alaska, prevalence of FAS is presented in three-year moving averages.

Note: For the overall rate, approximately 18% of the total number of confirmed and probable FAS cases from 1995-1999 could not be matched to birth certificates, but were not excluded from the numerator when calculating the prevalence of FAS in Alaska. Possible reasons for the inability to match a birth certificate to a case in the database are out-of-state births, adoptions and duplications of children in the database.

Numerator: Number of confirmed or probable cases of FAS that meet the Fetal Alcohol Syndrome Surveillance Network (FASSNet) case definition.

Denominator: Total number of live births.

Data Source: Alaska Fetal Alcohol Syndrome Surveillance Project, 1995-1999.

Breastfeeding (Initiation)

Percent of mothers of newborns who indicated that they had ever breast fed their newborn.

Numerator: Number of women who indicated they had ever breast fed their newborn.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS),

1991-2000.

Breastfeeding (4 weeks)

Percent of mothers of newborns who indicated that they had breastfed their newborn for at least 4 weeks.

Numerator: Number of women who indicated they had breastfed their newborn for at least 4 weeks.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Back-sleeping Infants

Percent of mothers of newborns who indicated (on average, 3.5 months postpartum) that they most regularly put their infant down on his/her back.

Numerator: Number of women who indicated they most regularly put their infant down to sleep on his/her back.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

Mother-Infant Co-sleeping

Percent of mothers of newborns who indicated that they always or almost always, sometimes or never sleep with their infant in the same bed.

Numerator: Number of women who indicated they sleep with their infant in the same bed. (NOTE: Data collection in 2000 asks how often the mother or anyone else sleeps with the baby).

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Exposure to Tobacco Smoke

Percent of mothers of newborns who indicated (on average, 3.5 months postpartum) that their newborn was in the same room with someone who is smoking for any

Indicator Definitions

positive length of time on an average day.

Numerator: Number of women who indicated that their newborn was in the same room with someone who is smoking for any positive length of time on an average day.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

Child Mortality (ages 1-4 and 5-9 years)

Mortality by manner of death for children ages 1-4 and 5-9 years is expressed as the number of deaths due to a specific cause to children per 100,000 children in these age groups. Due to the small number of events experienced in Alaska, child mortality rates are presented in three-year moving averages.

Numerator: Number of deaths among children ages 1-4 or 5-9 years.

Denominator: Total number of children ages 1-4 or 5-9 years.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Adolescent Mortality (ages 10-14 years)

Mortality by manner of death for adolescents ages 10-14 years is expressed as the number of deaths due to a specific cause to children per 100,000 children in this age group. Due to the small number of events experienced in Alaska, adolescent mortality rates are presented in three-year moving averages.

Numerator: Number of deaths due to a specific cause among children ages 10-14 years.

Denominator: Total number of children ages 10-14 years.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Teen Mortality (ages 15-19 years)

Mortality by manner of death for teens ages 15-19 years is expressed as the number of deaths due to a specific cause to teens per 100,000 in this age group. Due to the small number of events experienced in Alaska, teen mortality rates are presented in three-year moving averages.

Numerator: Number of deaths due to a specific cause among teens ages 15-19 years.

Denominator: Total number of teens ages 15-19 years.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Teen Births (ages 15-17 and 18-19 years)

Teenage birth rate is expressed as the number of live births to females ages 15-17 or 18-19 years in the calendar year per 1,000 females in that age group in the calendar year.

Numerator: Number of live births to females ages 15-17 or 18-19 years.

Denominator: Total number of females ages 15-17 or 18-19 years.

Data Source: Alaska Bureau of Vital Statistics, 1991-2000.

Pregnancy-Associated Mortality

Pregnancy-associated mortality rate, also known as pregnancy-associated mortality ratio, is expressed as the number of deaths that occur during pregnancy or within one year of pregnancy, due to any cause per 100,000 live births. Due to the small number of events experienced in Alaska, pregnancy-associated mortality rates are presented in five-year moving averages.

Numerator: Number of pregnancy-associated deaths.

Denominator: Total number live births.

Data Source: Alaska Maternal-Infant Mortality Review, 1990-1999.

Pre-pregnancy Overweight or Obesity

Percent of women whose body mass index (as calculated from self-reported weight just before pregnancy and height) was at least 25 kg/m².

Numerator: Number of women whose pre-pregnancy body mass index was 25 kg/m² or greater.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

Physical Abuse by Anyone 12 Months Before Pregnancy

Percent of women who indicated someone (i.e. husband/partner, a family or household member other than the husband/partner, a friend, or someone else)

Indicator Definitions

physically abused them 12 months before pregnancy. Physical abuse was defined as pushing, hitting, slapping, kicking, or any other way of physically hurting someone.

Numerator: Number of women who experienced physical abuse by anyone 12 months before pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-1999.

Female Mortality (ages 15-44 years)

Mortality by manner of death for females of childbearing age (15-44) is expressed as the number of deaths due to a specific cause to females per 100,000 in this age group. Due to the small number of events experienced in Alaska, female mortality rates are presented in three-year moving averages.

Numerator: Number of deaths due to a specific cause among females ages 15-44 years.

Denominator: Total number of females ages 15-44 years.

Data Source: Alaska Bureau of Vital Statistics, 1989-2000.

Physical Abuse in Last Two Years

Percent of mothers of newborns who indicated that their husband or partner physically hurt them during the 12 months before delivery, including the months before they became pregnant or if they indicated they had been physically hurt by someone they were close to in the last two years.

Numerator: Number of women who experienced physical abuse by their husbands or partners 12 months before delivery of their newborn, including the time before the pregnancy or in the last two years had been physically hurt by someone they were close to. (NOTE: This indicator has been replaced with the percentage of women experiencing physical abuse by husbands/partners surrounding the prenatal period [12 months before or during pregnancy].)

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-1996.

(Phase 2 data only.)

Physical Abuse by Husband/Partner Surrounding the Prenatal Period

Percent of women who indicated that their husband or partner physically abused them 12 months before or during pregnancy.

Numerator: Number of women who experienced physical abuse by their husband/partner 12 months before pregnancy or during pregnancy.

Denominator: Total number of Alaska-resident women who delivered a live-born infant.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

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Methodology

All statistical analyses were performed at a significance level of $\alpha=.05$. Any mention of a significant trend or significant difference between two groups implies that it is **statistically significant** at $\alpha=.05$.

Trend Analyses

Trend analyses were performed using ordinary least squares regression of the natural log of the rate for years within a given time period. By convention, some trends (e.g., mortality rates) are graphed as three or five-year moving averages. However, all trend analyses are performed on the single year data, not the averaged data presented in the graph. Although the graphs of trends may show what appears to be a declining trend, it should be noted that these are moving averages and the decline may not be statistically significant since the regression is performed on single year data, not the averaged data.

Percent Change

Percent change between two time periods is calculated as follows:

$$PC = \frac{(P_n - P_o)}{P_o} \times 100$$

where P_n = later time period
 P_o = earlier time period

Rate Ratios

Rate ratios, the ratio of two rates, are used to compare rates for two populations – calculated as follows:

$$RR = \frac{(E_1 / P_1) \times 10^n}{(E_2 / P_2) \times 10^n} = \frac{Rate_1}{Rate_2}$$

where E_1 = number of events occurring in population 1
 E_2 = number of events occurring in population 2
 P_1 = number of people in population 1 at risk of an event
 P_2 = number of people in population 2 at risk of an event
 n = base for multiplier
 $Rate_1$ = rate for population 1
 $Rate_2$ = rate for population 2

so $n = 3 \Rightarrow 10^3$ would give a rate per 1,000

Note: The multiplier, 10^n , must be the same for both rates. A rate ratio of 1.0 indicates that there is no difference in the race-specific or age-specific rates for the two populations being compared. It is customary for the group of interest to be labeled as population 1 and the reference group as population 2, so, the group of interest is always in the numerator.

Moving Averages

Moving averages are overlapping sequences of time periods that are used to smooth out the year-to-year variability that is often observed when dealing with small numbers. A general formula for calculating the first and second time periods using the moving average method is as follows:

$$MA = \frac{\sum_{P_i-(w-1)}^{P_i} events}{\sum_{P_i-(w-1)}^{P_i} pop} \times 10^n, \quad \frac{\sum_{P_{i+1}}^{P_{i+1}} events}{\sum_{P_{i+1}-(w-1)}^{P_{i+1}} pop} \times 10^n$$

where P_i = time period of interest
 w = width of interval
 n = base for multiplier
 pop = population

so $w = 3$ would be a three-year moving average
 $n = 3 \Rightarrow 10^3$ would give a rate per 1,000

Ex. The three-year moving average for the year 1991 is comprised of data from 1989-1991, 1992 is comprised of data from 1990-1992, and so forth. Using the formula, the rate per 1,000 for this example is:

$$\frac{(events_{1989} + events_{1990} + events_{1991})}{(pop_{1989} + pop_{1990} + pop_{1991})} \times 10^3, \quad \frac{(events_{1990} + events_{1991} + events_{1992})}{(pop_{1990} + pop_{1991} + pop_{1992})} \times 10^3$$

Examples using the methods found in this section can be found in:

Analytic Methods in Maternal and Child Health, Handler, A., Rosenberg D., Monahan, C., and Kennelly, J. (eds.), Maternal and Child Health Bureau, HRSA, DHHS, 1998.

To view this document on-line, please visit:

<http://www.uic.edu/sph/dataskills/publications/wrkbkpdfs/index.html>

Chapter 1: Population Characteristics

Crude Birth Rate (rate per 1,000)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	20.5	20.0	18.6	17.8	17.0	16.6	16.3	16.1	16.0	15.9
U.S.	16.3	15.9	15.5	15.2	14.8	14.7	14.5	14.6	14.5	14.4

Chapter 2: Reproductive Health

Fertility Rate (rate per 1,000 females ages 15-44 years)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	83.1	82.3	77.3	74.9	72.7	71.7	71.6	71.6	72.5	70.9
U.S.	69.3	68.6	67.3	66.3	65.2	64.9	64.5	65.4	65.9	67.7

Unintended Pregnancies Among

Women Delivering Live Births (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	42.5	45.5	43.5	42.6	40.8	41.6	40.5	42.8	42.5	43.2
Alaska Native	50.1	55.1	52.4	54.0	49.4	45.1	46.8	53.4	53.4	54.3

Chapter 3: Prenatal Health

Protective Behaviors

Prenatal Care (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
First Trimester	82.6	83.1	83.4	84.7	83.7	81.2	81.1	82.0	79.9	80.5
Adequate/Adequate Plus	69.8	71.2	73.4	74.1	73.4	69.2	67.9	66.8	67.1	67.4

Prenatal Screening for Domestic

Violence (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall						28.2	30.1	37.9	42.3	
White						21.1	26.5	31.8	35.8	
Alaska Native						47.9	41.3	55.1	60.7	

Chapter 3: Prenatal Health cont.

Medicaid Coverage for Prenatal Care (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	28.2	29.7	31.3	33.3	32.6	32.4	36.0	35.2	39.0	41.1
White	25.7	25.2	26.0	28.2	27.9	25.3	30.5	28.0	31.4	34.6
Alaska Native	35.8	42.9	46.1	48.4	47.9	50.2	51.8	53.5	57.5	56.6

Prenatal WIC Participation (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	29.7	30.7	32.6	33.2	42.3	44.4	41.4	47.9	47.0	48.5
White	22.5	24.1	25.2	26.1	35.0	37.0	35.4	40.3	39.7	39.8
Alaska Native	49.8	49.0	50.5	53.0	63.4	60.8	55.3	66.8	61.0	66.3

Knowledge of Folic Acid Benefits (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
White						72.5	78.8	81.4	85.8	89.2
Black						61.7	80.1	71.3	77.2	88.5
Alaska Native						39.5	48.6	48.4	60.9	62.3
Asian/Pacific Islander						40.2	53.0	41.4	52.0	61.1

Risk Behaviors

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Prenatal Physical Abuse (percent)						5.6	4.0	3.8	4.1	5.2

Any Prenatal Alcohol Use (last 3 months) (percent)

	10.3	10.9	7.7	7.4	6.6	6.4	6.6	4.3	4.4	5.3
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Prenatal Tobacco Use (last 3 months) (percent)

	23.2	21.3	20.9	20.8	18.2	21.5	17.6	18.3	16.6	16.8
--	------	------	------	------	------	------	------	------	------	------

Prenatal Marijuana Use (percent)

	5.8	5.5	5.0	3.7	5.1	5.5	5.4	4.2	5.4	4.5
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

*Three-year moving average. See page 163 for definition of moving average.

Chapter 4: Birth Outcomes

Infant Mortality (rate per 1,000 live births)*	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Infant	9.6	9.4	8.6	8.1	8.0	7.7	7.7	7.0	6.5	6.1
Neonatal	4.3	4.2	4.0	3.9	4.3	3.9	4.1	3.5	3.1	3.1
Post-Neonatal	5.3	5.2	4.6	4.2	3.7	3.7	3.6	3.6	3.4	3.0
Fetal Mortality (rate per 1,000 live births plus fetal deaths)*	5.2	5.4	5.2	4.6	4.3	4.5	4.4	4.4	4.5	4.7
Low and Very Low Birth Weight (percent)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
LBW	3.8	4.0	4.1	4.3	4.3	4.4	4.7	4.6	4.4	4.4
VLBW	0.6	0.8	0.8	0.7	0.8	0.8	1.0	0.8	0.7	0.7
Preterm Births (< 37 weeks) (percent)	8.7	9.4	9.3	8.9	8.9	9.9	10.2	10.1	10.7	10.1
FAS Prevalence (rate per 1,000 live births)*										
Overall							1.7	1.6	1.2	
Alaska Native							5.9	5.3	4.1	

Chapter 5: Infant Health

Breastfeeding (percent)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Initiation After Delivery	79.1	77.6	83.8	83.7	84.2	85.5	86.4	87.9	89.0	88.8
4 Weeks Postpartum	67.8	66.4	70.4	69.1	72.5	74.3	75.3	75.5	77.3	79.0

Placing Infants to Sleep on Their Backs (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall						40.9	48.5	59.3	60.4	66.6
White						43.7	50.0	61.6	62.0	68.0
Alaska Native						38.6	45.7	52.1	58.8	65.5

Mother-Infant Co-Sleeping (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Always/Almost always	15.9	18.9	21.3	20.8	24.5	32.9	35.2	35.8	38.4	39.9
Sometimes	41.8	42.0	41.3	47.0	43.5	41.5	41.5	38.1	39.1	41.1
Never	42.2	39.2	37.4	32.3	32.1	25.6	23.3	26.1	22.5	19.1

Infant Exposure to Second-Hand

Smoke (percent)						8.6	6.8	4.5	4.4	5.3
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*Three-year moving average. See page 163 for definition of moving average.

Chapter 6: Child Health

Child Mortality by Cause of Death and Age (rate per 100,000)*

All Causes

Ages 1-4 Years

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Causes										
Ages 1-4 Years	56.4	50.9	51.9	54.5	55.3	52.0	56.0	48.3	45.7	43.7
Ages 5-9 Years	29.3	24.4	24.4	20.9	23.6	21.7	25.2	23.4	23.6	19.3
Due to Unintentional Injury										
Ages 1-4 Years	25.1	25.1	30.3	33.0	38.6	33.1	33.4	23.8	19.2	15.7
Ages 5-9 Years	18.2	15.7	16.5	14.4	17.1	13.5	15.8	12.9	13.6	10.2

56.4

29.3

25.1

18.2

50.9

24.4

25.1

15.7

51.9

24.4

30.3

16.5

54.5

20.9

33.0

14.4

38.6

17.1

33.1

13.5

52.0

21.7

33.4

15.8

48.3

23.4

45.7

23.6

2000

43.7

19.3

15.7

10.2

Due to Unintentional Injury

Ages 1-4 Years

Ages 5-9 Years

Completed Combination

Immunization Series for Children 19-35

Months (percent)

Alaska

U.S.

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Completed Combination										
Immunization Series for Children 19-35										
Months (percent)										
Alaska					54.3	67.2	68.8	74.1	74.5	70.6
U.S.					55.1	67.7	68.5	72.7	73.2	72.8

1991

1992

1993

1994

1995

1996

1997

1998

1999

2000

54.3

67.2

68.8

74.1

74.5

70.6

55.1

67.7

68.5

72.7

73.2

72.8

Chapter 7: Adolescent and Teen Health

Adolescent Mortality by Cause of Death and Sex, Ages 10-14 Years (rate per 100,000)*

All Causes

Overall

Male

Female

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Causes										
Overall	35.1	34.1	38.4	36.8	37.8	28.4	33.6	32.0	27.8	26.9
Male	49.6	53.0	55.4	50.7	45.8	30.6	41.2	40.8	35.4	36.0
Female	19.5	13.6	20.0	21.9	29.2	26.0	25.6	22.7	19.9	17.2
Due to Unintentional Injury										
Overall	18.7	16.7	20.5	21.0	21.8	16.4	16.2	16.6	12.1	14.9
Male	24.1	26.5	33.0	30.4	28.5	19.6	20.6	20.4	13.0	20.9
Female	13.0	6.0	7.1	10.9	14.6	13.0	11.5	12.6	11.2	8.6

1991

1992

1993

1994

1995

1996

1997

1998

1999

2000

35.1

34.1

38.4

36.8

37.8

28.4

33.6

32.0

27.8

26.9

49.6

53.0

55.4

50.7

45.8

30.6

41.2

40.8

35.4

36.0

19.5

13.6

20.0

21.9

29.2

26.0

25.6

22.7

19.9

17.2

Due to Unintentional Injury

Overall

Male

Female

18.7

16.7

20.5

21.0

21.8

16.4

16.2

16.6

12.1

14.9

24.1

26.5

33.0

30.4

28.5

19.6

20.6

20.4

13.0

20.9

13.0

6.0

7.1

10.9

14.6

13.0

11.5

12.6

11.2

8.6

Chapter 7: Adolescent and Teen Health cont.

*Three-year moving average. See page 163 for definition of moving average.

Teen Mortality by Cause of Death and

Sex, Ages 15-19 Years (rate per 100,000)*

All Causes

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	141.5	129.3	129.7	127.9	118.8	120.3	117.4	112.4	106.9	114.7
Male	200.7	185.6	178.9	189.2	173.3	191.6	183.0	175.0	156.5	160.7
Female	75.7	67.1	76.3	61.4	59.5	42.5	45.7	44.0	52.9	64.3

Due to Unintentional Injury

Overall	70.8	63.8	61.8	58.1	45.6	49.2	50.4	52.2	44.3	50.5
Male	107.2	96.2	86.9	85.7	67.1	82.3	77.8	80.5	62.1	65.3
Female	30.3	28.0	34.5	28.1	22.1	13.1	20.5	21.2	25.0	34.3

Due to Intentional Injury

All Intentional	56.4	51.4	57.4	60.6	59.4	53.9	47.4	45.0	42.9	45.8
Suicide	43.9	38.1	44.4	46.3	43.9	39.1	33.1	34.8	33.0	40.4
Homicide	12.5	13.3	13.1	14.3	15.5	14.8	14.3	10.2	9.8	5.5

Teen Birth Rate by Age and Race (rate per 1,000)

Overall

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
15-17 Years	37.8	35.2	34.2	33.7	30.6	26.9	26.2	26.4	26.5	24.3
18-19 Years	126.0	123.3	112.5	111.9	101.2	96.4	94.2	88.3	85.0	97.3
15-19 Years	70.9	68.0	62.4	61.6	55.6	51.6	50.3	48.4	47.8	49.0

Ages 15-19 Years

White	57.1	55.8	48.5	50.0	41.3	39.8	38.4	36.9	33.8	
Alaska Native	120.3	114.6	104.3	99.5	98.3	89.3	83.7	86.0	85.5	

*Three-year moving average.
 **Five-year moving average.
 See page 163 for definition of moving average.

Chapter 8: Maternal Health

Pregnancy-Associated Mortality (rate per 100,000)**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
				43.8	45.1	48.4	71.1	70.8	73.8	

Pre-pregnancy Overweight or Obesity (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	26.8	27.7	29.6	30.8	32.0	37.3	32.3	37.6	39.4	41.2
White	25.0	26.9	28.8	29.0	32.1	36.1	30.2	36.3	36.9	38.1
Alaska Native	33.4	33.5	38.2	37.8	37.6	44.8	42.0	44.7	49.3	53.1

Postpartum Tobacco Use (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	29.1	27.2	26.5	26.3	25.2	27.6	24.2	25.6	24.6	24.4
White	26.1	22.8	23.9	2	21.6	24.8	20.8	21.1	19.9	21.1
Alaska Native	43.2	46.8	41.8	39.2	40.4	42.6	38.6	42.6	41.7	37.1

Physical Abuse (by Anyone) 12

Months Before Pregnancy (percent)

	6.6	8.1	8.7	5.5
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Chapter 9: Women's and Family Health

Female Mortality, Ages 15-44 Years (rate per 100,000)*

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Causes	100.5	97.2	99.4	95.5	97.2	97.0	104.3	104.0	107.0	104.0
Due to Unintentional Injury	31.9	32.0	30.2	28.6	24.7	26.1	24.7	22.8	23.8	27.0

Live Births by Category and Census Area, Alaska, 1996 - 2000
Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)

Census Area [†]	Births Resulting from an Unintended Pregnancy 1996-2000		Avg Births 1996-2000 Unmarried 13-19y.o.	
	n (average annual)	%	n	%
Anchorage	1482	40.1	304	76.5
Fairbanks NSB	526	38.6	100	63.0
Matanuska Susitna	332	47.9	62	72.7
Kenai Peninsula	282	47.5	41	62.0
Bethel	192	50.4	49	90.6
Juneau	130	36.7	21	96.9
Wade Hampton	114	56.6	42	95.1
Nome	92	53.8	35	97.9
Kodiak Island	82	31.0	16	50.7
Northwest Arctic B.	79	48.4	34	94.0
Valdez-Cordova	65	50.1	14	63.1
North Slope	62	56.8	23	92.3
Ketchikan Gateway	55	35.0	18	68.8
Dillingham	55	51.0	15	90.4
Sitka	44	34.2	5	59.0
Yukon-Koyukuk	43	45.5	23	87.8
Prince of Wales	33	44.4	6	100.0
SE Fairbanks	33	32.9	4	100.0
Wrangell-Petersburg	29	35.5	13	80.3
Aleutians West	20	74.3	1	100.0
Denali Borough	13	55.0	1	100.0
Aleutians East	13	38.9	4	100.0
Lake and Peninsula	10	39.7	6	100.0
Haines	9	51.3	0	0.0
Skagway/Hoonah/An	8	30.7	7	100.0
Bristol Bay	3	20.3	1	100.0
Yakutat	2	50.2	0	0.0
Total (Alaska)	3809	42.1	842	76.6

Note: Unintended means the pregnancy was wanted later or not wanted at all.

* Alaska Bureau of Vital Statistics, 1999 Annual Report, pp.19-45, crude birth rate, all races. (Most recent data available.)

† Alaska Population Overview: 1999 Estimates; Alaska Dept. of Labor and Workforce Development, p. 106. (Alaska Boroughs and Census Areas Map.)

Avg Births 1996-2000 Married 13-19y.o.		Avg Births 1996-2000 Unmarried 20+y.o.		Avg Births 1996-2000	1997-99 Crude Birth Rate*
n	%	n	%	n	per 1,000 pop
93	23.5	909	20.5	3702	16.4
59	37.1	266	16.3	1364	17.2
23	27.3	215	26.1	693	12.9
25	38.0	158	21.7	593	13.6
5	9.4	181	36.8	380	26.5
1	3.1	111	25.3	355	13.3
2	4.9	120	48.4	202	31.3
1	2.2	100	52.4	171	22.4
15	49.3	64	19.8	264	18.8
2	6.1	110	58.6	163	26.3
8	36.9	30	21.5	130	12.7
2	7.7	68	56.2	109	19.9
8	31.2	46	24.4	158	13.6
2	9.6	48	36.1	108	21.7
3	41.0	30	19.1	130	12.9
3	12.2	55	50.7	96	18.1
0	0.0	25	24.8	75	13.3
0	0.0	29	22.2	102	15.9
3	19.8	20	22.7	80	12.5
0	0.0	17	46.4	27	7.8
0	0.0	12	41.0	24	10.6
0	0.0	19	48.7	33	10.0
0	0.0	8	27.7	25	17.3
2	100.0	7	31.8	18	9.8
0	0.0	8	31.5	26	9.3
0	0.0	4	16.6	16	15.8
0	0.0	7	69.7	5	7.3
257	23.4	2668	24.5	9046	16.1

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