



Alaska Maternal and
Child Health Data
Book 2008:
Health Status
Edition

Maternal and Child Health Epidemiology Unit
Section of Women's, Children's and Family Health
Alaska Division of Public Health

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Alaska Birth Defects Registry and Fetal Alcohol Spectrum
Disorders Surveillance (ABDR)
Pregnancy Risk Assessment Monitoring System (PRAMS)
Childhood Understanding Behaviors Survey (CUBS)
Maternal Child Health Indicators Surveillance Program
Alaska Surveillance of Child Abuse and Neglect (SCAN)
Preterm Birth Surveillance Project
Maternal Infant Mortality Review and Child Death Review
(MIMR-CDR)

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Alaska Maternal and Child Health Data Book 2008: Health Status Edition

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Introduction

In 2003, the Maternal and Child Health (MCH) Epidemiology Unit published the first of our series of reference books on the epidemiology of maternal, infant and child health in Alaska. The *Alaska Maternal and Child Health Data Book 2008: Health Status Edition*, updates and builds upon the work presented in our first data book, featuring information on the health status of Alaskan mothers, infants, children and families. The *Health Status Edition* synthesizes information from statewide surveillance systems, surveys, vital records and program services to provide critical data on leading health status indicators and emerging issues in maternal and child health. We publish updates of the health status edition every three to five years.

In interim years, the Alaska MCH Data Book focuses on specific topics in maternal and child health. The *Alaska MCH Data Book 2004: PRAMS Edition* presented detailed information from the Pregnancy Risk Assessment Monitoring System (PRAMS),

providing the first regional and bivariate analyses of PRAMS survey data. The *Alaska MCH Data Book 2005: Birth Defects Surveillance Edition*, featured analysis of data from the Alaska Birth Defects Registry (ABDR), including prevalence estimates, trends, regional analyses and risk factors. Future Alaska MCH Data Books will focus on topics such as fetal alcohol spectrum disorders, early childhood health and other subjects important to maternal and child health.

The Alaska MCH Data Book is produced by the MCH Epidemiology Unit of the Section of Women's, Children's and Family Health. Our mission is to provide reliable, evidence-based information for MCH program planning and evaluation. We hope the *Alaska MCH Data Book 2008: Health Status Edition* will be a helpful reference for all Alaskans concerned with improving the health and well being of Alaskan families.

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Overview: Alaska MCH Snapshot



Alaska MCH Snapshot

Based on the most recent years of available data:

Women of childbearing age, infants and children comprise 45% of Alaska's population.

Overall fertility rates in Alaska are among the highest in the nation.

Alaska's teen birthrate is below the national average.

Alaska Native teenagers are over twice as likely to have a baby as non-Native teens.

Forty-three percent of Alaskan pregnancies that result in a live birth are unintended.

Almost half of Alaskan women who deliver a live birth use Medicaid as a source of payment for prenatal care.

Eighty percent of Alaskan mothers receive prenatal care during the first trimester, but only 64% receive adequate care or better during their pregnancy.

Seventeen percent of Alaskan women smoke cigarettes during the prenatal period and 5% report alcohol use.

Over 90% of Alaskan mothers initiate breastfeeding after delivery and 70% continue breastfeeding for at least 8 weeks.

Alaska MCH Snapshot

Each year, an average of 70 Alaskan infants die before reaching their first birthday.

Child maltreatment contributes to an average of 12 infant deaths per year.

Eleven percent of Alaskan infants are born preterm.

Five percent of Alaskan infants are born with a major structural birth defect.

One in every hundred infants born in Alaska are affected by fetal alcohol spectrum disorders.

Seventeen percent of households in Alaska have children with special needs.

Homicide is the second leading cause of death for Alaskan children, after unintentional injuries which comprise 40% of childhood deaths.

Suicide is the leading cause of death among Alaska Native teens, accounting for 47% of teen mortality.

Four percent of Alaskan mothers report experiencing physical abuse by their husband or partner prior to pregnancy.

Population Characteristics



Population Size

The 2005 population estimate for Alaska was 663,661 – 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 (45%) of the state's total population.

- ◆ Alaska's MCH population is proportionately larger than that of the nation, (45% versus 40%). Fourteen percent of Alaskans are children ages 1 - 9 years compared to 12% of U.S. citizens.
- ◆ Alaska has the largest land area of any U.S. state and one of the smallest populations. Long distances and remote locations complicate delivery of public health services, especially in small communities where one-quarter of the population resides.
- ◆ Compared to the U.S. (population density = 79.6 per square mile), Alaska's average population density is low (one person per square mile); however, 75% of Alaskans live in communities of 2,500 or more, where population density may be closer to 100 people per square mile.

Data Sources: Alaska Department of Labor, U.S. Census Bureau.



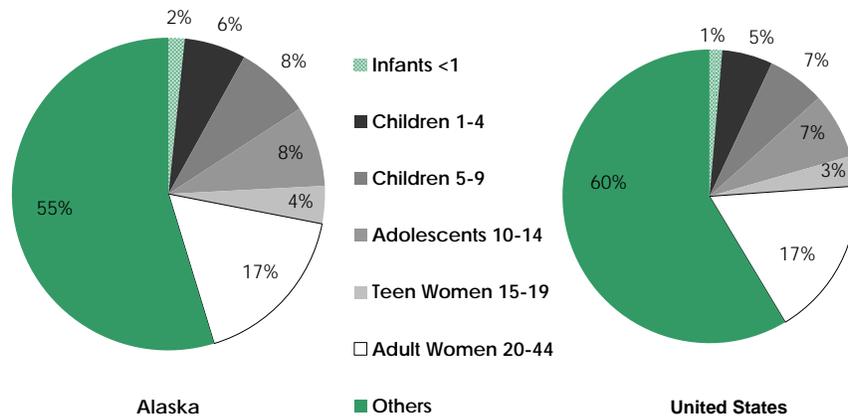
Population Characteristics

Population Composition by Maternal and Child Health Groupings, Alaska and United States, 2005

Population Group	Age in Years	Alaska Population Estimate	U.S. Population Estimate
Infants	< 1	10,406	4,060,745
Children	1 - 4	42,849	16,242,979
Children	5 - 9	51,500	19,538,793
Adolescents	10 - 14	55,494	20,857,743
Women of Childbearing Age	15 - 44	140,850	62,073,767
<i>Teen Women</i>	15 - 19	26,624	10,248,766
<i>Adult Women</i>	20 - 44	114,226	51,825,001
Total MCH Population		301,099	122,774,027
Others		362,562	173,636,377
Total Alaska Population		663,661	296,410,404

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

Maternal and Child Health Populations as a Percent of Total Population, Alaska and United States, 2005



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

Population Composition

The composition of Alaska's population differs from the United States (U.S.) as a whole.

- ◆ Sixteen percent of Alaska's total population have Alaska Native/American Indian heritage, compared to 2% of the total U.S. population. Proportionately, the Alaska Native/American Indian population is larger in Alaska than in any other state*.
- ◆ The Anchorage/Mat-Su region is home to over half of the Alaskan population. Of these, 7% are Alaska Native residents. In comparison, 75% of residents of the Southwest and 70% of people living in the Northern Region are Alaska Native.
- ◆ Alaska's population is younger than the total U.S. population – 32% of Alaskans are under age 20 compared to 28% of Americans as a whole.

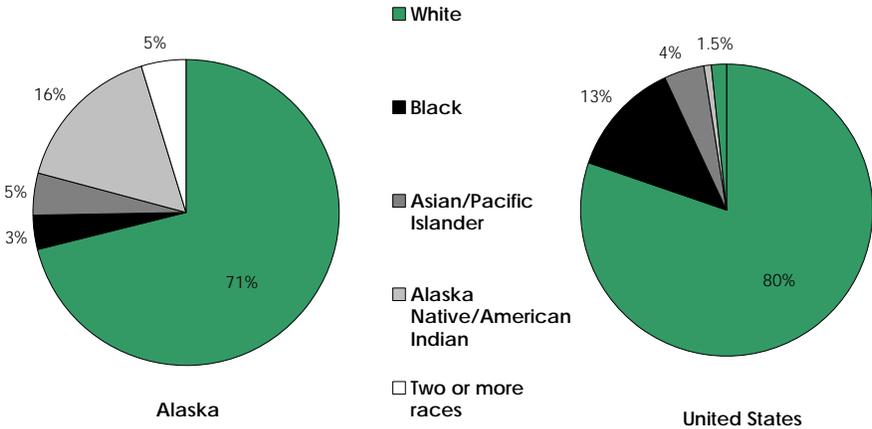
Data Source: Alaska Department of Labor.

*Note: in this In this publication, "Alaska Native" refers to all of Alaska's indigenous people, including people of American Indian, Eskimo, and Aleut heritage.



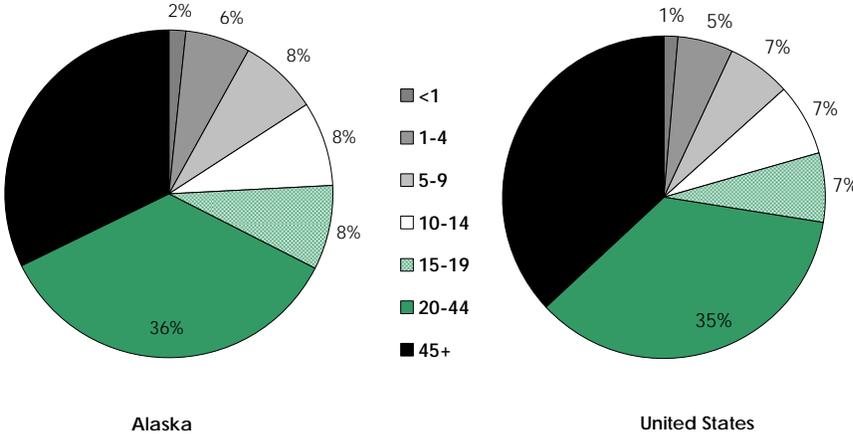
Population Characteristics

Population Distribution by Race Alaska and United States, 2005



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

Population Distribution by Age in Years Alaska and United States, 2005



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

Population Growth

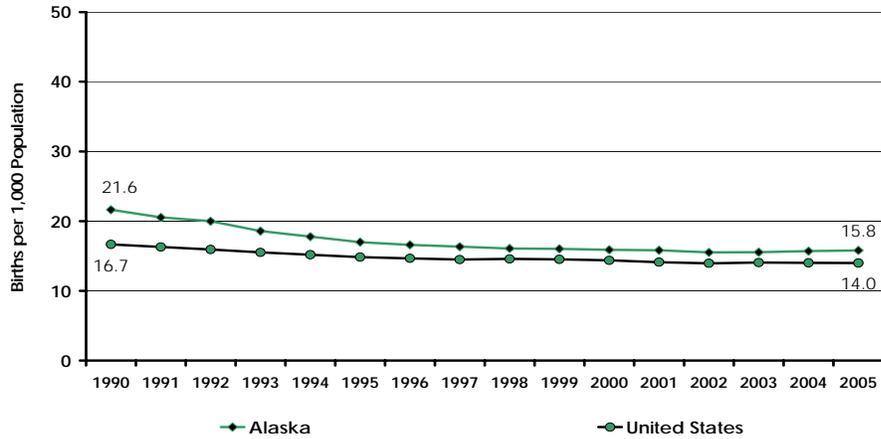
Historically, population growth in Alaska was characterized by periods of rapid growth due to in-migration during economic booms. By 1993, natural population increase (more births than deaths) began to provide the major source of population growth.

- ◆ Alaska's crude birth rate, 15.8 live births per 1,000 population in 2005, was higher than the national rate of 14.0. In 2005, Alaska had the fifth highest birth rate in the nation (1).
- ◆ Alaska's crude birth rate declined 31% between 1980 and 1997 and has remained stable since then. The birth rate for the nation declined by 9% over the same time period and has remained relatively unchanged since 2001.
- ◆ The crude birth rate for Alaska Native people (23.0 per 1,000 in 2005) living in Alaska was 60% higher than that of U.S. American Indians/Alaska Natives (14.2 per 1,000) in 2005.
- ◆ In Alaska, crude birth rates were highest for Alaska Native people, followed by Asian/Pacific Islanders and blacks. The crude birth rate for Alaska Native people was 2 times higher than that of whites in 2005.

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

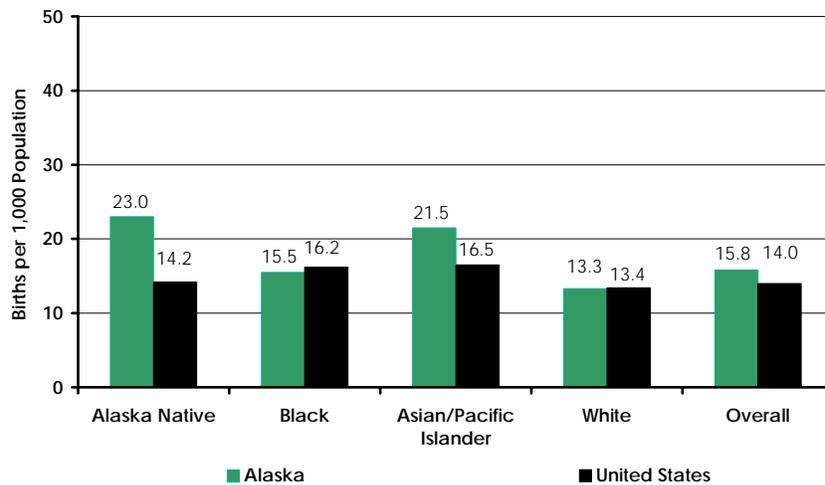
Population Characteristics

Crude Birth Rate by Year Alaska and United States, 1990-2005



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

Crude Birth Rate by Race Alaska and United States, 2005



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

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Chapter 1: Population Characteristics

1. Martin JA, Hamilton BE, Sutton PD, et al. Births: Final Data for 2005. *National Vital Statistics Reports*. 2007;56(6).

Reproductive Health



Fertility

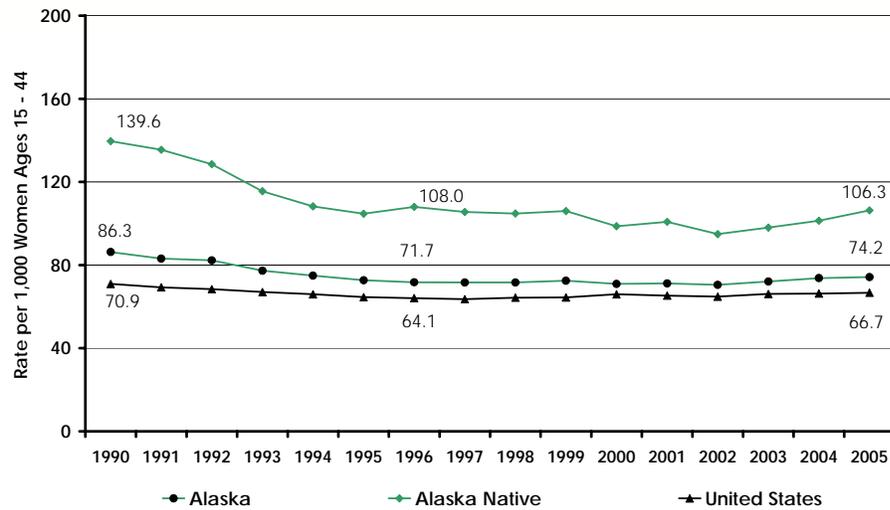
The fertility rate of a population is expressed by the number of births that occur over a given time period per thousand women of childbearing age (15 - 44 years). In general, fertility has declined in both the U.S. and in Alaska since 1980 but during 1996-2005, fertility rates stabilized. Alaska has one of the highest fertility rates in the country.

- ◆ Alaska's overall fertility rate declined 14% during 1990-2005 and was 11% higher than the national average in 2005. Fertility rates in Alaska and the U.S. continued on a downward trend until 1996.
- ◆ In Alaska from 1990-2005, the Alaska Native fertility rate declined 24%, but was still 1.6 times higher than the non-Native rate in 2005. Most of the decline in fertility among Alaska Native women occurred before 1996. Unlike non-Native women, Alaska Native women did not experience an increase in fertility during 1996-2005.
- ◆ Alaska women were most likely to have a baby when they were in their twenties. In 2005, women in their twenties were over twice as likely to deliver a live birth as 15 - 19 year olds.
- ◆ The fertility rate among 15 - 19 year old women (often referred to as the teen birth rate) was 1.3 times higher for Alaska Native women than for non-Natives in 2005. In 2004, the Alaska Native teen birth rate was 2.5 times higher than the non-Native rate.
- ◆ Alaska Native women have previously been shown to have higher fertility rates than women of other races for all maternal age groups (1). During 2005, Asians and Pacific Islanders had the highest fertility rates among women ages 30 - 34 years.

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

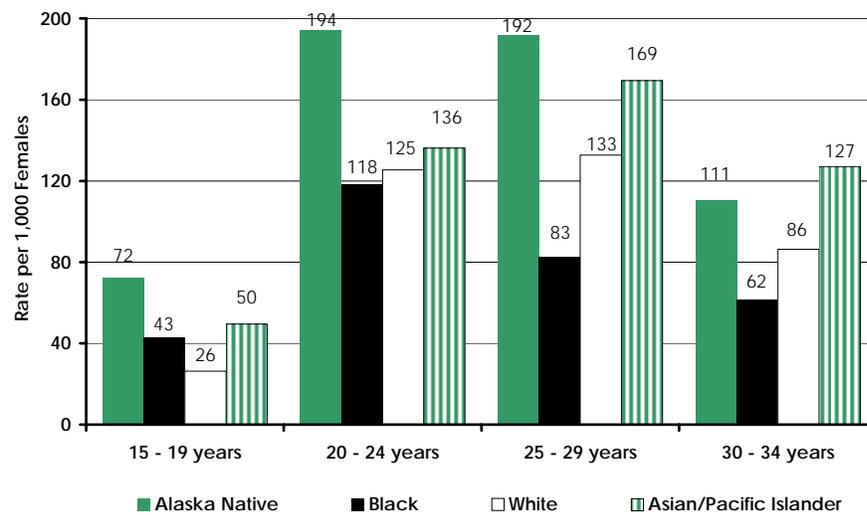
Reproductive Health

Fertility Rates by Year and Alaska Native Status Alaska and United States, 1990-2005



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

Fertility Rates by Race and Age Group Alaska, 2005



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

Teen Birth Rates

Teen mothers experience a range of poor social and economic outcomes such as inadequate prenatal care, substance abuse and poor nutrition. Teen mothers are less likely to obtain higher education and to achieve higher standards of economic success. Children of teen mothers are more likely to suffer abuse and neglect.

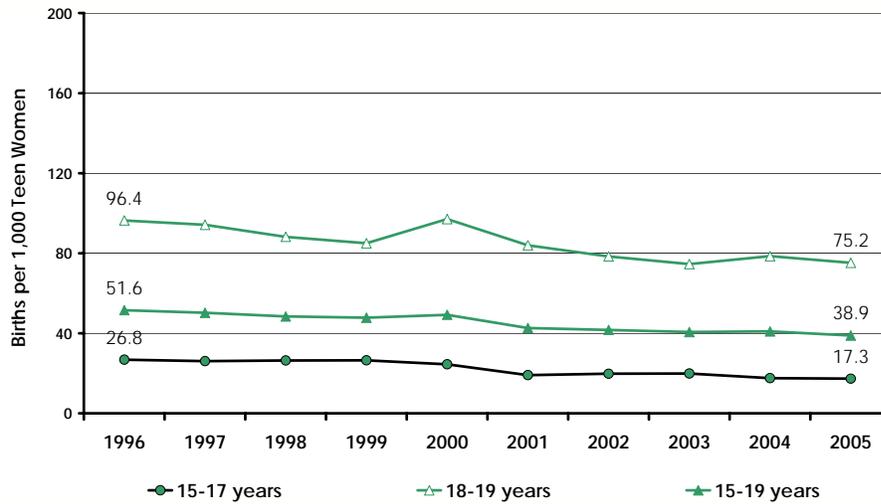
Nationally, the teen birth rate has been declining since 1991. In 2005, the U.S. estimate of the birth rate for teens ages 15 - 19 years was 40.5 births per 1,000 population.

- ◆ In 2005, the overall teen birth rate for Alaska (38.9 per 1,000) was slightly below the national rate (40.5 per 1,000). Over the last decade, Alaska's teen birth rate was consistently lower than the national rate for 15 - 17 year olds and slightly higher than the national rate for 18 - 19 year olds.
- ◆ Birth rates among young teenagers (15 - 17 years old) fell by 35% in 2005 compared to 1996. Birth rates among older teenagers (18 - 19 years old) fell by 22% during 1996 - 2005.
- ◆ Alaska Native and non-Native teen birth rates both declined significantly during 1996-2005, by 19% and 30%, respectively.
- ◆ Recent declines in the Alaska Native teen birth rate were not sufficient to reduce the Native/non-Native disparity. In 2005, the Alaska Native teen birth rate among 15 - 19 year olds was 2.4 times higher than for non-Native teens.

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

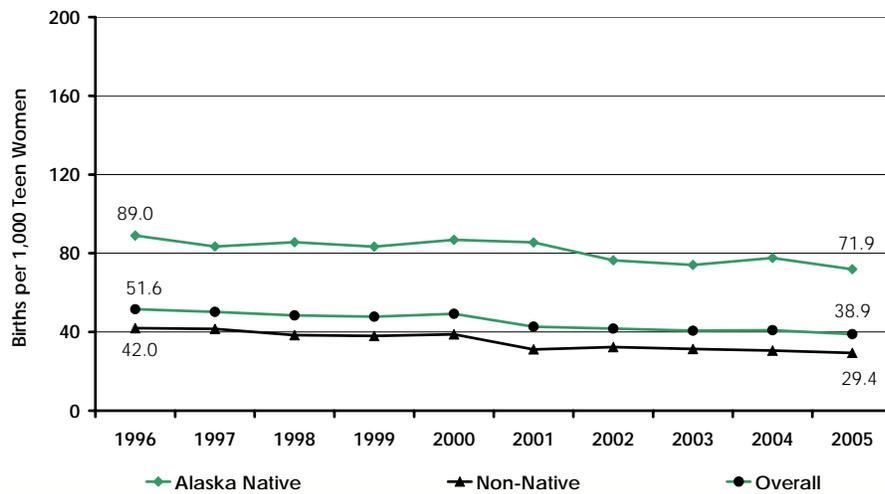
Reproductive Health

Teen Birth Rates by Year and Age Group Alaska, 1996-2005



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

Teen Birth Rates (Ages 15 - 19) by Year and Alaska Native Status, Alaska, 1996-2005



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

Contraception Use

While many issues, including socio-economic conditions, cultural practices and health status, are associated with fertility, use of contraception is the most important factor affecting the U.S. birth rate. Availability, method and efficacy of contraception are important in determining contraceptive choice.

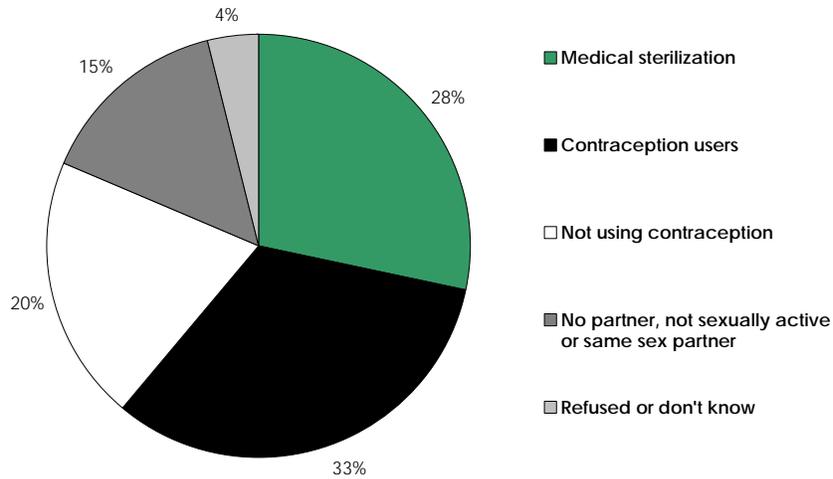
The Alaska Behavioral Risk Factor Surveillance System measured contraceptive behaviors among adults (ages 18 - 45 if female or 18 - 60 if male) in 2004.

- ◆ Sixty-one percent of Alaskan adults reported that they used some type of birth control method in 2004.
- ◆ During 2004, the most frequently used birth control method in Alaska was medical sterilization. Twenty-eight percent of adults stated that they or their partner had undergone a medical procedure that prevents pregnancy.
- ◆ Among adults reporting medical sterilization, vasectomy was reported by 52%, tubal ligation by 35%, and hysterectomy by 14%.
- ◆ Thirty-three percent of Alaskan adults used birth control methods other than medical sterilization. The most commonly used reversible contraceptive methods were oral contraceptive pills (39%) and condoms (25%). Intrauterine devices (IUDs) were used by 9%.
- ◆ Twenty percent of Alaskan adults who could become pregnant during 2004 reported that they did not use any birth control method.

Data Source: Alaska Behavioral Risk Factor Surveillance System.

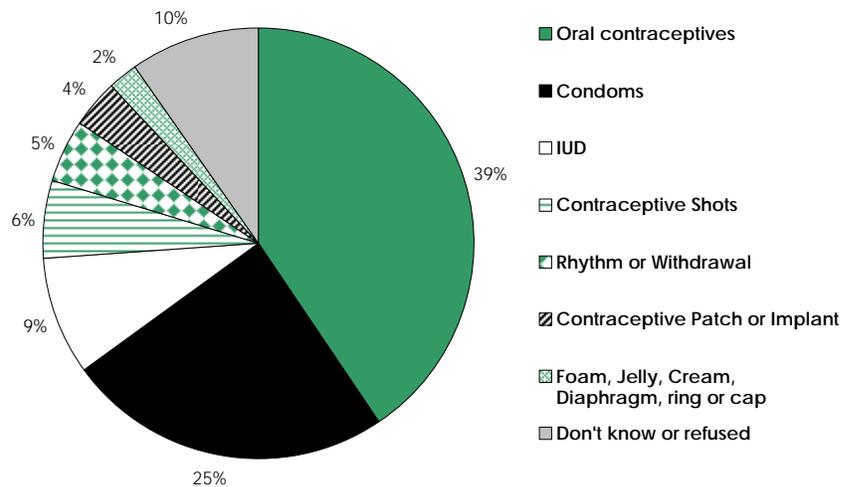
Reproductive Health

Adults of Reproductive Age by Contraceptive Status Alaska, 2004



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

Birth Control Methods Practiced by Adults Using Contraception, Alaska, 2004



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

Family Planning

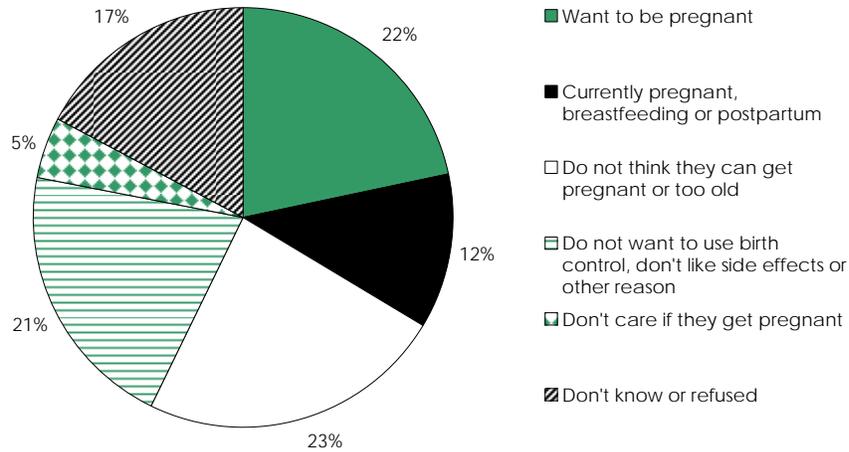
Using contraception gives individuals the opportunity to choose when they have children as well as the number of children they want to have. It also allows for healthy spacing between subsequent births. Many Alaskans depend on contraceptive methods for successful family planning and to prevent unintended pregnancies.

- ◆ In 2004, twenty percent of Alaskan adults (ages 18 - 45 if female or 18 - 60 if male) reported that they were not using any form of birth control.
- ◆ Twenty-two percent of Alaskans who were not using birth control want a pregnancy or were trying to become pregnant. An additional 12% were currently pregnant, breastfeeding or recently postpartum.
- ◆ Almost one-quarter of adults not using birth control considered themselves unable to become pregnant because of age or other reasons.
- ◆ Alaskans at highest risk of unintended pregnancy were those who reported that they did not want to use contraception because they didn't care if they or their partner became pregnant, were afraid of the side effects of using contraception, or did not like contraception for some other reason. Together, these respondents made up 26% of adults not using some form of birth control.
- ◆ Eighty-three percent of women who recently delivered a live birth report using birth control in the postpartum period during 2005.
- ◆ The proportion of women using postpartum birth control increased for non-Natives by 4.5% during 2000-2005, but declined by 1.8% for Alaska Native women.

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

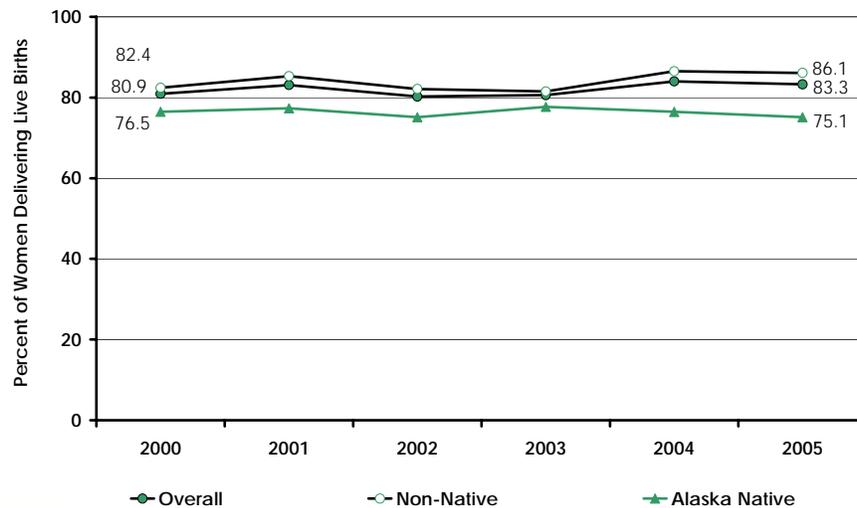
Reproductive Health

Reasons for Not Using Contraception (Excluding Medical Sterilization), Alaska, 2004



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

Postpartum Birth Control Use by Year and Alaska Native Status, Alaska, 2000-2005



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

Unintended Pregnancy

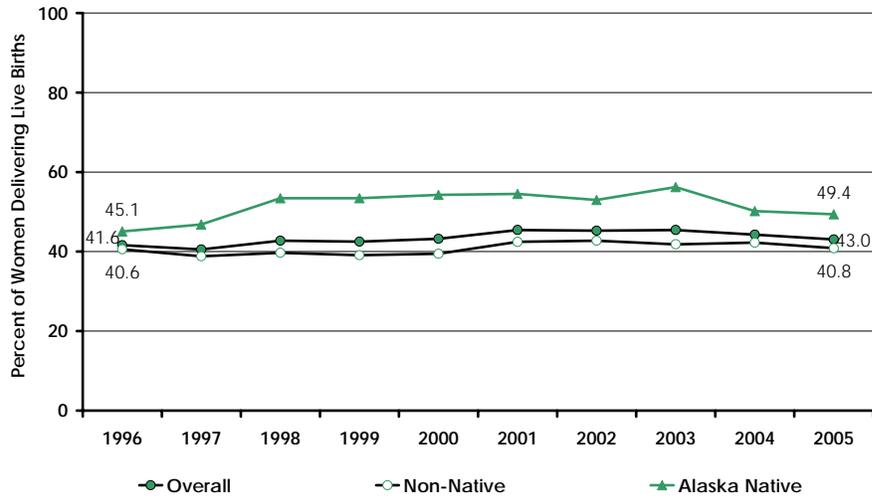
Unintended pregnancies result in considerable emotional and financial costs to individuals and society. Pregnancy is considered to be unintended when the woman desired a later pregnancy or never wanted to be pregnant. For the information presented here, unintended pregnancies are limited to those that resulted in a live-born infant.

- ◆ In Alaska, the overall prevalence of unintended pregnancies resulting in live births (43% in 2005) has not changed significantly over the past decade.
- ◆ During 1991-2005, the prevalence of unintended pregnancy among Alaska Native women was 20% higher on average than among non-Native women.
- ◆ Alaskan teenagers who delivered a live-born infant during 2001-2005 were 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 84% and 69%, respectively.
- ◆ Women who were ages 30-39 years when they had their most recent baby had the lowest prevalence of unintended pregnancy during 2001-2005 (30%).

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

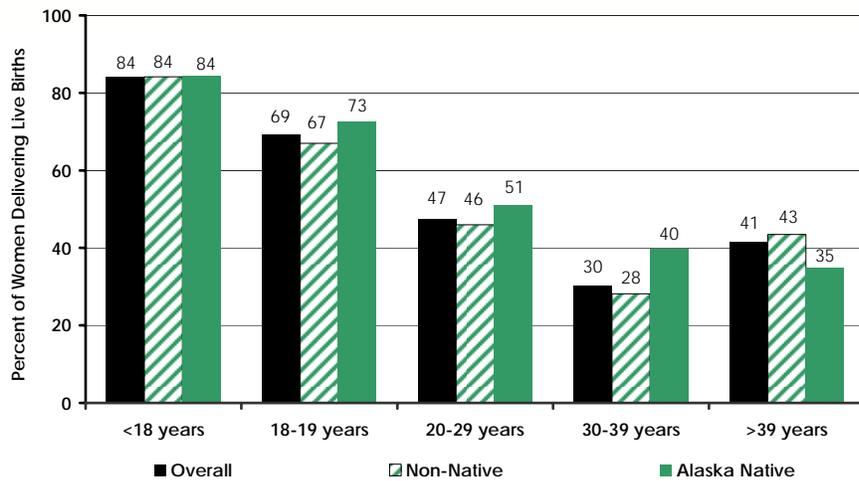
Reproductive Health

Unintended Pregnancy by Year and Alaska Native Status Alaska, 1996-2005



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

Unintended Pregnancy by Age Group and Alaska Native Status, Alaska, 2001-2005



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

Chapter References

Chapter 2: Reproductive Health

1. Schoellhorn J, Wiens HN, Perham-Hester KA. *Alaska Maternal and Child Health Data Book 2003*. Alaska Department of Health and Social Services, Division of Public Health. June 2003.

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. The Adequacy of Prenatal Care Utilization (APNCU) Index is a standardized tool used to measure the level of prenatal care a woman receives during her pregnancy.

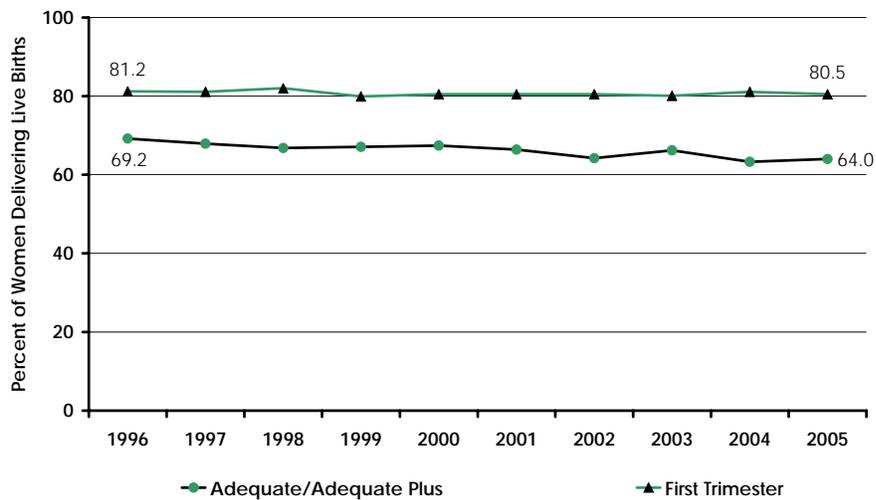
- ◆ The proportion of women in Alaska who received adequate* prenatal care in 2005 (64%) was 15% lower than the U.S. average of 75.4%. An additional 40% improvement in prenatal care adequacy would be needed for Alaska to meet the Healthy People 2010 goal of 90%.
- ◆ The proportion of women in Alaska who received prenatal care in the first trimester in 2005 (80.5%) was 4% lower than the U.S. 2005 average of 83.9%. An additional 12% improvement in the first trimester would be needed for Alaska to meet the Healthy People 2010 goal of 90%.
- ◆ The percent of Alaskan women who began prenatal care in the first trimester or who received adequate* prenatal care did not change significantly from 2002-2005.
- ◆ Sixteen percent of Alaskan women who delivered live born infants during 2005 received inadequate prenatal care.

Data Source: Alaska Bureau of Vital Statistics.

*Note: Adequate prenatal care is a combination of adequate and adequate plus as defined by the Adequacy of Prenatal Care Utilization (APNCU) Index.

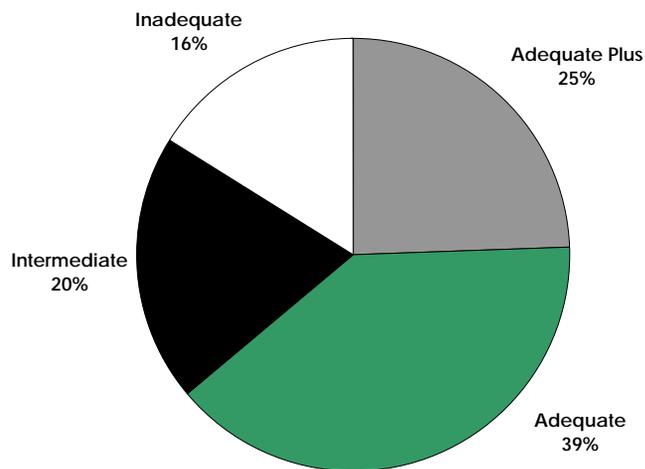
Prenatal Health

Prenatal Care (First Trimester and Adequate) by Year Alaska, 1996-2005



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

Level of Prenatal Care Adequacy among Women Delivering Live Births, Alaska, 2005



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

Factors Affecting Prenatal Care

The proportion of women receiving early and adequate prenatal care varies across racial and age groups. Women in the youngest maternal age groups have the lowest rates of adequate prenatal care. Since the risk of poor birth outcomes is greatest among the youngest mothers, education about the need for early, continuous prenatal care is essential.

In Alaska, the lack of improvement in prenatal care indicators has been recognized as a problem, particularly for Alaska Native women. Lower reported use of prenatal care among Alaska Native women versus non-Native women may be partially explained by variation in the continuity of care. Utilization of different providers during the pregnancy may not be recorded accurately on the birth certificate.

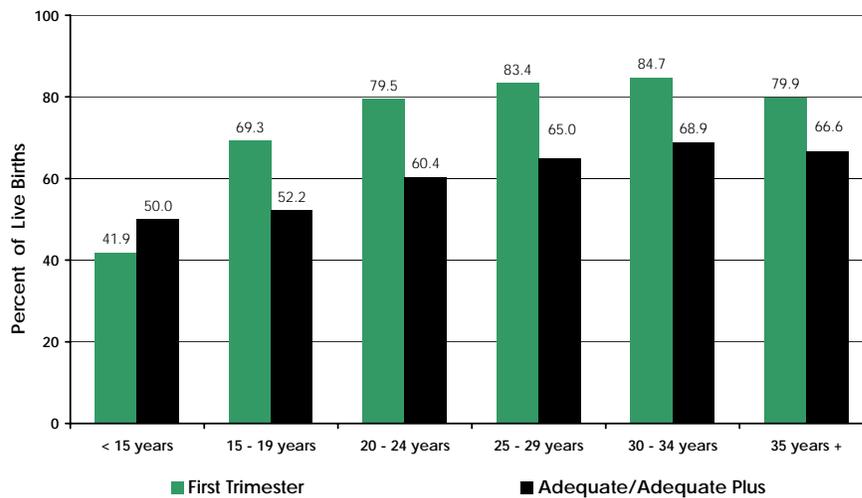
- ◆ Adequacy of prenatal care for Alaskan women of all age groups (81%) was significantly lower in 2005 than the Healthy People objective of 90%.
- ◆ In 2005, 42% of teens less than 15 years old and 69% of teens ages 15 - 19 years received prenatal care in the first trimester compared with 80% or more of women in other age groups.
- ◆ The prevalence among non-Native women for first trimester (84%) and adequate* (70%) prenatal care was 17% and 49% higher respectively than for Alaska Native women in 2005.

Data Source: Alaska Bureau of Vital Statistics.

* Note: Adequate prenatal care is a combination of adequate and adequate plus as defined by the Adequacy of prenatal care utilization (APNCU) Index.

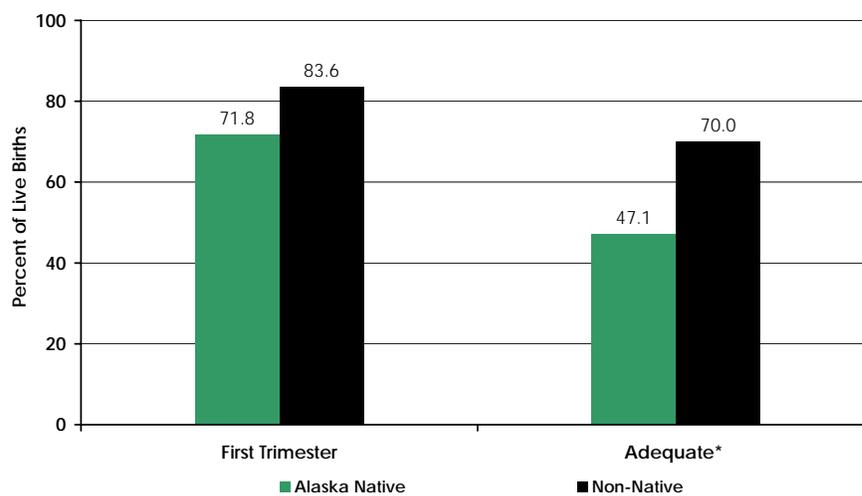
Prenatal Health

Prenatal Care (First Trimester and Adequate) by Age Group, Alaska, 2005



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

Prenatal Care by Alaska Native Status Alaska, 2005



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

Accessibility to Prenatal Care

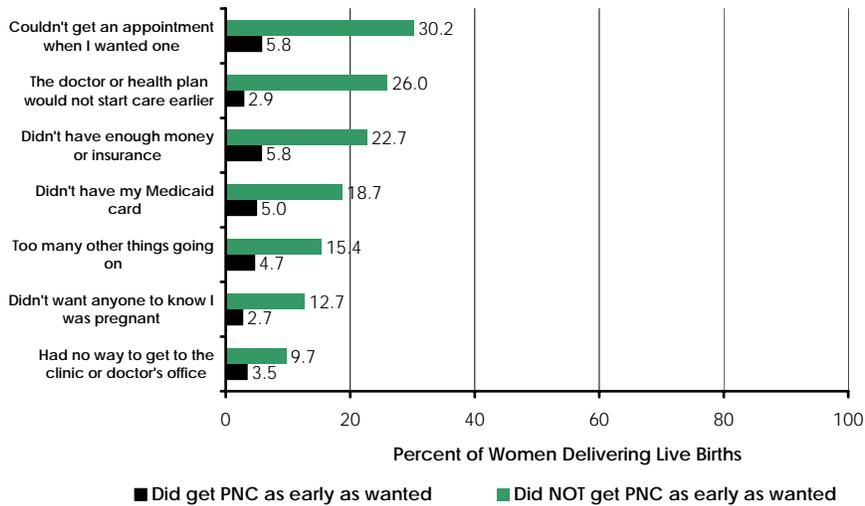
For women to receive early and adequate prenatal care, prenatal health care services must be available, accessible, and affordable. The type of health care provider seen, insurance status, early recognition of pregnancy, and ability to find prenatal care locally may affect the level of prenatal care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

- ◆ Nearly one third (30.2%) of women who did not get prenatal care as early as they wanted during 2004-2005 reported not being able to get an appointment as the reason.
- ◆ Problems related to the healthcare system were commonly reported reasons for not getting earlier prenatal care. Barriers to early prenatal care for women who did not get care as early as desired included health plan or provider policies (26%), insufficient funds or inadequate coverage (23%) and lack of a Medicaid card (19%).
- ◆ Problems related to the health care system were also reported by women who *did* receive early prenatal care during 2004-2005, with 6% of these women citing difficulties obtaining an appointment when desired or problems with Medicaid or insurance coverage.
- ◆ Personal issues were also barriers to prenatal care, particularly among those who did not receive care as early as they wanted it. Fifteen percent of these women reported they had too many other things going on and 13% did not want anyone to know they were pregnant. Problems getting to the clinic, taking time off work and getting childcare affected 10 % or fewer of these women.
- ◆ Almost half (48%) of the women who delivered in 2004-2005 used Medicaid as a source of payment for prenatal care. Private health insurance was used by 41% and 23% used personal income to help pay for their prenatal care.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

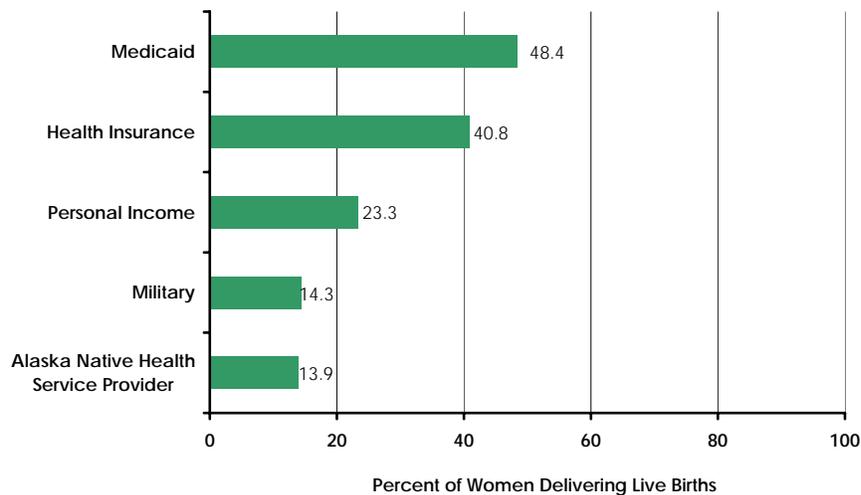
Prenatal Health

Problems Getting Early Prenatal Care (PNC) Alaska, 2004-2005



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

Sources of Payment for Prenatal Care Alaska, 2004-2005



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

Prenatal Care Counseling

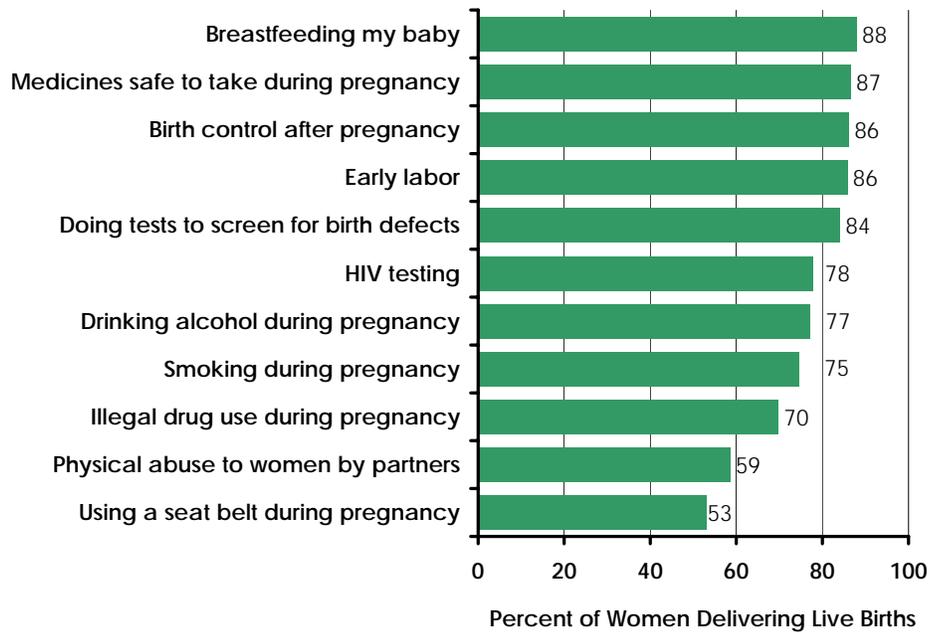
Good prenatal care includes screening for important risk factors, providing prenatal counseling, and promoting healthy behaviors. Prenatal care providers should offer education and counseling about behaviors that can affect maternal and infant health, as well as strategies for reducing risks and insuring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

- ◆ During 2004-2005, the main topic areas discussed by health care workers with their prenatal patients were breastfeeding (88%), medicines that are safe to take during pregnancy (87%) and birth control methods to use after pregnancy (86%).
- ◆ Less often discussed prenatal topic areas were physical abuse to women by partners (59%), seat belt use during pregnancy (53%) and how using illegal drugs could affect the baby (70%). During 2000, these three topics were also discussed less frequently than other topics.
- ◆ Alaska Native women were significantly more likely than non-Natives to have received counseling for most prenatal counseling topics, including physical abuse, illegal drug use, HIV testing, smoking during pregnancy, drinking alcohol during pregnancy, and birth control after pregnancy.
- ◆ Non-Native women were more likely than Alaska Native women to have been counseled on using a seat belt during pregnancy, doing tests to screen for birth defects, and medicines safe to take during pregnancy.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Prenatal Health

Prenatal Care Counseling Received by Topic Alaska, 2004-2005



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

Folic Acid

For women of childbearing age, taking supplemental folic acid before and during pregnancy can reduce the risk of serious 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 everyday and eat a balanced diet that includes a variety of fruits, vegetables, and fortified breads and cereals. Women who have already had an NTD-affected pregnancy should consult their physician about taking higher doses (4000 micrograms daily) of folic acid supplements.

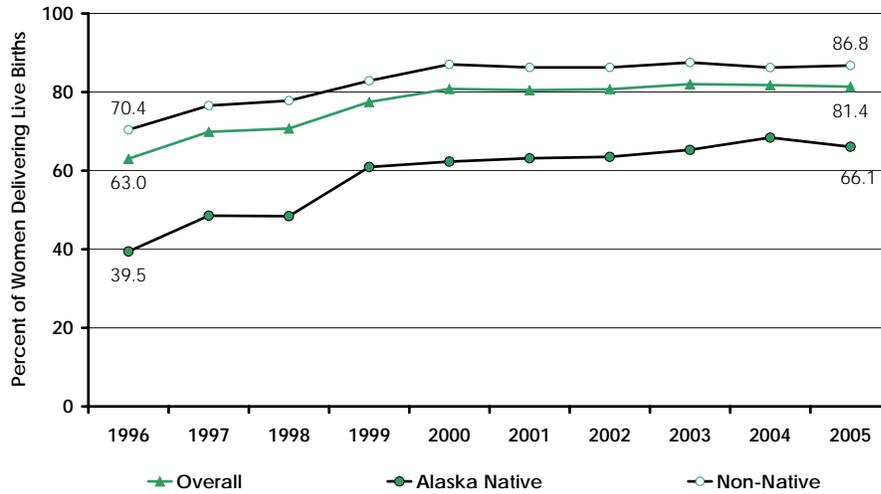
NTD prevalence in Alaska dropped dramatically after national mandates were implemented in 1998 to increase the folic acid content of commercially prepared, fortified grain products (1). Folic acid educational campaigns began in 1996.

- ◆ Knowledge in Alaska about folic acid's benefits increased from 63.0% in 1996 to 80.9% in 2000 and to 81.4% in 2005. Sixty-six percent of Alaska Native and 87% of non-Native mothers knew of folic acid's benefits in 2005.
- ◆ While folic acid knowledge increased for Alaska Native women and non-Natives during 1996-2005, a disparity in the prevalence of folic acid knowledge persisted throughout the time period. In 2005 Alaska Native women were 30% less likely than non-Natives to know about the benefits of folic acid.
- ◆ The protective effects of folic acid can only be obtained if there are adequate stores of folic acid at conception and in the earliest days of pregnancy. Over half (51%) of women who delivered a live-born infant in 2004-2005 indicated they never took a multivitamin or prenatal vitamin in the month before they got pregnant. During the last three months of pregnancy, this percentage dropped to 8%.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

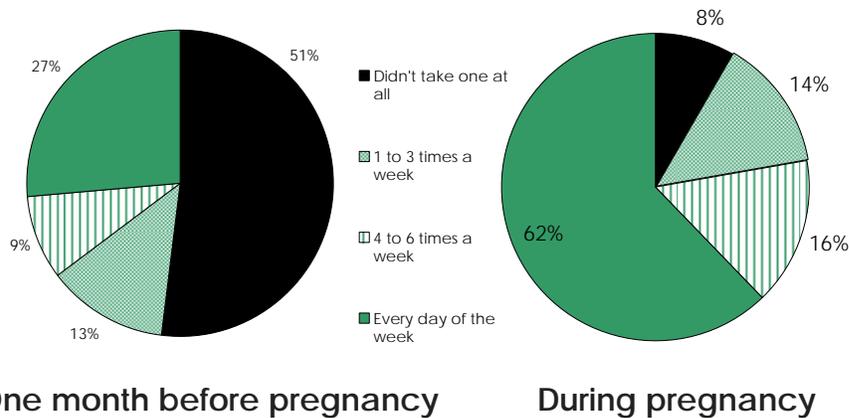
Prenatal Health

Knowledge of Folic Acid Benefits by Year and Alaska Native Status, Alaska, 1996-2005



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

Multivitamin or Prenatal Vitamin Use One Month Before and During Pregnancy, Alaska, 2004-2005



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

Medicaid / Denali KidCare

The Children's Health Insurance Program for the State of Alaska, Denali KidCare (DKC), 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).

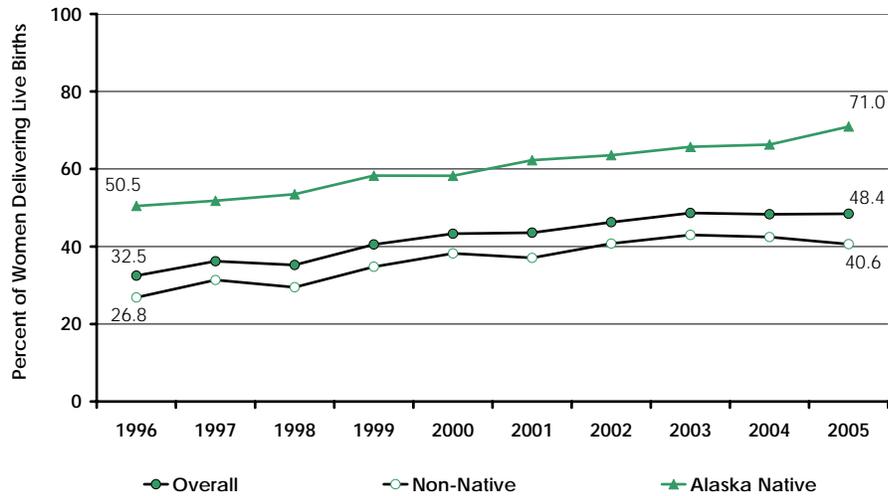
- ◆ During 1996-2005, Medicaid coverage of prenatal care (either in part or in whole) in Alaska steadily increased from 32.5 to 48.4 percent of women delivering live-born infants (a 49% increase).
- ◆ Both Alaska Native and non-Native women experienced increases in Medicaid/DKC coverage of prenatal care, however, Alaska Native women had consistently higher percentages covered by Medicaid than non-Native women. In 2005, 71% of Alaska Native women compared to 41% of non-Natives utilized Medicaid/DKC for prenatal care coverage.
- ◆ Compared to the Anchorage/Mat-Su region*, where 46% of women delivering live births used Medicaid/DKC to pay for prenatal care costs, a significantly higher proportion of women in the Northern (68%) and Southwest (83%) regions utilized Medicaid/DKC.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

*Note: Regional map of Alaska is found on page 7.

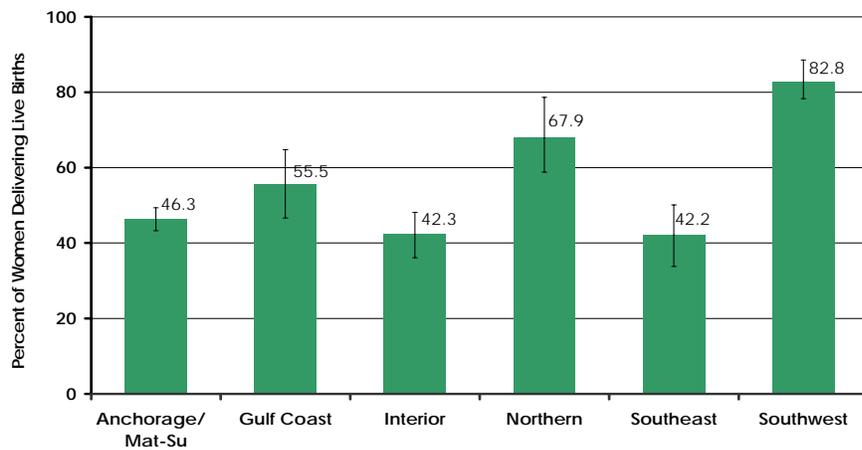
Prenatal Health

Medicaid Coverage for Prenatal Care by Year and Alaska Native Status, Alaska, 1996-2005



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

Prenatal Medicaid Coverage by Region Alaska, 2004-2005



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

WIC Participation

WIC, the Women, Infants, and Children program, is a supplemental nutrition program that helps pregnant and breastfeeding women, mothers of newborns (6 months old or younger) and young children (less than 5 years old) eat well, learn about good nutrition and stay healthy (2). WIC provides participants with vouchers that can be used to purchase foods such as milk, juice, eggs, cheese, and cereal. WIC provides nutrition counseling, support and information about breastfeeding, and help in linking mothers to health care and community services. To participate in WIC a woman must have a nutritional need and meet WIC income eligibility criteria (3). Denali KidCare recipients are automatically eligible for WIC.

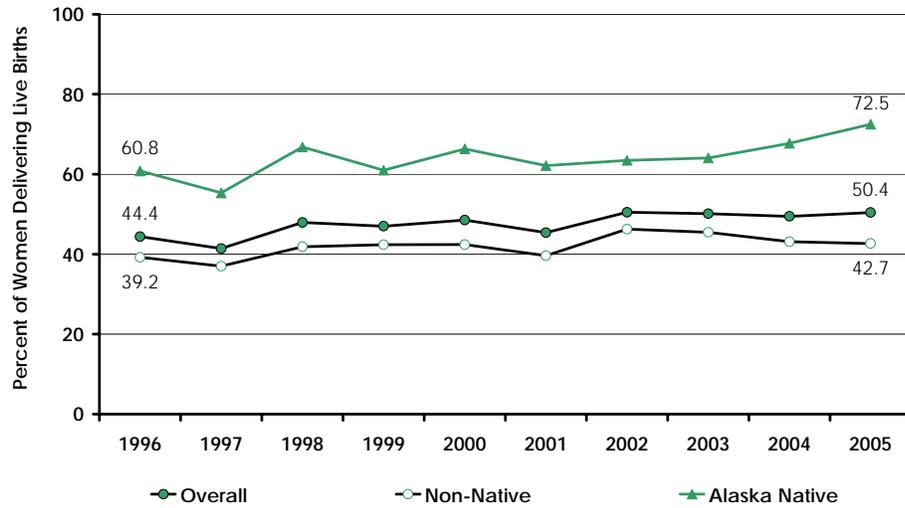
- ◆ Prenatal WIC participation increased steadily during 1996-2005. Over 50% of women who delivered a live-born infant in 2005 received WIC services while they were pregnant.
- ◆ Prenatal WIC participation increased 9% (from 39% in 1996 to 43% in 2005) among non-Native women and 19% (from 61% to 73%) among Alaska Native women during 1996-2005.
- ◆ Prenatal WIC participation was more prevalent in the rural Northern (79%) and Southwest (73%) regions of the state, where participation rates were significantly higher than all other regions. The Southeast region had the lowest prevalence (34%) of prenatal WIC participation.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: [Regional map of Alaska is found on page 7.](#)

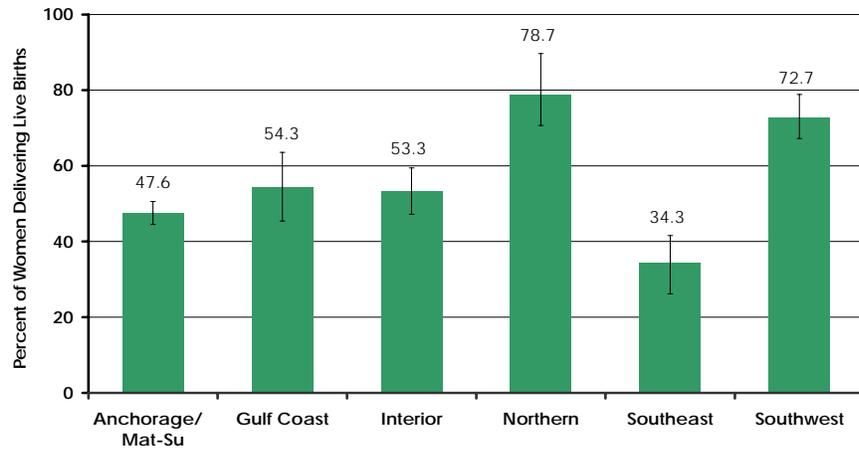
Prenatal Health

Prenatal WIC Participation by Year and Alaska Native Status, Alaska, 1996-2005



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

Prenatal WIC Participation by Region Alaska, 2004-2005



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

Chapter References

Chapter 3: Prenatal Health

1. Schoellhorn J. Decline in the Prevalence of Neural Tube Birth Defects, Alaska, 1996-2004. State of Alaska Epidemiology Bulletin. Alaska Department of Health and Social Services, Division of Public Health. April 21, 2005; No. 15. http://www.epi.hss.state.ak.us/bulletins/docs/b2005_15.pdf. Accessed on November 19, 2008.
2. Alaska Department of Health and Social Services, Division of Public Assistance, Family Nutrition Web-site for WIC participants. <http://www.hss.state.ak.us/dpa/programs/nutri/WIC/Participants/Default.htm>. Accessed on February 28, 2008.
3. Alaska Department of Health and Social Services, Division of Public Assistance, WIC Income Guidelines. <http://www.hss.state.ak.us/dpa/programs/nutri/wic/Participants/WICIncomeGuidelines.htm>. Accessed on February 28, 2008.

Prenatal Risks



Overview of Prenatal Risks

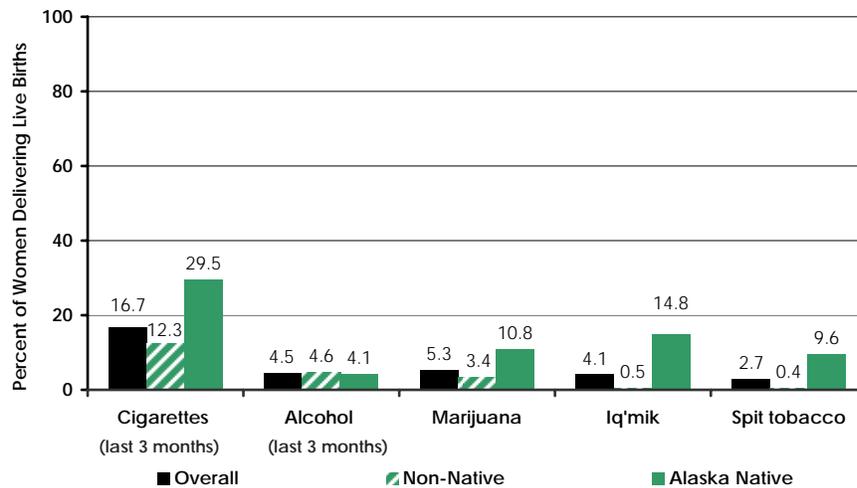
Physical abuse and drug abuse have a devastating impact on families and communities. When a woman abuses substances while pregnant, her unborn child can be adversely impacted in a variety of physical and developmental ways. Physical violence against women during pregnancy or surrounding the pregnancy 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 Alaska's prenatal population smoked cigarettes during 2004-2005. The prevalence of cigarette use among Alaska Native women during the last 3 months of pregnancy was over twice as high as among non-Native women.
- ◆ The reported prevalence of prenatal alcohol use during the last 3 months of pregnancy was 5%. There was no difference in the overall prevalence of prenatal alcohol use between Alaska Native women and non-Natives.
- ◆ Five percent of women used marijuana prenatally during 2004-2005. Alaska Native women were over three times more likely to use marijuana than non-Natives.
- ◆ During 2004-2005, 4% of the prenatal population, primarily Alaska Native women, used iq'mik, a narcotic substance derived from tree fungus that is chewed inside a tobacco leaf.
- ◆ Spit tobacco, or chew, was used by 3% of pregnant women. The prevalence of chewing spit tobacco was 3.5 times higher among Alaska Native women than non-Natives.
- ◆ The prevalence of prenatal physical abuse by a husband or partner declined by 30% during 1996-2005. Though Alaska Native women showed a significant decline of 57% for the same timeframe, it was less pronounced for the 1997-2005 time period.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

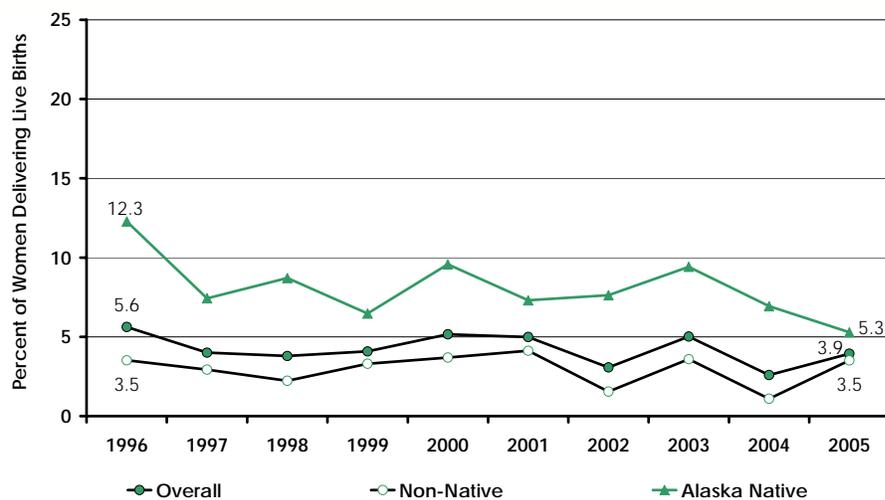
Prenatal Risks

Prenatal Substance Use by Alaska Native Status Alaska, 2004-2005



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

Prenatal Physical Abuse by Husband or Partner by Year and Alaska Native Status, Alaska, 1996-2005



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

Alcohol Use

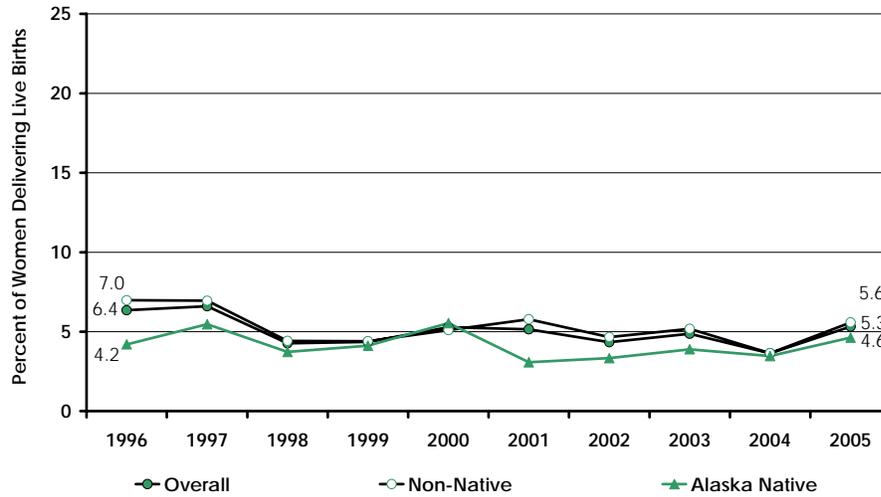
Prenatal alcohol use is associated with poor infant outcomes, including birth defects and developmental disabilities. Health care providers should routinely screen women of childbearing age for alcohol use and counsel them about the adverse effects of alcohol use during pregnancy. While first trimester exposure to alcohol is especially detrimental to the fetus, the data presented here is from the Alaska Pregnancy Risk Assessment Monitoring System, which collects data about maternal alcohol use during the last three months of pregnancy.

- ◆ The reported prevalence of prenatal alcohol use during the last 3 months of pregnancy declined from 6.4% in 1996 to 4.3% in 1998 but no change has been seen during the past 8 years. In Alaska, an additional 34% decline will be needed to meet the Healthy People 2010 target of 3.5% from the 2005 estimate of 5.3%.
- ◆ During 2001-2005, the overall prevalence of prenatal binge drinking (5 or more drinks at one sitting during the last 3 months of pregnancy) was less than 1%.
- ◆ Alaska Native women reported higher rates of binge drinking than non-Natives, with 2.3% indicating that they had 5 or more drinks at one sitting (on at least one occasion) during the last 3 months of pregnancy.
- ◆ The prevalence of any prenatal alcohol use was slightly higher among non-Native than Alaska Native women during 2001-2005, 5% and 3.7%, respectively.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

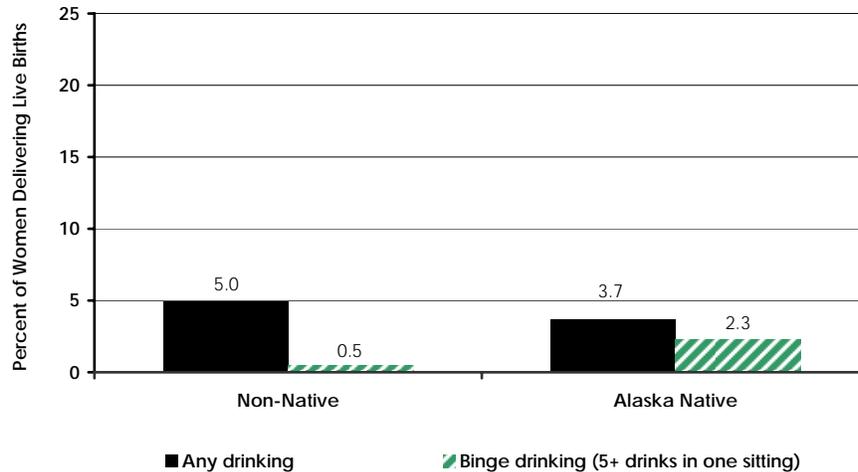
Prenatal Risks

Any Prenatal Alcohol Use (last 3 months) by Year and Alaska Native Status, Alaska, 1996-2005



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

Prenatal Alcohol Use (last 3 months), Any and Binge, by Alaska Native Status, Alaska, 2001-2005



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

Cigarette Use

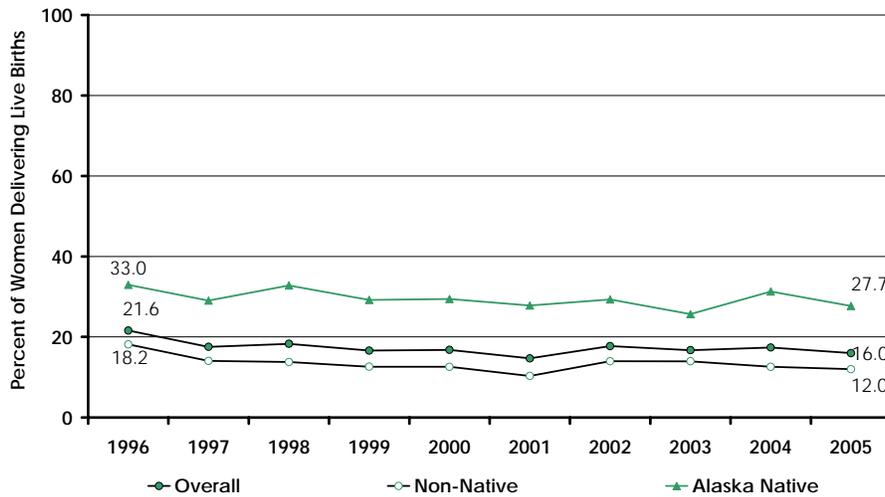
In addition to the well known deleterious affects on human health of smoking cigarettes and exposure to second hand smoke, smoking during pregnancy is the single most preventable cause of infant low birth weight and prematurity. Rates of placental abruption, fetal demise and infant mortality are higher among women who smoke during their pregnancy (1).

- ◆ Cigarette use during the last 3 months of pregnancy decreased from 22% to 18% from 1996 to 1997 and then remained static through 2005. From 1997 to 2005 no substantial change occurred for either Alaska Native or non-Native women.
- ◆ At 16% in 2005, the Alaska prevalence of prenatal cigarette smoking during the last 3 months of pregnancy would need to decline by an additional 38% to meet the Healthy People 2010 target of 10%.
- ◆ The almost two-fold disparity in prevalence of prenatal cigarette smoking among Alaska Native women vs. non-Natives did not change during 1996-2005.
- ◆ Among Alaska women who reported prenatal cigarette smoking during 2004-2005, the majority (50%) smoked one to five cigarettes per day. Fourteen percent were heavy smokers, smoking 11 or more cigarettes each day.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

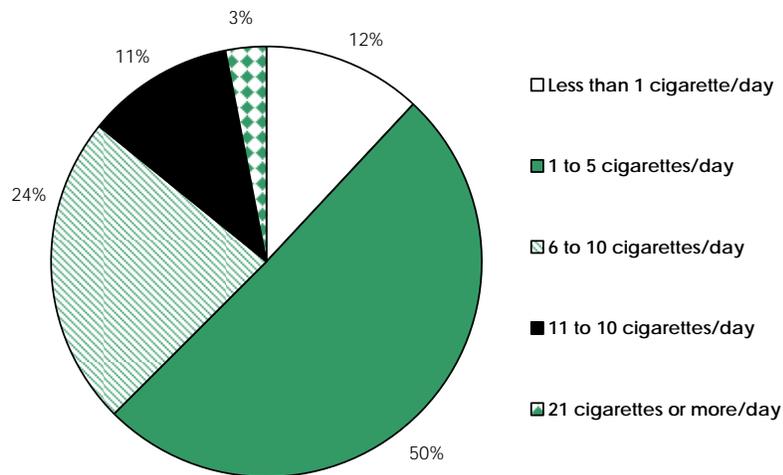
Prenatal Risks

Prenatal Cigarette Use (last 3 months) by Year and Alaska Native Status, Alaska, 1996-2005



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

Number of Cigarettes Smoked During Last 3 Months of Pregnancy, Prenatal Cigarette Smokers, Alaska, 2004-2005



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

Smokeless Tobacco Use

Smokeless (spit) tobacco, or chew, can cause cancer and non-cancerous oral conditions and lead to nicotine addiction and dependence. Alaska Native women have high prenatal chew use rates and commonly report use of iq'mik, a smokeless tobacco consisting of fungus, willow, or driftwood ash mixed with commercial tobacco. Before 2004, the Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) asked women only if they used prenatal smokeless tobacco. Starting with 2004 births, the survey also asked women if they used "a mixture of ash and tobacco, sometimes known as iq'mik or blackbull" during their most recent pregnancy.

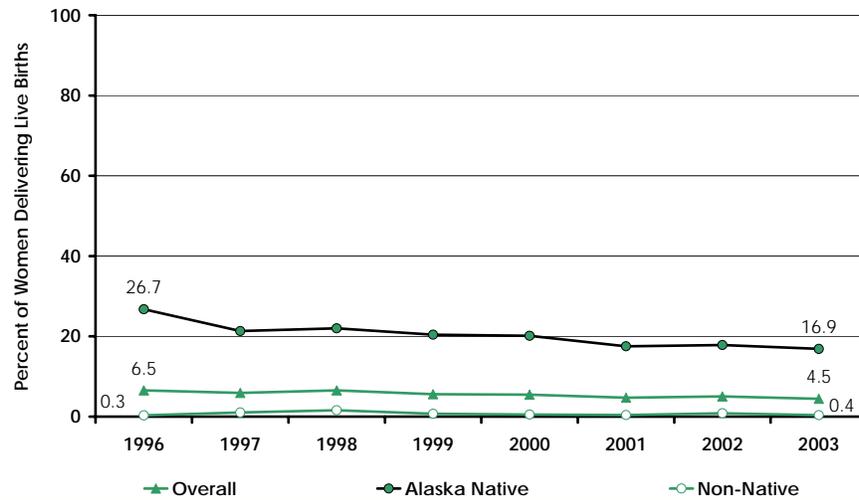
- ◆ During 1996-2003, 20.2% of Alaska Native and 0.7% of non-Native Alaskan women reported prenatal smokeless tobacco use. Alaska Native women experienced a significant 37% decrease in use.
- ◆ During 2004-2005, 4.1% of all Alaskan women surveyed reported prenatal iq'mik use and 2.7% reported spit tobacco use.
- ◆ During 2004, the prevalences of prenatal iq'mik or spit tobacco use among Alaska Native and non-Native women were 16.6% and 1.2%, respectively. Among Alaska Native women, iq'mik or spit use increased to 20.8% during 2005 (2).
- ◆ Compared to women from other regions, women from Southwest Alaska reported prenatal use of iq'mik or spit tobacco over seven times more frequently than the region with the next highest reported use.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: Regional map of Alaska is found on page 7.

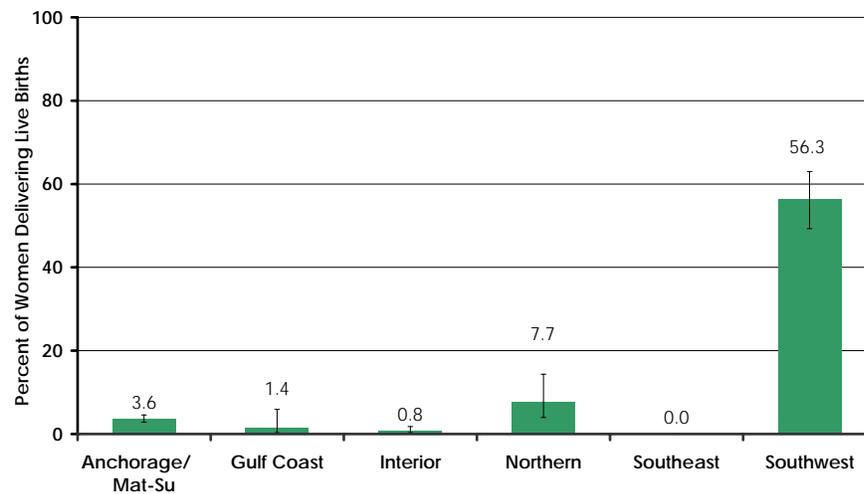
Prenatal Risks

Prenatal Smokeless Tobacco Use by Year and Alaska Native Status, Alaska, 1996-2003



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

Prenatal Spit Tobacco or Iq'mik Use by Region Alaska, 2004-2005



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

Marijuana Use

Studies on the effect of prenatal marijuana use on infants and children are equivocal. While prenatal marijuana use appears to affect infant sleep and movement (3), only one recent study found significant associations with prenatal marijuana use and adverse birth outcomes (4). Longitudinal study has demonstrated hyperactivity, impulsivity, and inattention symptoms among 10-year-old children with prenatal marijuana exposure (5).

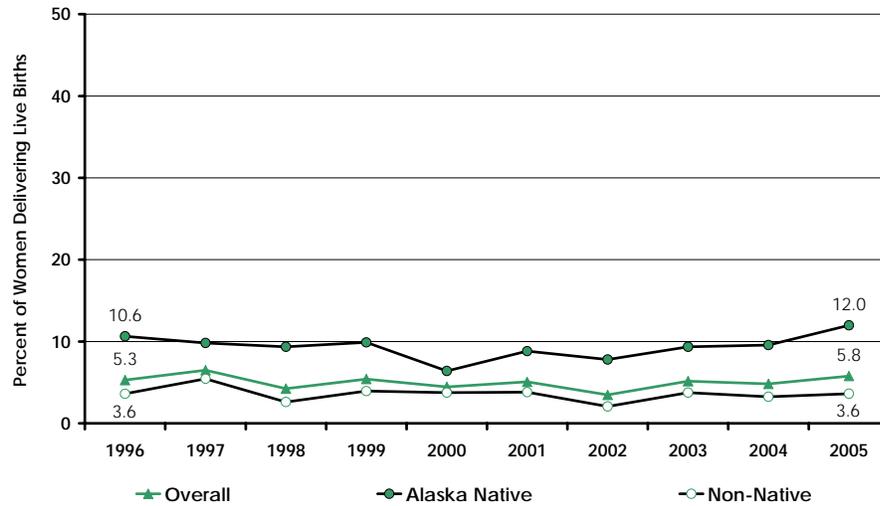
- ◆ Overall, prenatal marijuana use in Alaska has remained relatively constant over the last decade. About 6% of women who delivered a live birth in 2005 reported smoking marijuana prenatally.
- ◆ The prevalence of prenatal marijuana use among Alaska Native women was consistently higher than among non-Native women. Prenatal marijuana use by Alaska Native women remained constant during 1996-2004, but appeared to increase slightly in 2005.
- ◆ Prenatal marijuana use was highest in the Northern and Southwest regions of Alaska. The prevalence of prenatal marijuana use in the Northern region was over 4 times that of the Anchorage/Mat-Su region.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: Regional map of Alaska is found on page 7.

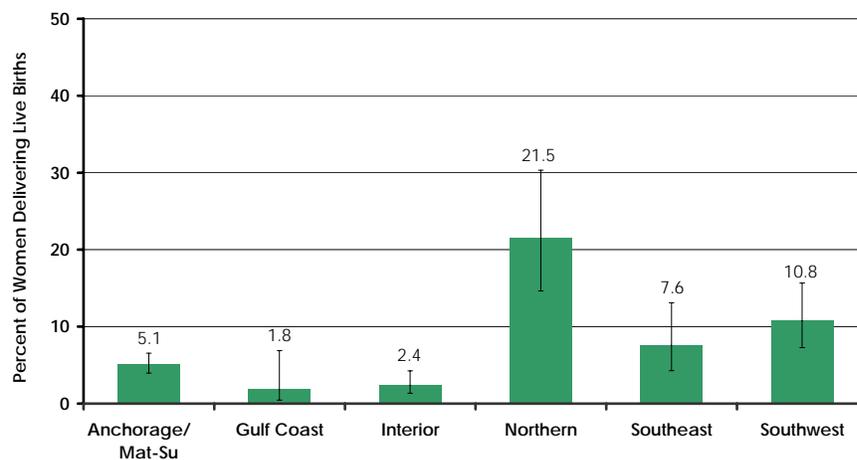
Prenatal Risks

Prenatal Marijuana Use by Year and Alaska Native Status Alaska, 1996-2005



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

Prenatal Marijuana Use by Region Alaska, 2004-2005



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

Chapter References

Chapter 4: Prenatal Risks

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4. Hatch EF, Braken MB. Effect of Marijuana Use in Pregnancy on Fetal Growth. *Am J Epidemiol*. 2006;124(6):986-993.
5. Goldschmidt L, Day N, Richardson GA. Effects of Prenatal Marijuana Exposure on Child Behavior Problems at Age 10. *Neurotoxicol Teratol*. 2000;22(3):325-336.

Birth Outcomes



Infant Mortality

Infant mortality (the death of an infant before one year of age) is the most widely used indicator of population health status. Infant mortality rates reflect not only maternal and infant health, but social, environmental and economic conditions as well. Infant mortality rates are used worldwide to track improvements in living conditions, access to medical care and the effects of governmental policies.

The U.S. ranked 29th in the world in infant mortality in 2004, falling from 12th in 1960 and 23rd in 1990 (1). Alaska's infant mortality rate of 6.4 per 1,000 live births ranked 20th in the Nation during 2004 (2). While U.S. infant mortality has fallen in recent decades, it continues to affect minority groups disproportionately.

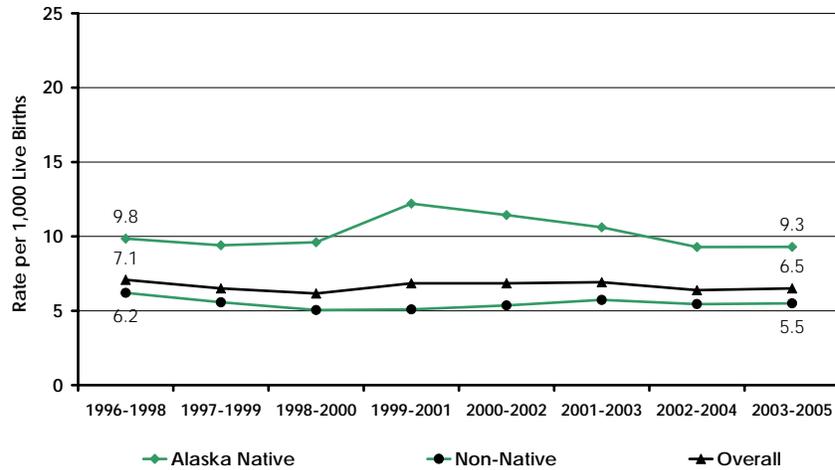
- ◆ During 2003-2005, Alaska's infant mortality rate was 6.5 per 1,000 live births. The rate has remained static over the prior 10-year period. The U.S. infant mortality rate, 6.9 per 1,000 in 2005, did not decline from 2000-2005 (1).
- ◆ During 2003-2005, the Alaska Native infant mortality rate was 70% higher than the non-Native rate.
- ◆ The average annual infant mortality rate during 2001-2005 was highest in the Northern region (12.5 per 1,000 live births). The lowest rate during the same period occurred in the Southeast region (5.7 per 1,000 live births).

Data Source: Alaska Bureau of Vital Statistics.

Note: [Regional map of Alaska is found on page 7.](#)

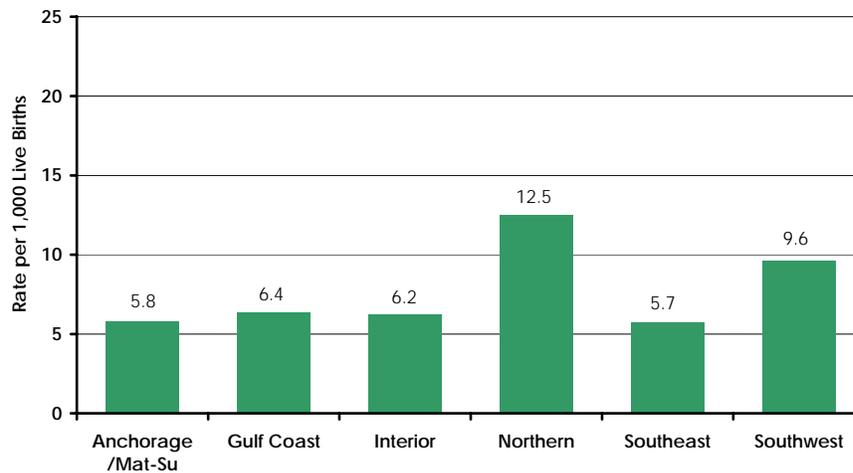
Birth Outcomes

Infant Mortality Rates by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Infant Mortality Rate by Region Alaska, 2001-2005



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

Neonatal Mortality

Factors associated with infant deaths vary according to the age of the infant. By convention, infant mortality is divided into neonatal mortality and post-neonatal mortality. Infant deaths that occur in the neonatal period (birth to 28 days), are usually associated with issues that arise during pregnancy and delivery. Medical advances, the introduction of neonatal intensive care units, perinatal care regionalization and improved access to prenatal care have contributed to declines in neonatal mortality, particularly in low birth weight preterm infants (3).

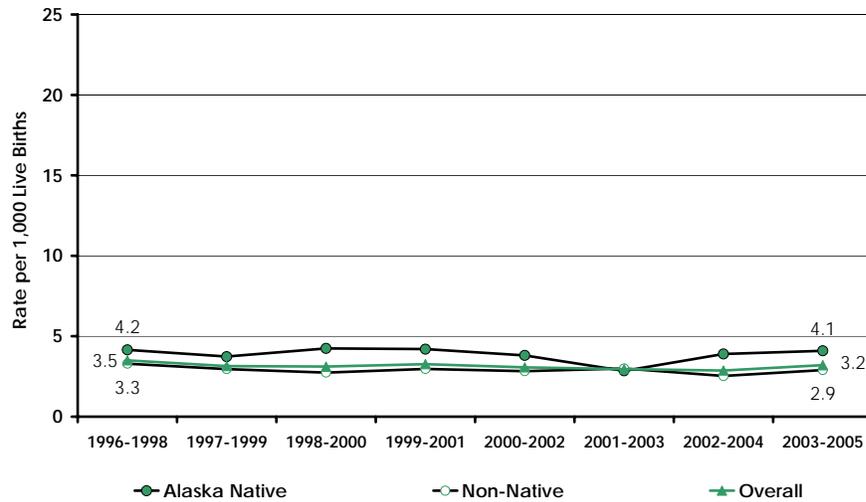
- ◆ In 2003-2005, Alaska's neonatal mortality rate (3.2 per 1,000 live births) was 29% lower than the 2004 U.S. average (4.5 per 1,000 live births).
- ◆ During the decade spanning 1996-2005, neonatal mortality rates have remained static.
- ◆ During 2003-2005, Alaska Native infants were 1.4 times more likely than non-Native infants to die in the neonatal period.
- ◆ Rates of neonatal mortality were highest in the Southwest (4.6 per 1,000 live births) and Northern (3.9 per 1,000 live births) areas of the state.

Data Sources: Alaska Bureau of Vital Statistics, Centers for Disease Control and Prevention, National Vital Statistics Reports.

Note: Regional map of Alaska is found on page 7.

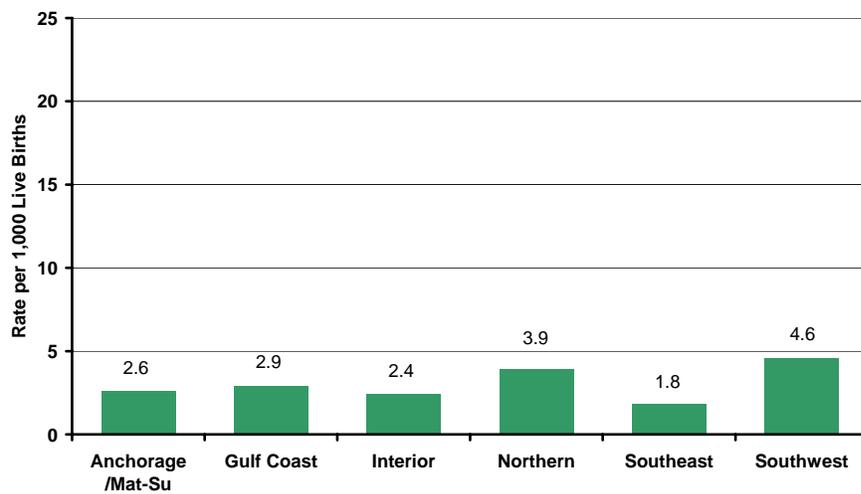
Birth Outcomes

Neonatal Mortality Rates by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Neonatal Mortality Rate by Region Alaska, 2001-2005



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

Causes of Neonatal Mortality

The Alaska Maternal Infant Mortality Review (MIMR) committee conducts retroactive reviews of all infant deaths in Alaska. The committee, composed of a variety of health experts, reviews infant and maternal medical records, birth and death certificates, and autopsy and police reports, and comes to a consensus determination of the most likely underlying and contributing causes of death. The committee has reviewed over 99% of all known infant deaths which occurred to Alaska residents during 1992-2002.

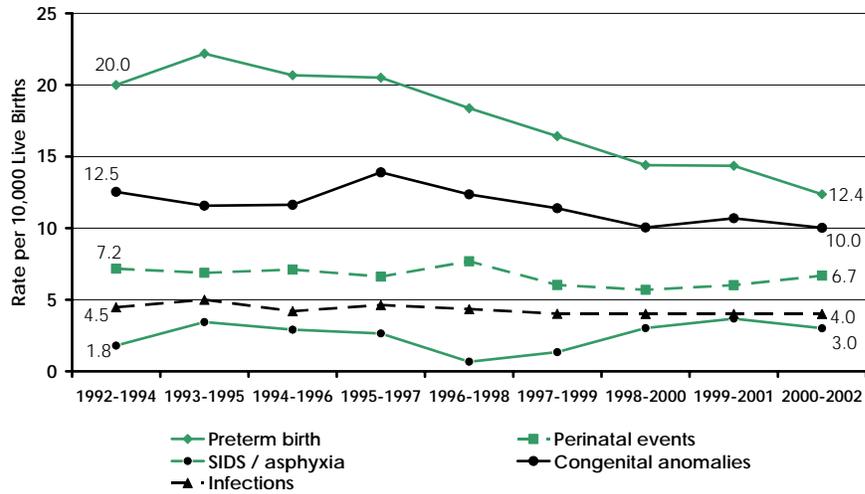
- ◆ During 1992-2002, preterm birth contributed to almost half of all neonatal deaths in Alaska. Other primary causes of neonatal death included congenital anomalies (33%), perinatal events (19%), and infections (12%)*.
- ◆ Neonatal mortality associated with preterm birth decreased from 20.0 per 10,000 live births in 1992-1994 to 12.4 per 10,000 live births in 2000-2002, a decline of almost 40%. Neonatal mortality rates due to other primary causes did not dramatically change.
- ◆ Perinatal events noted by the committee included cord accidents, hypoxic ischemic encephalopathy and other consequences of perinatal asphyxia, meconium aspiration syndrome, and placental abruption.
- ◆ An analysis of all fatal neonatal sepsis and pneumonia cases among Alaska infants during 1992-2000 showed that neonatal sepsis was concentrated in preterm infants. Etiologies of infection included group B streptococcus during the early neonatal period, *Candida* during the late neonatal period, and other bacteria during both periods (4).

Data Source: Alaska Maternal Infant Mortality Review.

*Note: Analysis allowed for multiple causes of death.

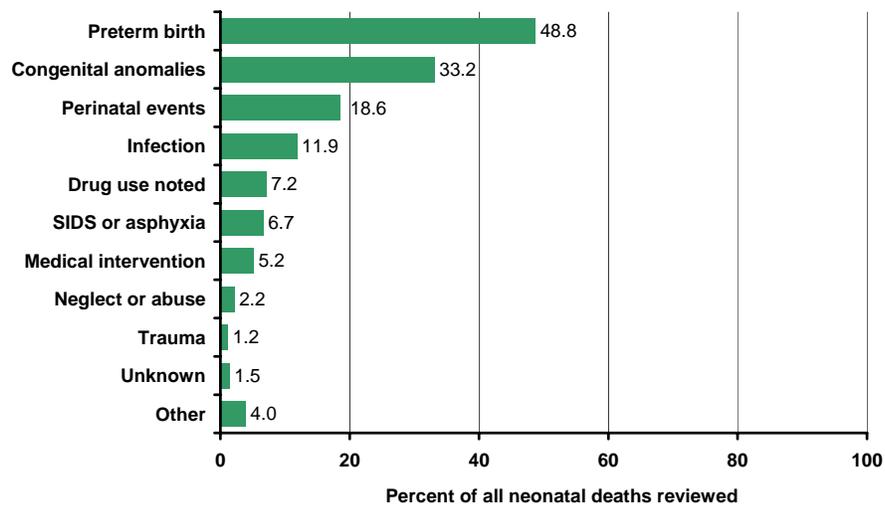
Birth Outcomes

Cause-specific Neonatal Mortality Rates Three Year Moving Averages, Alaska, 1992-2002



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

Primary Causes of Neonatal Mortality Alaska, 1992-2002



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

Post-neonatal Mortality

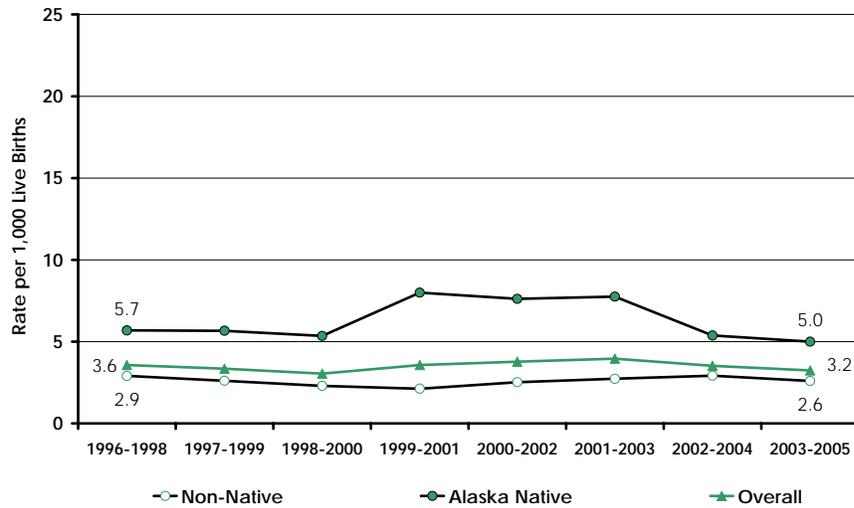
Post-neonatal mortality (an infant death that occurs between 28 days and one year of age) is more likely to be associated with environmental conditions experienced after delivery than with problems related to pregnancy and childbirth. At the beginning of the 20th century, post-neonatal deaths accounted for two thirds of infant deaths in the U.S. Improvements in environmental conditions, nutrition, the use of antibiotics and the advent of Medicaid are thought to explain the rapid decline in post-neonatal death that continued through the 1970's. Post-neonatal deaths made up one third of all infant deaths in the U.S. in 2003; in Alaska, they accounted for half.

- ◆ Alaska's post-neonatal mortality rate for 2003-2005, 3.2 per 1,000 live births, was 1.5 times higher than the 2003 national baseline and 2.1 times higher than the Healthy People 2010 target of 1.5 per 1,000.
- ◆ The 2003-2005 post-neonatal mortality rates for Alaska Native and non-Native infants were the same as that of 1996-1998. An additional 54% decline in the overall rate would be needed to meet the 2010 target.
- ◆ Infants born to Alaska Native mothers were twice as likely to die during the post-neonatal period than those born to non-Native mothers. This disparity persisted from 1990-1992 to 2003-2005 and was explained by similar rates of decline for both groups. For Alaska Native and non-Native populations respectively, post-neonatal mortality declined 38% and 35% during 1990-1999 and 12% and 10% during 1996-2005.
- ◆ During 2001-2005, post-neonatal mortality was highest in the Northern region of Alaska (8.6 per 1,000 live births) – 2.8 times higher than in the Anchorage/Mat-Su region. The Southeast region had the lowest post-neonatal mortality rate (2.7 per 1,000 live births).

Data Source: Alaska Bureau of Vital Statistics.
Note: Regional map of Alaska is found on page 7.

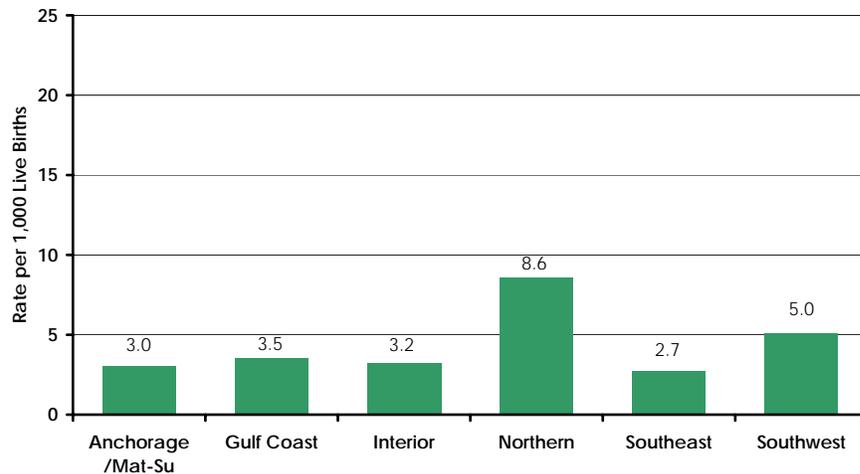
Birth Outcomes

Post-neonatal Mortality Rates by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Post-neonatal Mortality Rates by Region Alaska, 2001-2005



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

Causes of Post-neonatal Mortality

While the causes of post-neonatal death are generally associated with environmental conditions experienced after delivery, multiple issues may affect why an infant dies during the post-neonatal period. The Alaska Maternal Infant Mortality Review (MIMR) committee conducts reviews of all infant deaths in Alaska to come to a determination of the most likely underlying and contributing causes of death. The committee has reviewed over 99% of all known infant deaths which occurred to Alaska residents during 1992-2002.

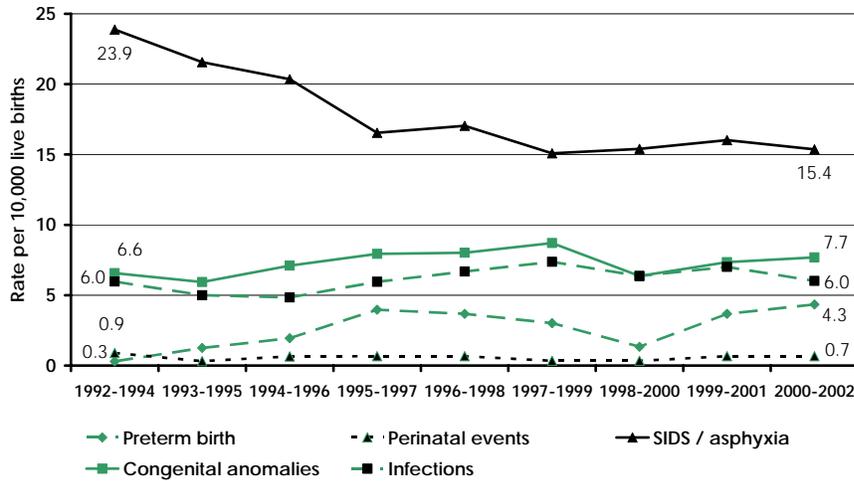
- ◆ According to MIMR consensus decisions, Sudden Infant Death Syndrome (SIDS), or asphyxia of unknown etiology, contributed to half of all post-neonatal deaths in Alaska during 1992-2002*.
- ◆ Post-neonatal mortality due to SIDS or unexplained asphyxia decreased 37% from 1992-1994 to 1997-1999. However, the SIDS/asphyxia rate remained stable during 1997-1999 to 2000-2002.
- ◆ Other primary causes of post-neonatal death included congenital anomalies (20%), infection (16%), and physical trauma (11%).
- ◆ Infections associated with post-neonatal deaths included pneumonia and bronchiolitis due to a variety of viral and bacterial causes and bacterial meningitis.
- ◆ Of 47 post-neonatal deaths due to physical trauma, the committee determined that at least 26 were possible or probable victims of neglect or abuse. Unintentional injuries included motor vehicle accidents, house fires, carbon monoxide poisoning, and drowning.

Data Sources: Alaska Bureau of Vital Statistics, Alaska Maternal Infant Mortality Review.

*Note: Analysis allowed for multiple causes of death.

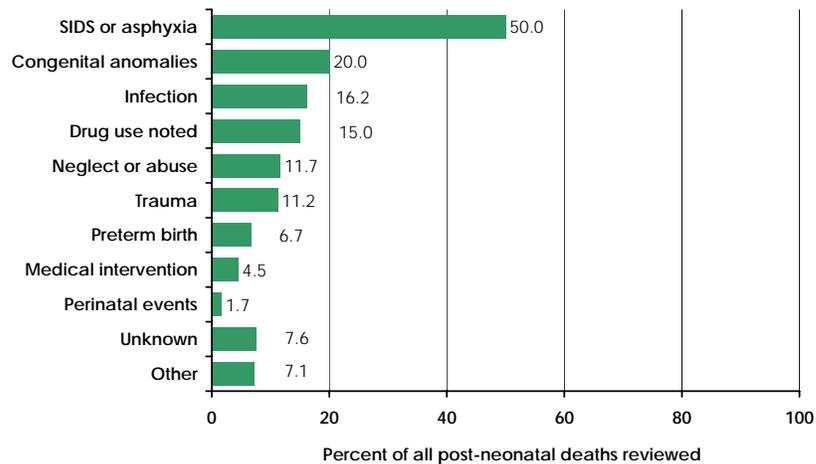
Birth Outcomes

Cause-specific Post-neonatal Mortality Rates Three Year Moving Averages, Alaska, 1992-2002



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

Primary Causes of Post-neonatal Mortality Alaska, 1992-2002



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

Fetal Mortality

Fetal mortality is based on fetal demise during the second half of pregnancy (20 weeks gestation to birth) per 1,000 live births plus fetal deaths. Deaths during this period are often associated with maternal risk factors, complications of pregnancy and birth defects. Prenatal smoking and drinking have been shown to increase rates of fetal mortality.

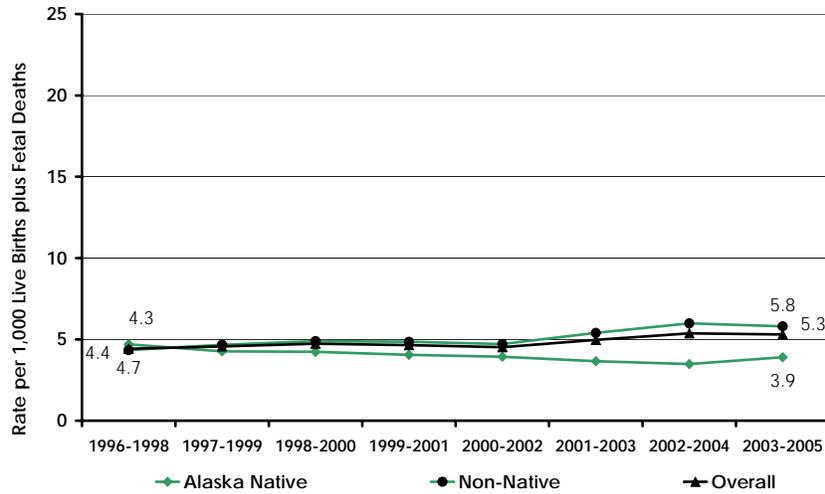
- ◆ Over the last decade, the overall fetal mortality rate for Alaska has been consistently lower than the national average (6.2 per 1,000 live births plus fetal deaths in 2004). Alaska's fetal mortality rate in 2003-2005 was 14.5% lower than the national average rate for 2004.
- ◆ Although lower than the national rate, fetal mortality in Alaska remained 29% higher during 2003-2005 than the Healthy People 2010 target of 4.1 per 1,000 live births plus fetal deaths.
- ◆ Total fetal mortality rates declined between 1991-1993 and 1993-1995 but have been rising slowly since 1999. The trend for Alaska Native and non-Native populations differed. The fetal mortality rate for the Alaska Native population declined significantly from 1991 to 2005 whereas the rate for the non-Native population increased gradually to a high of 6.0 in 2002-2004.
- ◆ In 2003-2005 fetal mortality among the non-Native population (5.8 per 1,000 live births plus fetal deaths) was 49% higher than among the Alaska Native population (3.9 per 1,000 live births plus fetal deaths).
- ◆ The highest rates of fetal mortality during 2001-2005 were seen in the Northern and Southwest regions, 6.4 and 6.7 per 1,000 live births, respectively.

Data Source: Alaska Bureau of Vital Statistics.

Note: Regional map of Alaska is found on page 7.

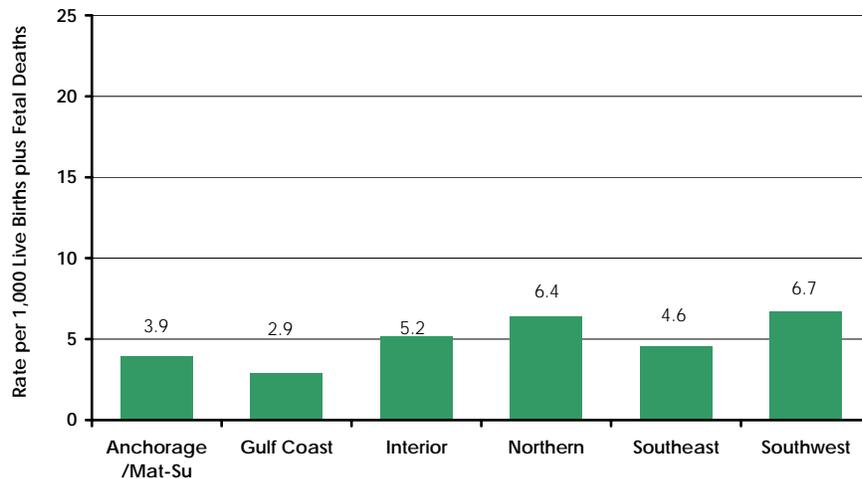
Birth Outcomes

Fetal Mortality Rates by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Fetal Mortality Rates by Region Alaska, 2001-2005



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 infants (less than 5.5 pounds or <2500 grams) are at increased risk of neonatal mortality, infection, impaired immune function, delayed motor and social development, learning disabilities and poor school performance. People born with low birth weights may be at increased risk of cardiovascular disease and diabetes later in life.

- ◆ Alaska's low birth weight rate in 2005 (4.7%) was not significantly different from 1996 (4.4%).
- ◆ Alaska's very low birth weight rate did not change significantly during 1996-2005 for either Alaska Native or non-Native infants.
- ◆ Although Alaska's 2005 low birth weight rate (4.7) was 26% lower than the national rate of 6.4%, an additional 15% decline would be needed in order to meet the Healthy Alaskans 2010 target of 4.0%.
- ◆ During the 1980's Alaska Native women were 26% more likely to have a low birth weight infant than non-Native women. During 2001-2005, this disparity was eliminated primarily because the risk of low birth weight among non-Native women increased (from an annual average of 3.8% in 1980-1989 to 4.5% in 2001-2005).
- ◆ The Anchorage/Mat-Su region had the highest average annual low birth weight rate during 2001-2005 (4.1%) and the Southeast region had the lowest (3.1%).

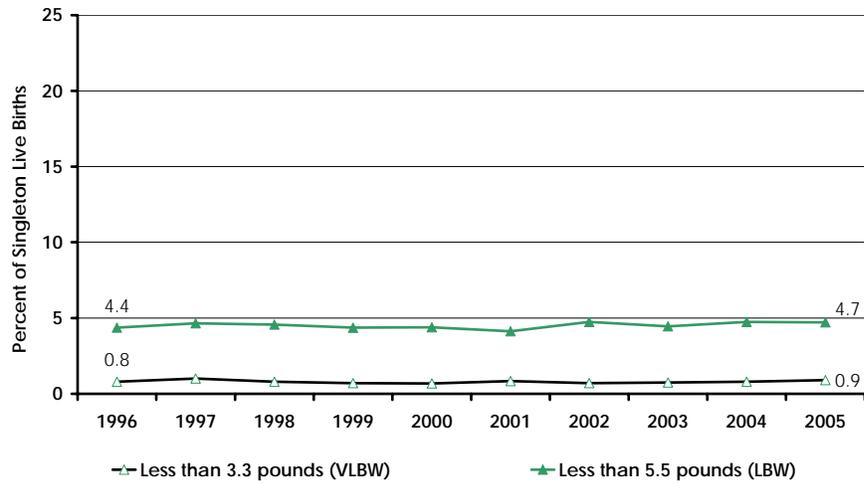
Data Source: Alaska Bureau of Vital Statistics.

Note: Regional map of Alaska is found on page 7.

*Note: The prevalence of low birth weight and very low birth weight includes singleton births only.

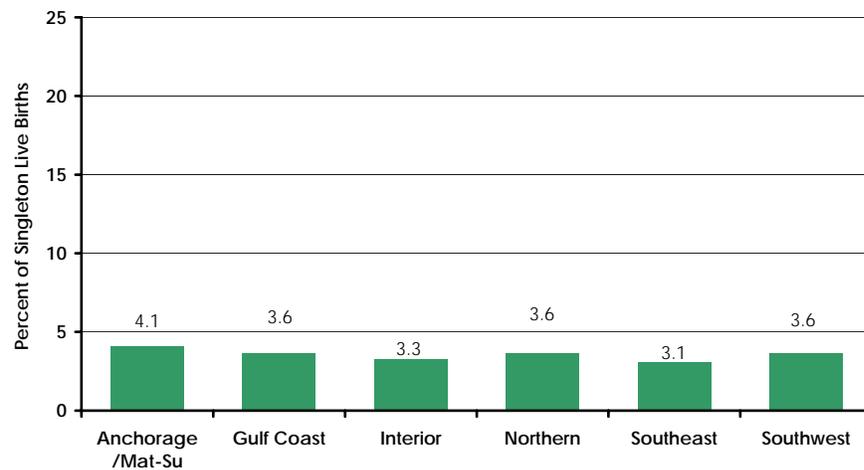
Birth Outcomes

Low and Very Low Birth Weight (LBW and VLBW) by Year Alaska, 1996-2005



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

Low Birth Weight by Region Alaska, 2001-2005



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

Preterm Births

Increases in preterm birth and preterm-related infant mortality account for much of the lack of decline in the U.S. infant mortality rate from 2000-2005 (1). 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.

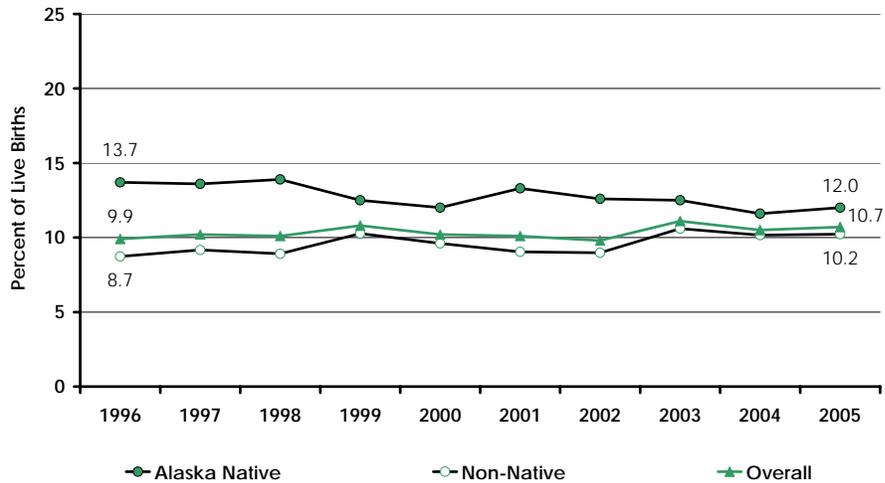
- ◆ From 1996-2005, the overall percentage of infants born preterm in Alaska varied between a low of 9.8% in 2002 to a high of 11.1% in 2003, a record high for the State.
- ◆ During 1996-2005, the percentage of preterm births increased among non-Native women by 17.2% and decreased among Alaska Native women by 12.4%.
- ◆ From 1989-2003 there was a significant increase in the proportion of moderately preterm (32 to 37 weeks gestation) infants. On the other hand, there was no significant change in the proportion of extremely preterm (23 to < 32 weeks gestation) births.
- ◆ The Southwest region of Alaska had the highest average annual rate of preterm births during 2001-2005 (14.4% of live births) whereas the Gulf Coast region had the lowest average annual rate (9.0%).

Data Source: Alaska Bureau of Vital Statistics.

Note: [Regional map of Alaska](#) is found on page 7.

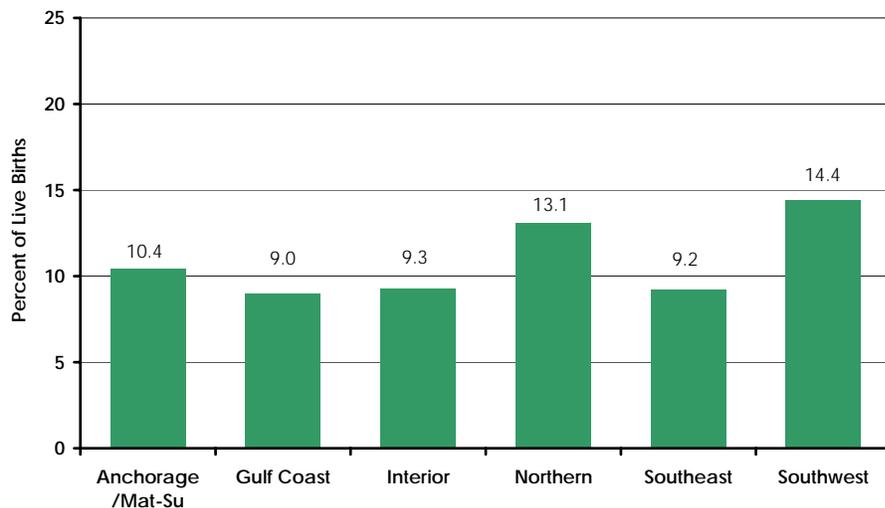
Birth Outcomes

Preterm Births (Less than 37 Weeks) by Year and Alaska Native Status, Alaska, 1996-2005



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

Preterm Births by Region Alaska, 2001-2005



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

Preterm Birth Delivery Subtypes

Preterm births are often separated into three mutually exclusive categories: preterm Premature Rupture of Membranes (PROM); medically indicated preterm births (defined as preterm birth following labor induction or cesarean section without PROM); and spontaneous preterm delivery, which includes all vaginal deliveries not induced and without PROM.* Medically indicated preterm births are increasing in the United States, and are a major contributor to the increasing proportions of preterm births.

- ◆ During 1996-2005, the percentage of medically indicated preterm births increased by 17.9% to 18.7% among non-Natives, and 12.3% among Alaska Natives.
- ◆ The increase in medically indicated preterm births during 1996-2005 coincided with a decrease in the cause-specific infant mortality rate for preterm births.
- ◆ The rate of spontaneous preterm births increased by 16.3% among non-Natives, and declined by 16.5% among Alaska Natives during 1996-2005. Concurrently, the rate of PROM preterm births remained stable at less than 1% of live births for both Alaska Natives and non-Natives.
- ◆ Compared to PROM and spontaneous preterm births, medically indicated preterm births were more likely to occur among women who were ≥ 35 years old and with ≥ 12 years of education.
- ◆ During 1996-2005, the Anchorage/Mat-Su region had the highest rate of medically indicated preterm births (4.6%). The Northern region had the highest rate of spontaneous preterm births (9.1%).

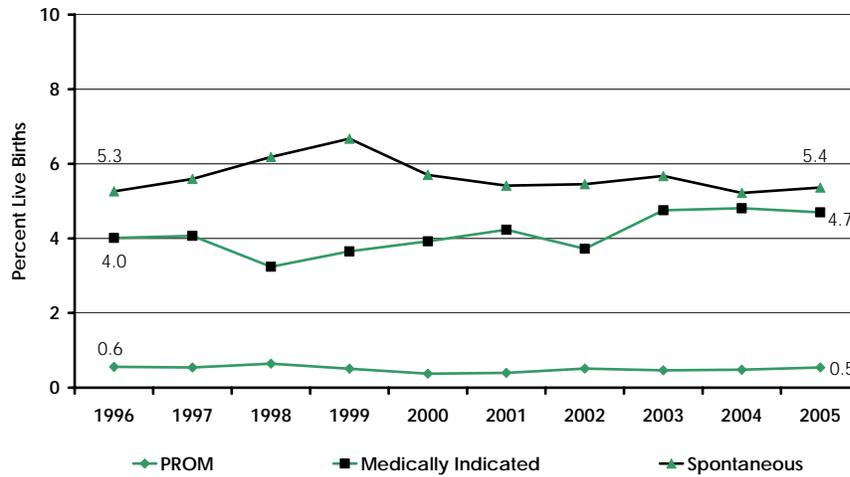
Data Source: Alaska Bureau of Vital Statistics.

Note: Regional map of Alaska is found on page 7.

*Note: Subtypes may not equal overall preterm birth rates due to missing information on the birth certificate.

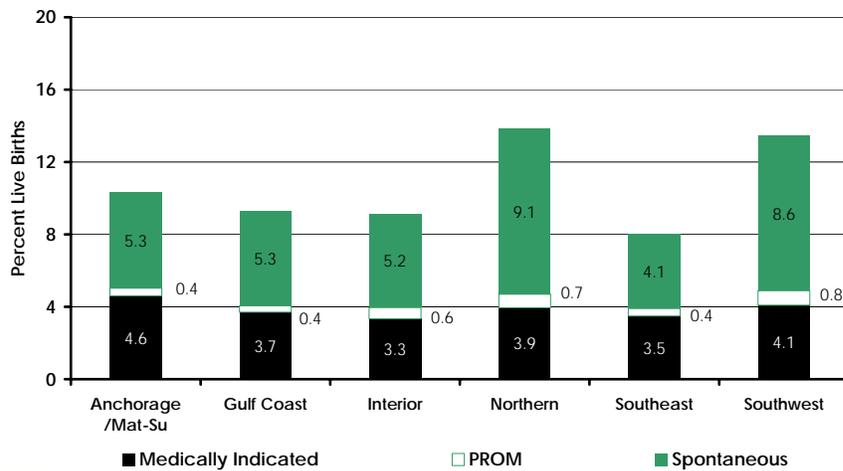
Birth Outcomes

Preterm Birth Delivery Subtypes by Year Alaska, 1996-2005



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

Preterm Birth Delivery Subtypes by Region Alaska, 1996-2005



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

Birth Defects

Birth defects* are the second leading identifiable cause of infant death in Alaska next to preterm birth. Approximately 1 in every 3 infant deaths in Alaska had congenital anomalies identified as a contributing cause of death during 1992-2002 (5). Alaska birth defects surveillance data show that on average, 1,900 infants are born with a reportable birth defect each year. About 500 infants in each annual birth cohort are born with at least one major structural congenital anomaly (6).

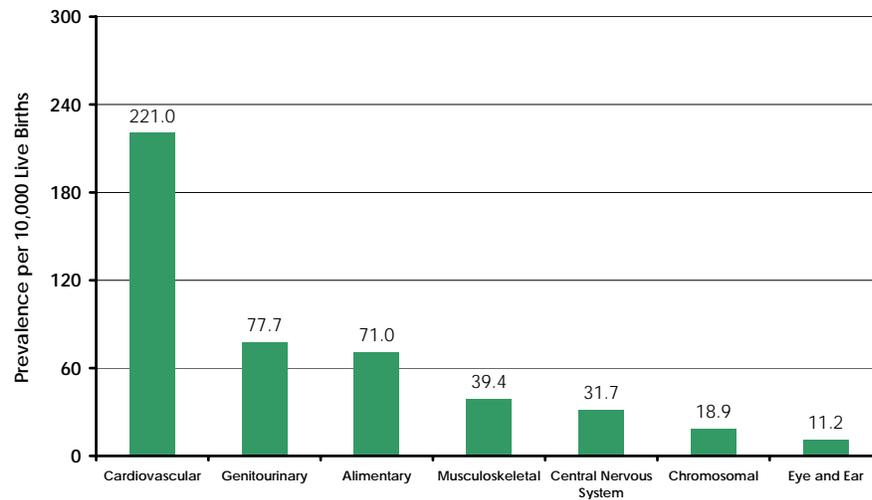
- ◆ Cardiovascular defects were the most common major congenital anomalies reported to the Alaska Birth Defects Registry during 2001-2005, affecting roughly 1 in 45 newborns. Cardiovascular defects were 2.8 times more prevalent than genitourinary defects, the second most common category of major congenital anomalies.
- ◆ During the five year period 2001-2005, major birth defects were 2.2 times more prevalent in Alaska Natives than in non-Natives. Higher prevalences for Alaska Natives were reported for 11 of the 15 most common major anomalies during 2001-2005.
- ◆ The most common birth defects reported in Alaska during 2001-2005 included six cardiovascular defects, two genitourinary anomalies and two alimentary tract disorders.
- ◆ Neural tube defects (NTD) were no longer among the most common birth defects in Alaska due to successful implementation of public health measures to increase folic acid consumption. A four-fold disparity in NTD prevalence among Alaska Natives vs. non-Natives was eliminated during 1996-2005 (7).

Data Source: Alaska Birth Defects Registry (8/1/2007).

*Note: Disorders associated with maternal alcohol use are usually diagnosed in early childhood and are not included here. (See pages 107-108 for information on fetal alcohol spectrum disorders.)

Birth Outcomes

Prevalence of Major Congenital Anomalies Alaska, 2001-2005



Data Source: Alaska Birth Defects Registry, MCH Epidemiology Unit.

Most Common Major Anomalies, Alaska, 2001-2005

Major Anomaly	Prevalence per 10,000 Live Births		
	Alaska Native	Non-native	Overall
Atrial Septal Defect	176	86	108
Ventricular Septal Defect	178	59	89
Patent Ductus Arteriosus	91	67	73
Hypospadias and Epispadias	36	40	39
Obstructive Genitourinary Defect	30	40	38
Cleft Lip and Cleft Palate	6	6	27
Pyloric Stenosis	39	20	25
Congenital Hip Dislocation	25	18	19
Microcephalus	28	13	17
Down Syndrome (Trisomy 21)	21	14	16
Pulmonary Valve Atresia/Stenosis	34	8	15
Hydrocephalus	22	9	13
Gastroschisis	13	9	10
Tetralogy of Fallot	13	5	7
Coarctation of Aorta	8	7	7
Any Major Anomaly	932	419	546

Data Source: Alaska Birth Defects Registry, MCH Epidemiology Unit.

Newborn Metabolic Conditions

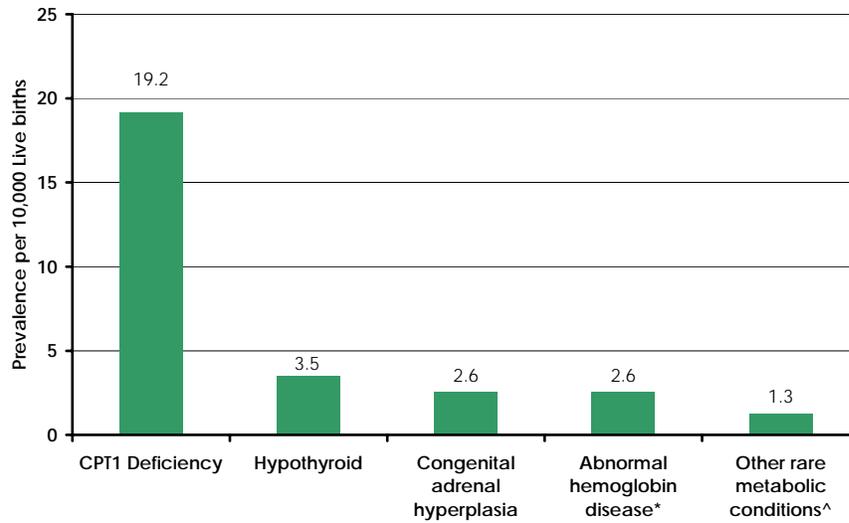
Newborn metabolic screening has been a mandated program in Alaska since 1968 and was originally developed to identify infants with phenylketonuria (PKU). PKU can lead to developmental delay unless dietary interventions are implemented. More conditions were added to the screening panel as methodologies were introduced and treatments were available for conditions that would lead to developmental delay or death without an early diagnosis. Screening is performed by the public health laboratory in Portland, Oregon (OPHL) through an intergovernmental agreement. Before OPHL implemented tandem mass spectrometry testing, Alaska screened for six conditions from blood spots obtained from the heel of newborns soon after birth. In October 2003, Alaska joined many other states by adding all of the disorders detectable by tandem mass spectrometry (tandem MS) to the screening panel, increasing the number of disorders which can be detected to more than 30. Universal screening for abnormal hemoglobins was also added.

- ◆ No Alaska infants were identified with PKU during birth years 2004-2006.
- ◆ Tandem MS screening identified a high prevalence of carnitine palmitoyl transferease-1 (CPT1a) deficiency in Alaska Natives. During 2004-2006, tandem MS screening identified an average of 19 Alaskan infants each year with CPT1a deficiency.
- ◆ Most metabolic disorders were rare in Alaska. After CPT1a deficiency, the most commonly diagnosed condition during 2004-2006 was hypothyroidism (an average of 4 infants each year). About 3 infants were born each year with congenital adrenal hyperplasia or abnormal hemoglobin disease.
- ◆ Of the more than 30 specific disorders detectable by tandem MS, 12 were identified in Alaskan infants during 2004-2006.

Data Source: Alaska Newborn Screening Program.

Birth Outcomes

Prevalence of Newborn Metabolic Conditions Alaska, 2004-2006



Data Source: Alaska Newborn Screening Program. Prepared by MCH Epidemiology Unit.

* Includes sickle cell disease and hemoglobinopathies E, C and H.

^ Includes medium-chain acyl-CoA dehydrogenase (MCAD) deficiency, very-long-chain acyl-CoA dehydrogenase (VLCAD) deficiency, partial biotinidase deficiency, glutaric acidemia and carnitine deficiency.

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Chapter 5: Birth Outcomes

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Infant Health



Breastfeeding Prevalence

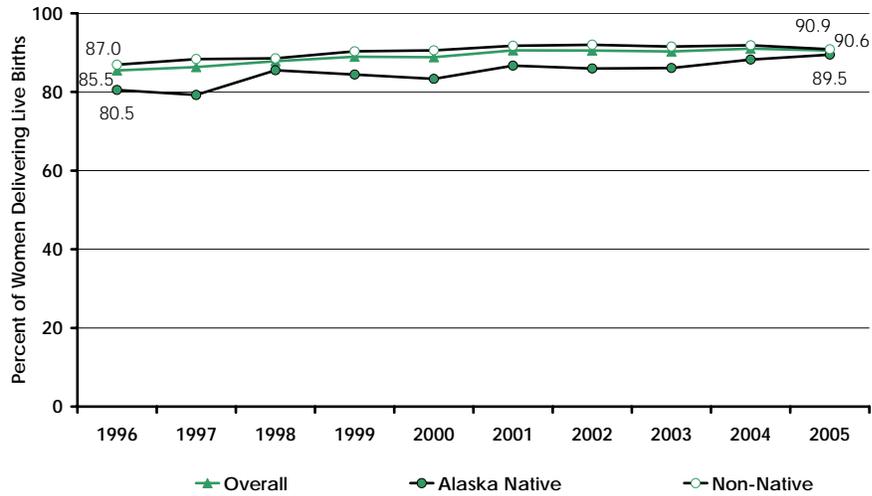
Breast milk is the best and most complete nutrition for infants. Breastfed infants, particularly premature infants, have better long and short-term health outcomes than babies who are not breastfed. Antibodies in breast milk protect the infant from infections and balanced nutrients promote proper weight gain. A substantial amount of research demonstrates psychological as well as physical benefits to both mother and infant, including improved mother-infant bonding.

- ◆ Alaska has one of the highest breastfeeding rates in the nation. The most recent national assessment of breastfeeding initiation reported breastfeeding prevalence at 74% for infants born in 2004 (1). In Alaska, the Pregnancy Risk Assessment Monitoring System (PRAMS) has measured breastfeeding initiation at over 85% since 1996.
- ◆ Ninety-one percent of Alaskan mothers who delivered a live-born infant in 2005 reported initiating breastfeeding. Breastfeeding initiation rates among Alaska Native mothers increased 11% during 1996-2005.
- ◆ Alaska has met and exceeded the Healthy People 2010 target of 75% for breastfeeding initiation; moreover, during 2005 no racial disparities existed for breastfeeding initiation prevalence.
- ◆ Substantial improvements in the duration of breastfeeding were observed during 1996-2005, with breastfeeding at 4 weeks postpartum increasing 9% and breastfeeding at 8 weeks postpartum increasing 8%.
- ◆ In 2005, 71% of Alaskan mothers who delivered a live-born infant were still breastfeeding at two months postpartum.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

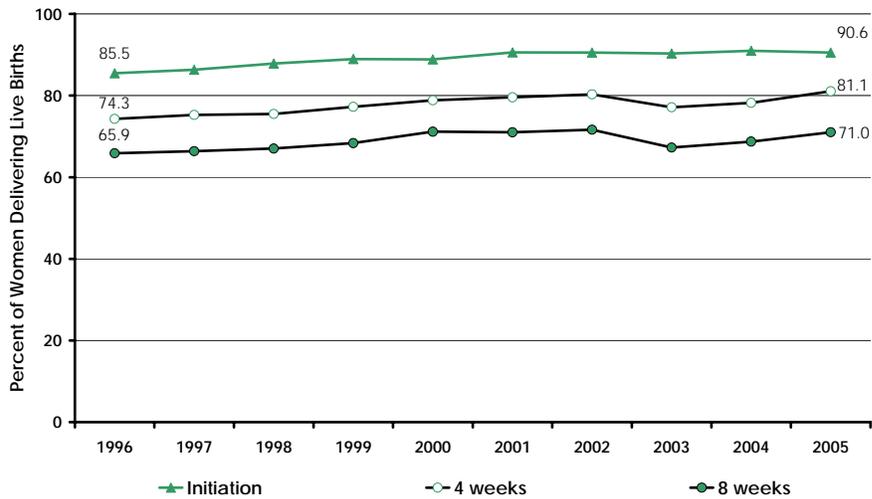
Infant Health

Breastfeeding Initiation by Year and Alaska Native Status Alaska, 1996-2005



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

Breastfeeding Initiation, 4 Weeks and 8 Weeks Postpartum by Year, Alaska, 1996-2005



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

Breastfeeding Characteristics

The American Academy of Pediatrics recommends that mothers exclusively breastfeed their infants for the first 6 months of life, and continue breastfeeding through age 12 months and beyond as other foods are introduced. An analysis of national data from 2004 found black race, maternal age less than 20 years, a high school education or less, unmarried status and rural residence to be associated with lower breastfeeding rates (1). In Alaska, previous study has identified lower rates for both breastfeeding initiation and breastfeeding at two months postpartum among women with a high school education or less (2). To increase breastfeeding rates and decrease disparities in breastfeeding initiation and duration, the Centers for Disease Control and Prevention has called for more research regarding factors that influence breastfeeding decisions (1).

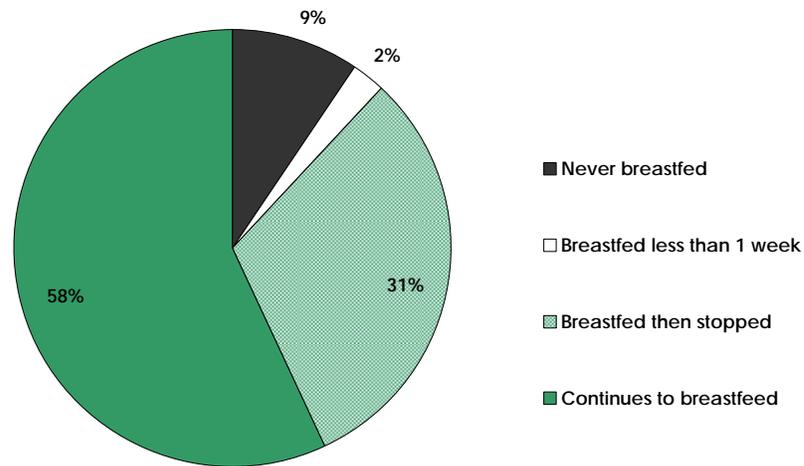
- ◆ Only 9% of Alaska women reported never breastfeeding their infants during 2004-2005. A small proportion, 2%, breastfed less than one week. At an average of 16 weeks postpartum, a majority of mothers (58%) were still breastfeeding.
- ◆ Breastfeeding initiation rates exceeded the Healthy People target of 75% in every region of Alaska. Only two regions, the Northern and Interior regions, did not exceed 90% initiation rates.
- ◆ At two months postpartum, breastfeeding rates remained higher than 70% in all but the Northern and Interior regions during 2004-2005. These two regions also had the largest decline in breastfeeding between initiation and 8 weeks postpartum, 40% and 28%, respectively.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: [Regional map of Alaska is found on page 7.](#)

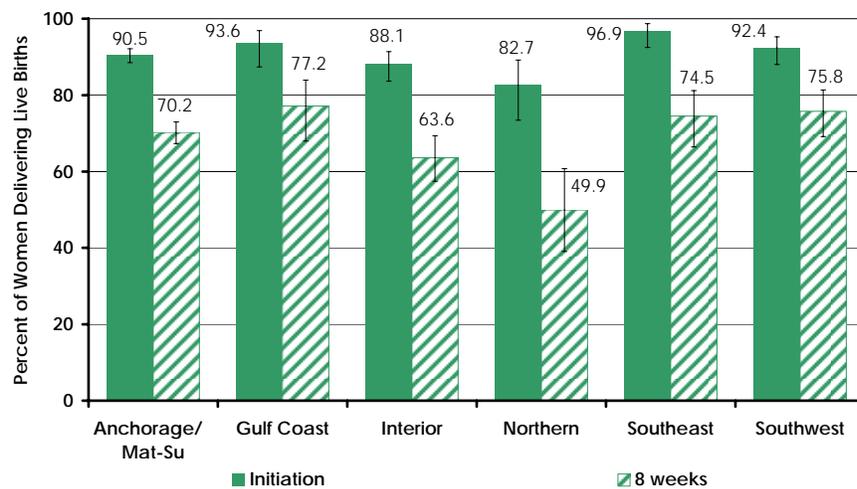
Infant Health

Breastfeeding Status at 16 Weeks (average) Postpartum Alaska, 2004-2005



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

Breastfeeding Initiation and at 8 Weeks Postpartum by Region, Alaska, 2004-2005



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

Bed Sharing

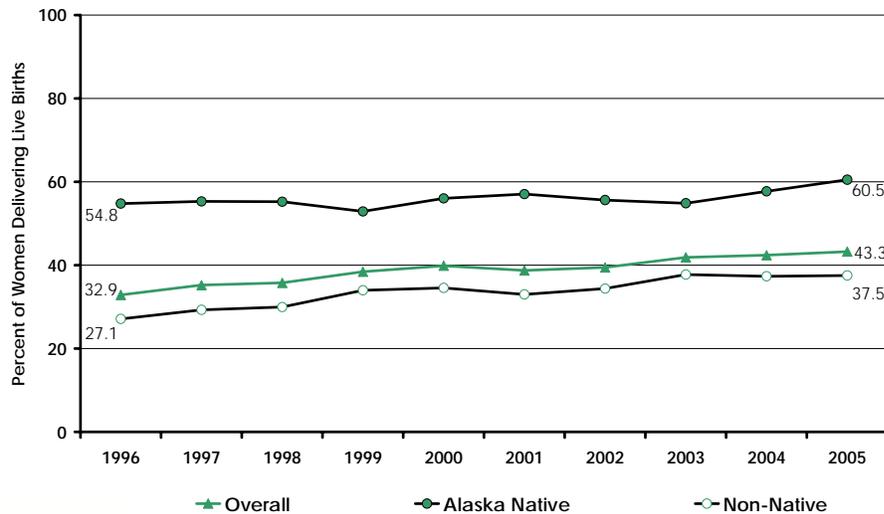
The American Academy of Pediatrics issued a statement in 2005 recommending that “infants not bed share during sleep” since this has been implicated as a potential risk factor for Sudden Infant Death Syndrome (SIDS) in some studies. However, other studies that take into account key factors involved in SIDS deaths such as parental impairment, sleep position, and the surface slept on, have shown that the association with SIDS deaths lies with these factors, not the isolated act of sharing a bed with adults or older children (3-4). Though population-based data on mother-infant bed sharing is lacking nationally, the Alaska Pregnancy Risk Assessment Monitoring System has collected bed sharing data since 1991.

- ◆ The prevalence in Alaska of mothers of newborns always or almost always bed sharing with their infants has been steadily increasing. In the past decade, always or almost always bed sharing showed a 32% increase from 32.9% in 1996 to 43.3% in 2005.
- ◆ Alaska Native women were more likely than non-Native women to bed share with their infants. This trend has remained consistent over time. During 1996, Alaska Native mothers’ prevalence of always or almost always bed sharing was twice the non-Native prevalence (54.8% compared with 27.1%, respectively). By 2005, this gap had narrowed to 1.6 (60.5% compared with 37.5%, respectively).
- ◆ Asian/Pacific Islander mothers show the highest prevalence of always or almost always bed sharing with their infants (nearly two thirds or 64.6%) during 2001-2005. In contrast, one third of white mothers (32.7%) indicated they always or almost always bed share with their infant during the same timeframe.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

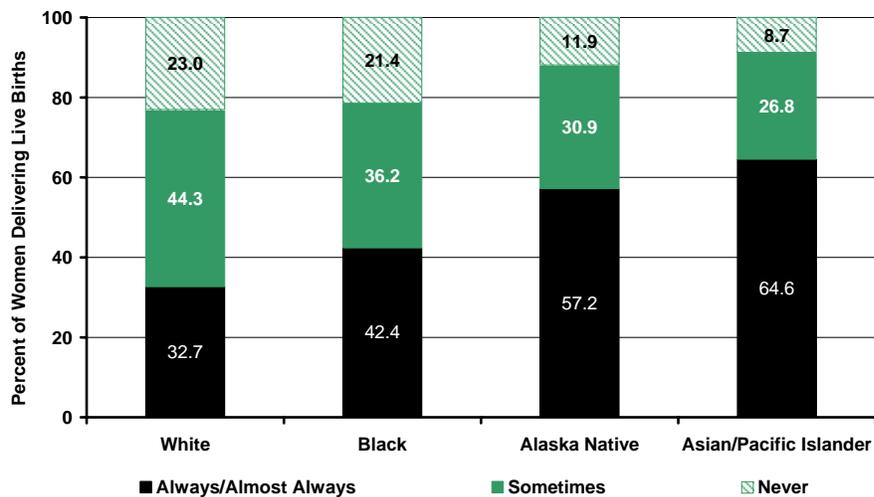
Infant Health

Bed Sharing (Always / Almost Always) by Year and Alaska Native Status, Alaska, 1996-2005



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

Bed Sharing Habits by Maternal Race Alaska, 2001-2005



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

Shaken Baby Awareness

Shaken Baby Syndrome, or SBS, is a severe form of child abuse. It can be caused by vigorously shaking an infant or small child to the extent that intracranial or intraocular bleeding can occur. Though shaking an infant does not always result in its death, a variety of life-long disabilities such as mental retardation, learning problems, blindness, seizure disorders, or severe motor dysfunction can result. The Alaska Division of Public Health promoted a public service campaign during 1998 that shared the message “Never Shake a Baby.” Though SBS is 100% preventable, it is not known whether educational efforts will effectively prevent this type of abuse; it is possible that home visitation programs may have the greatest impact.

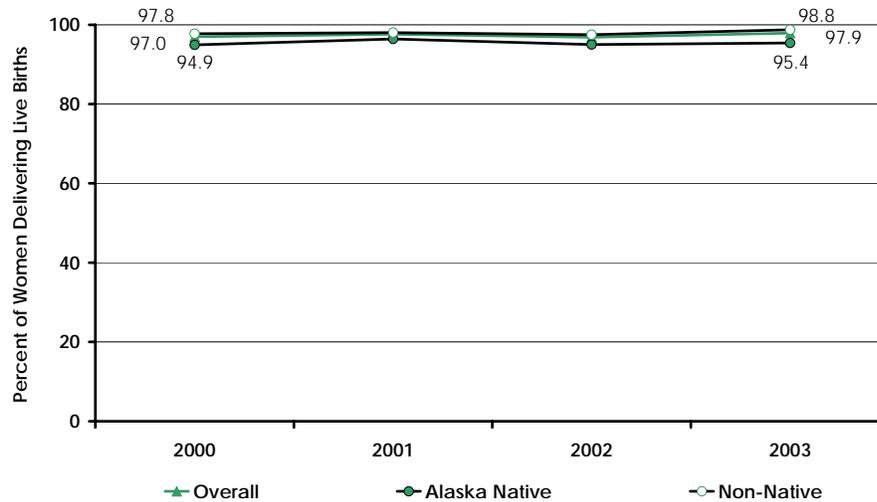
- ◆ According to the Alaska Maternal Infant Mortality Review, during the period 1992-2002 in Alaska there were thirteen (9 male, 4 female) documented fatalities associated with shaken baby syndrome. The average age of the victim was 6 months old. The average age of the known perpetrator was 24 years old. The majority (77%) of the perpetrators (10 of the 13) were male. Of these 10 male perpetrators, 70% were the infant’s father (including step-father).
- ◆ Over the four-year timeframe of 2000-2003 these data were collected on the Pregnancy Risk Assessment Monitoring System, 97% of Alaskan mothers of newborns had consistently heard or read about what can happen if a baby is shaken. No appreciable disparity was shown by Alaska Native status.
- ◆ The Anchorage/Mat-Su region showed the highest percentage of mothers who had shaken baby awareness (98.4%) during 2002-2003. The Southwest region showed the lowest prevalence of awareness (90.2%). This region’s estimate was significantly lower than the other regions, except for the Northern region (95.7%).

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

Note: Regional map of Alaska is found on page 7.

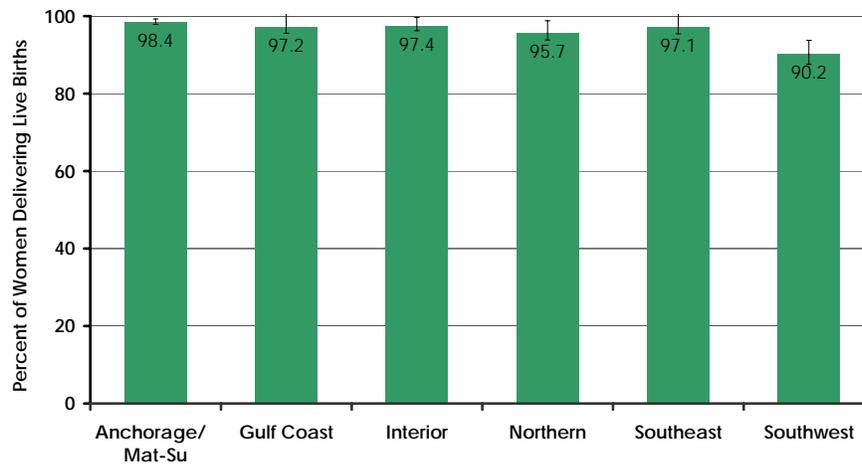
Infant Health

Shaken Baby Awareness by Year and Alaska Native Status Alaska, 2000-2003



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

Shaken Baby Awareness by Region Alaska, 2002-2003



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

Infant Sleep Position

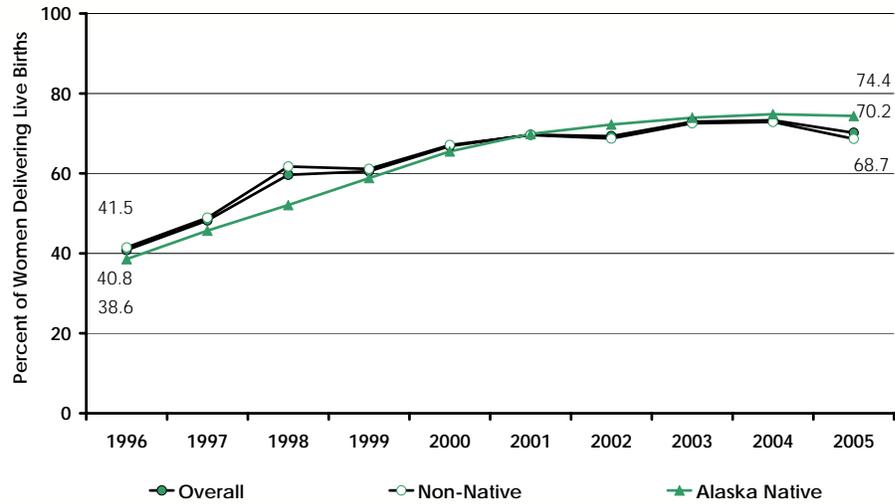
Since 1992, the American Academy of Pediatrics has recommended that caregivers not place babies on their stomachs (prone) when putting them to sleep in order to reduce the risk of Sudden Infant Death Syndrome (SIDS). This recommendation was revised in 1996 to explicitly advocate for placing babies on their backs to sleep, versus their sides, as the preferred position.

- ◆ According to the Alaska Maternal Infant Mortality Review, infant mortality rates due to SIDS or asphyxia of unknown etiology declined during 1992-2002 (significant trend based on single-year data). For 1992-1994, the rate was 2.5/1,000 live births. For 2000-2002, the rate was 1.8/1,000 live births.
- ◆ During 1992-2002, among 190 Alaskan infants who died at home while sleeping, sleep position was known for 69%. Among these, 48% were placed to sleep or found on their stomach.
- ◆ The prevalence of Alaskan mothers putting their newborns on their backs to sleep has increased 72% over the decade for 1996-2005, from 40.8% to 70.2%. (The average age of the infant at the time the mother answered the question is 16 weeks.) The Healthy People 2010 target for back-sleeping infants is 70%. Alaska met this goal in 2003 and has maintained it through 2005.
- ◆ During the ten-year period 1996-2005, the prevalence of placing infants to sleep on their backs increased 93% for Alaska Natives. Since 2001, Alaska Native mothers have shown a higher prevalence of placing their infants to sleep on their backs than non-Native mothers, although this is not statistically significant.
- ◆ Nearly 75% of Alaska Native mothers report that they routinely placed their newborns on their backs to sleep in 2005. Only 12% placed them on their stomachs.

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

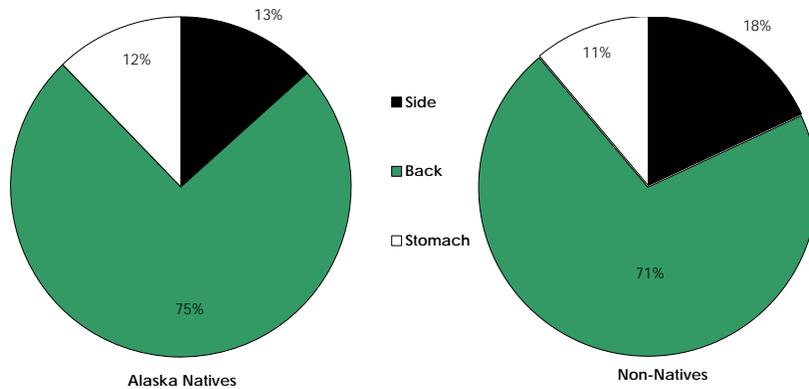
Infant Health

Placing Infants to Sleep on Their Backs by Year and Alaska Native Status, Alaska, 1996-2005



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

Infant Sleep Position (based on how mothers put their infants down to sleep), by Alaska Native Status Alaska, 2004-2005



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

Exposure to Tobacco Smoke

The health consequences of exposure to secondhand smoke were illuminated in a 2006 report from the U.S. Surgeon General: “The science is clear. Secondhand smoke is not a mere annoyance but a serious health hazard that causes premature death and disease in children and nonsmoking adults.” (5)

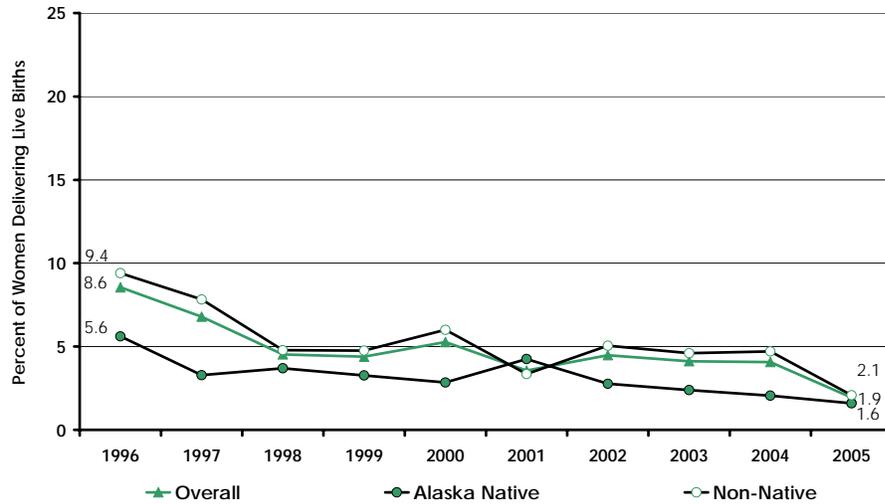
- ◆ The 2004 modified survey for Alaska’s Behavioral Risk Factor Surveillance System showed that 90% of all adults and 83% of smoking adults believed that secondhand smoke is harmful (6).
- ◆ Over the ten-year period 1996-2005, there was a 77% decline in Alaskan mothers of newborns who reported that their baby was exposed to secondhand smoke during an average day. (The average age of the infant at the time the mother responded was 16 weeks.) The overall prevalence dropped from 8.6% in 1996 to 1.9% in 2005.
- ◆ Except for 2001, non-Native mothers showed consistently higher annual prevalences of any environmental tobacco smoke (ETS) exposure for their newborns during 1996-2005 compared with Alaska Native mothers.
- ◆ The Anchorage/Mat-Su region showed the highest (and most stable) prevalence of ETS exposure for infants in 2004-2005 at 3.5%.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: Regional map of Alaska is found on page 7.

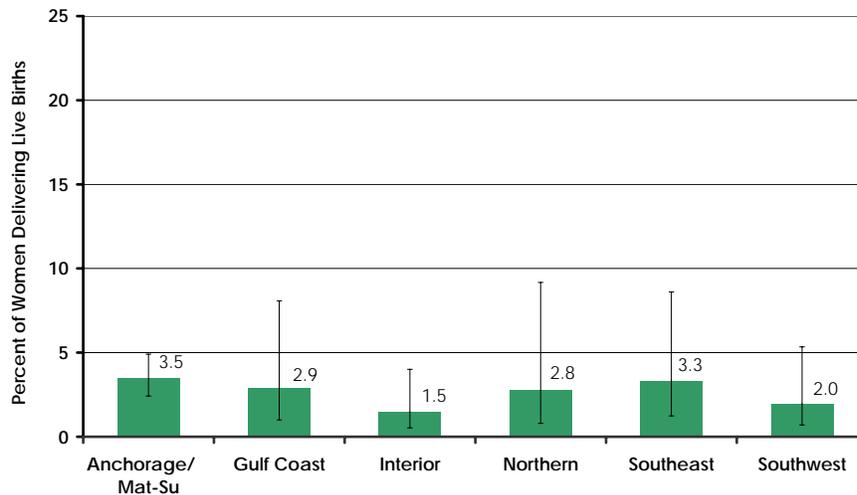
Infant Health

Infant Exposure to Secondhand Tobacco Smoke by Year and Alaska Native Status, Alaska, 1996-2005



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

Infant Exposure to Secondhand Tobacco Smoke by Region, Alaska, 2004-2005



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

Infant Hospital Stays

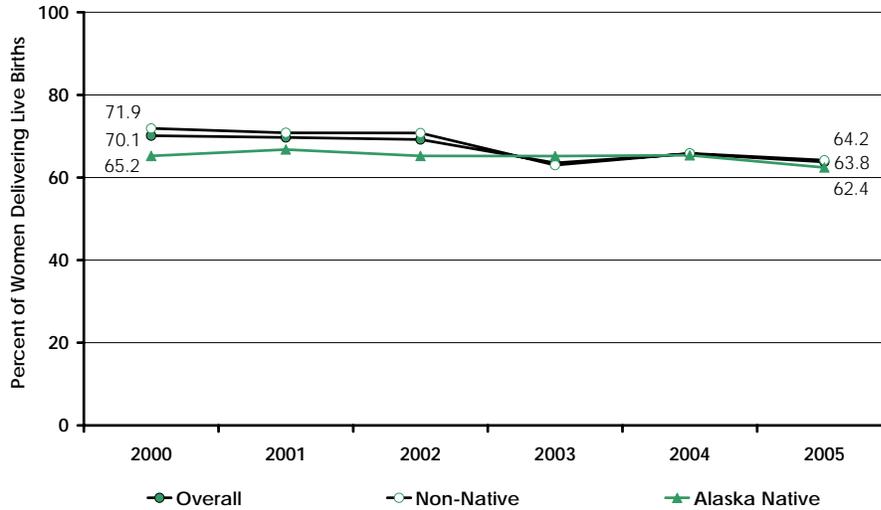
In the early 1990s, discharge on the day after a normal vaginal delivery was common. In 1992, the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists jointly published recommendations that mothers should stay in the hospital for 48 hours post-delivery of an uncomplicated vaginal birth. Alaska Statute 21.42.347, which mandated insurance coverage for a 48-hour stay, began in 1996. Recent evidence-based recommendations have also included clinical follow-up for newborns within a week of discharge, regardless of the length of the hospital stay (7,8).

- ◆ During 2003-2005, 94% of Alaska births occurred in a hospital, 3% in birthing centers, 2% at home, 0.2% at a clinic and the remainder occurred out-of-state.
- ◆ During 2000-2005, the proportion of infants discharged from the hospital within 48 hours of their birth declined 9% overall, from 70.1% in 2000 to 63.8% in 2005. During this same timeframe, the proportion for non-Natives declined 11% and that for Alaska Natives declined 4%. Recent years have not shown a disparity between non-Native and Alaska Native infants regarding early hospital discharge.
- ◆ Among infants discharged within 48 hours of delivery, 83.9% received an infant checkup within 1 week of hospital discharge in 2005. This was a 14% increase from the year 2000. Infants of Alaska Native mothers were 1.6 times *less* likely to have received a checkup than those of non-Native mothers.
- ◆ During 2000-2002, the proportion of infants who received “sufficient well-baby care” decreased in Alaska from 80.5% in 2000 to 76.1% in 2002. Alaska was the only PRAMS state of 27 states considered to have shown this declining trend and was the state with the lowest prevalence of sufficient well-baby care in 2002. (9)

Data Sources: Alaska Bureau of Vital Statistics, Alaska Pregnancy Risk Assessment Monitoring System.

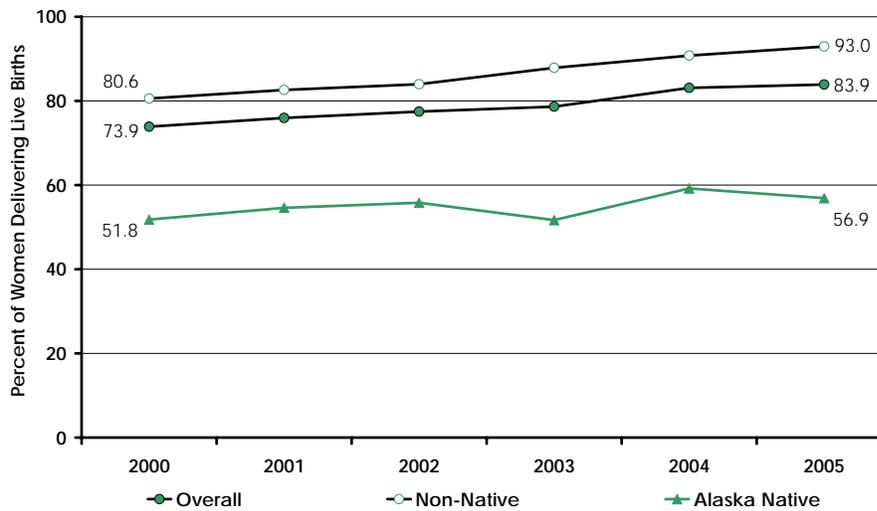
Infant Health

Infant Discharge from Hospital within 48 Hours by Year and Alaska Native Status, Alaska, 2000-2005



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

Infant Checkup within 1 Week of Discharge (for infants discharged within 48 hours of delivery) by Year and Alaska Native Status, Alaska, 2000-2005



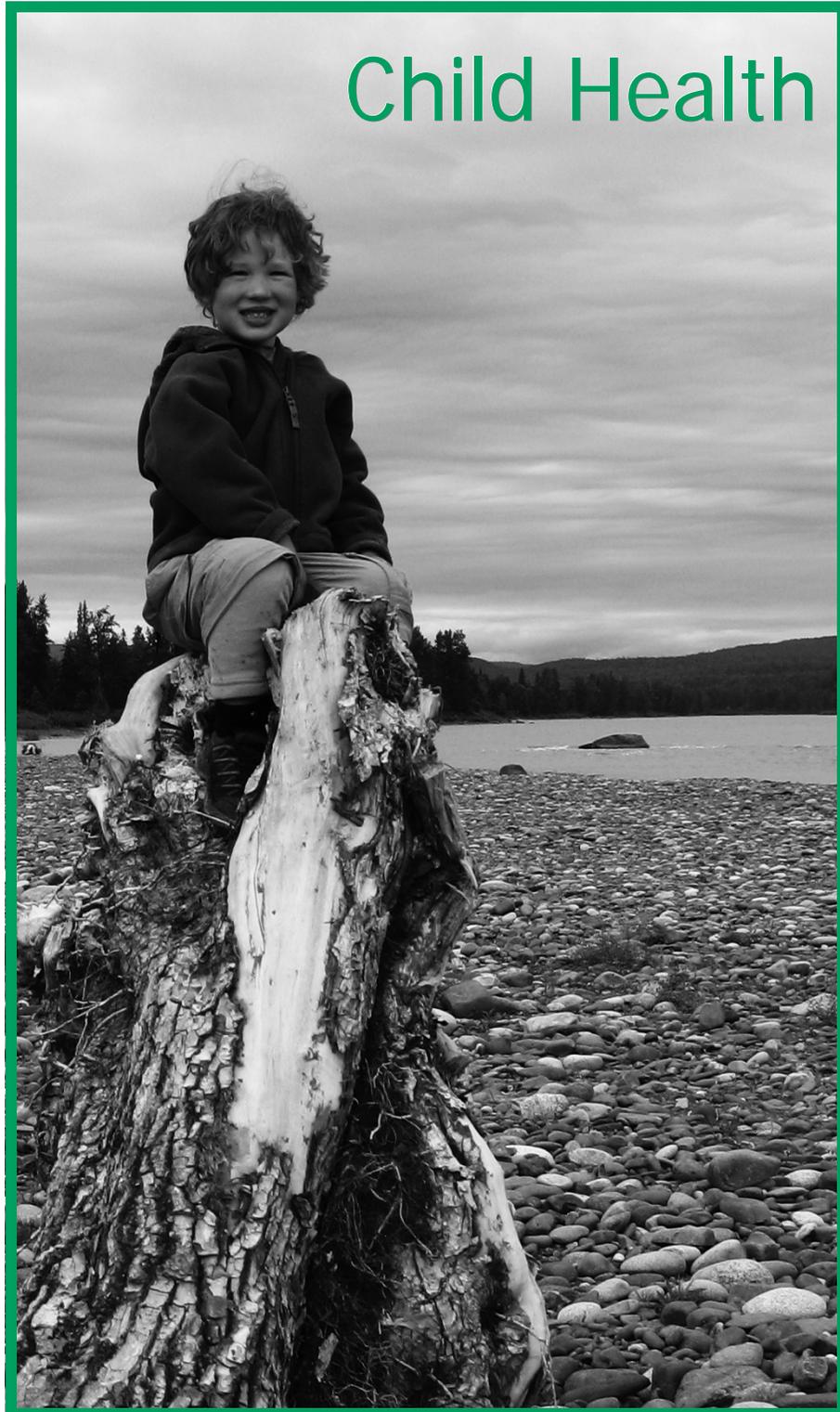
Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.

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Chapter 6: Infant Health

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Child Health



Child Mortality

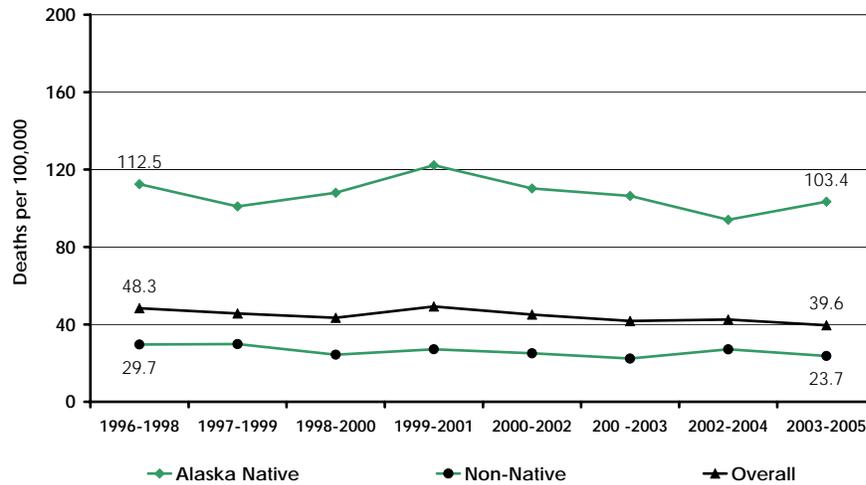
Child mortality, especially among children ages 1 - 4, is a global indicator of child health and economic development. Most deaths occurring in childhood are preventable. While infectious disease accounts for most child mortality in developing countries, in Alaska and in the United States, injuries are the leading cause of death among children. With over half of mortality attributable to unintentional injury, the majority of child deaths in Alaska can be prevented.

- ◆ During 2003-2005, Alaska's mortality rate among children ages 1 - 4 years was 39.6 per 100,000. This was 35% higher than the 2005 U.S. rate of 29.4 per 100,000 and more than double the Healthy People 2010 target of 18.6 per 100,000.
- ◆ Among children ages 5 - 9 years, the mortality rate was 16.3 per 100,000 during 2003-2005. Alaska's rate was 12% higher than the 2005 U.S. rate of 14.5 per 100,000 and 33% above the Healthy People 2010 target of 12.3 per 100,000.
- ◆ A disparity in mortality rates exists between Alaska Native and non-Native children. For 2003-2005, among children 1 - 4 years, Alaska Native mortality was nearly four and a half times the non-Native rate (103.4 vs. 23.7 per 100,000, respectively). Among children 5 - 9 years, the Alaska Native rate was more than two and a half times the rate for non-Native children (32.5 vs. 11.7 per 100,000, respectively).
- ◆ The leading cause of death to Alaska children from 1996-2005 was unintentional injuries.
- ◆ The second leading cause of death to Alaska children from 1996-2005 was homicide, comprising 8% of deaths to children 1 - 4 years and 7% of deaths to children 5 - 9 years.

Data Source: Alaska Bureau of Vital Statistics.

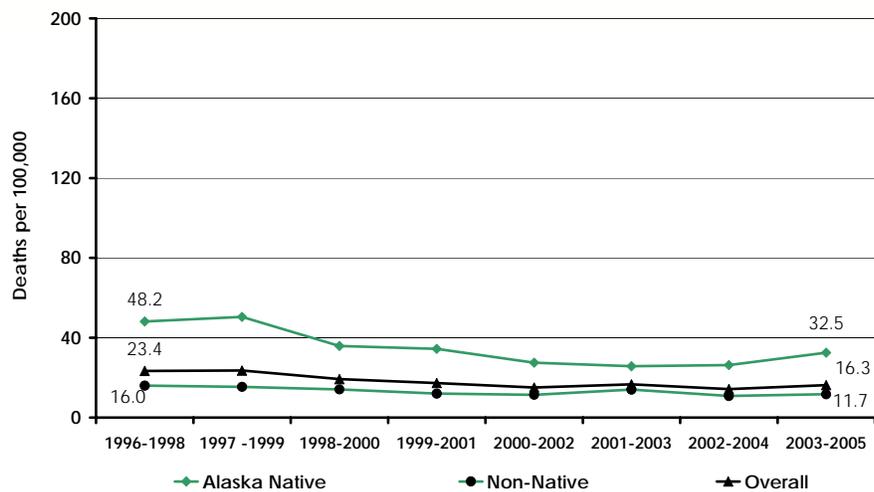
Child Health

Child Mortality (Ages 1 - 4 Years) by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Child Mortality (Ages 5 - 9 Years) by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Unintentional Injury Mortality

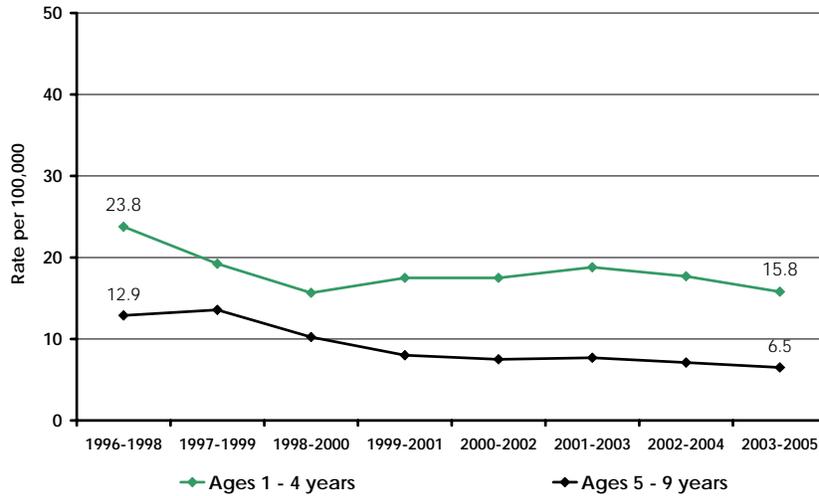
In Alaska and nationally, the leading cause of death among children of all ages is unintentional injury. The most common unintentional injury deaths among children in Alaska were motor vehicle accidents, drowning, other accidents and fires.

- ◆ Unintentional injuries made up 40% of deaths to Alaskan children ages 1 - 4 and 5 - 9 years during 2003-2005.
- ◆ During 2003-2005, Alaska's rate of child mortality due to unintentional injury was 15.8 and 6.5 per 100,000 among the 1 - 4 and 5 - 9 years age groups, respectively. Nationally, unintentional injury deaths to children ages 1 - 4 and 5 - 9 were 10.3 and 5.5 per 100,000, respectively, in 2005 (1).
- ◆ Over the last decade, the leading cause of unintentional injury deaths among Alaskan children was motor vehicle crashes. The rates among 1 - 4 and 5 - 9 year olds were 5.1 and 7.5 per 100,000, respectively.
- ◆ The second leading cause of unintentional injury death to children in Alaska was drowning. Over the last decade, the rate among 5-9 year olds (3.4 per 100,000) was nearly twice that of 1 - 4 year olds (2.7 per 100,000).
- ◆ Alaskans frequently participate in activities that could put children at risk for unintentional injury. Fifty-nine percent of Alaskan two-year-olds in 2006 had ridden in a boat since birth and 18% rode on, or were pulled in a trailer behind, an ATV (four-wheeler) or snow machine during the past week.

Data Sources: Alaska Bureau of Vital Statistics, Alaska Childhood Understanding Behaviors Survey (CUBS).

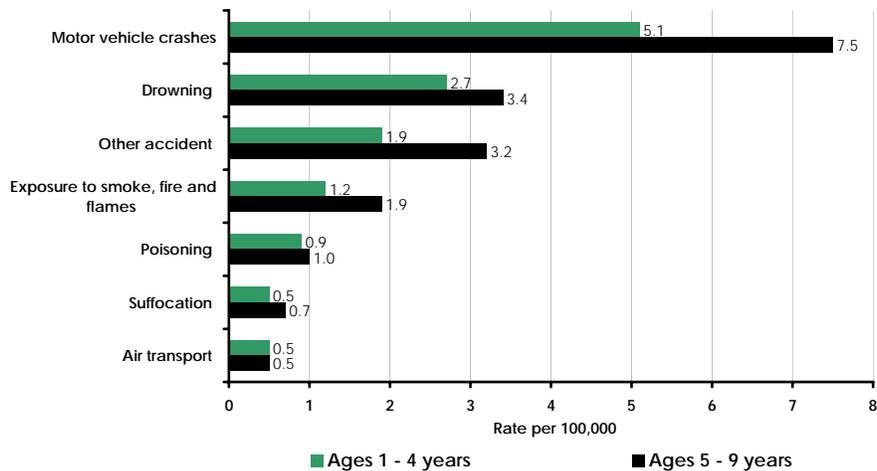
Child Health

Child Mortality due to Unintentional Injury by Age Group Three Year Moving Averages, Alaska, 1996-2005



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

Most Common Causes of Child Mortality due to Unintentional Injury by Age Group, Alaska, 1996-2005



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

Immunization Coverage

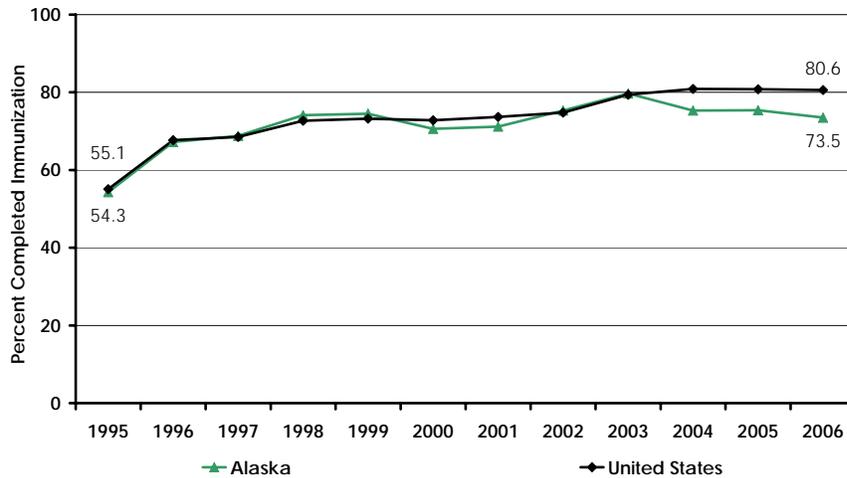
Appropriate immunization of young children attending schools and child care facilities has nearly eliminated vaccine-preventable diseases that in the past caused significant illness and death. The Healthy People 2010 goal is 90% immunization coverage among children ages 19 - 35 months for the combined series of vaccines: 4+DTP, 3+Polio, 1+MMR, 3+Hib, and 3+HepB. This combined series is referred to as the 4:3:1:3:3 series.

- ◆ During 1995-2006, the proportion of Alaskan children ages 19 - 35 months that completed the 4:3:1:3:3 series increased by 35%. During the same time period, immunization coverage increased 46.3% in the U.S., resulting in lower immunization coverage for Alaska compared to the U.S. average.
- ◆ Seventy-four percent of Alaska children 19 - 35 months old were immunized with the 4:3:1:3:3 series, ranking Alaska at 47th in the nation (2).
- ◆ Alaska's immunization coverage for 3+Polio, and 3+Hepatitis B did not differ significantly from the U.S. average during 2006. For the remaining individual vaccine series, Alaska had lower coverage than the U.S. average.
- ◆ Thirteen percent of mothers of two-year-olds during 2006 indicated that at some point they delayed taking their child to get immunizations because they didn't know when shots were due. Mothers reported that friends and family (19.3%) and information gained from the media (15.4%) were the common sources of advice *not* to get recommended shots or immunizations for their child.

Data sources: National Immunization Survey, Alaska Childhood Understanding Behaviors Survey (CUBS).

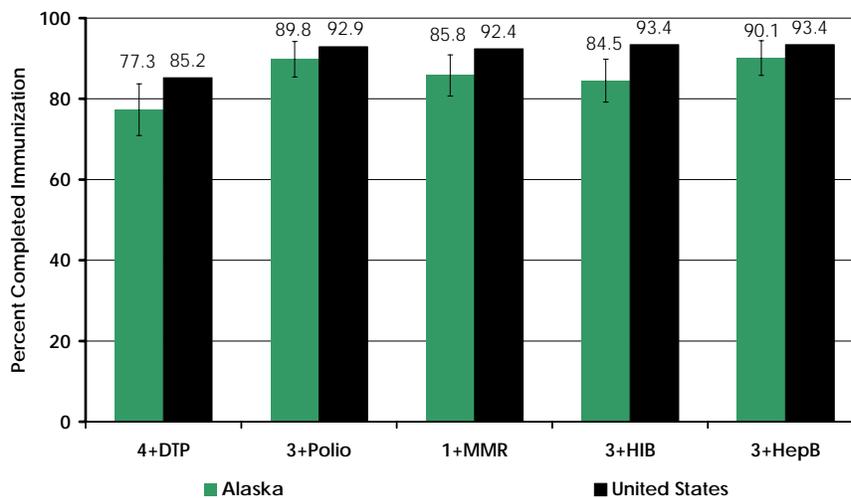
Child Health

Completed Immunization Series among Children 19 - 35 Months by Year, Alaska and United States, 1995-2006



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

Immunization Coverage among Children 19 - 35 Months by Vaccine, Alaska and United States, 2006



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

Health Status and Health Care

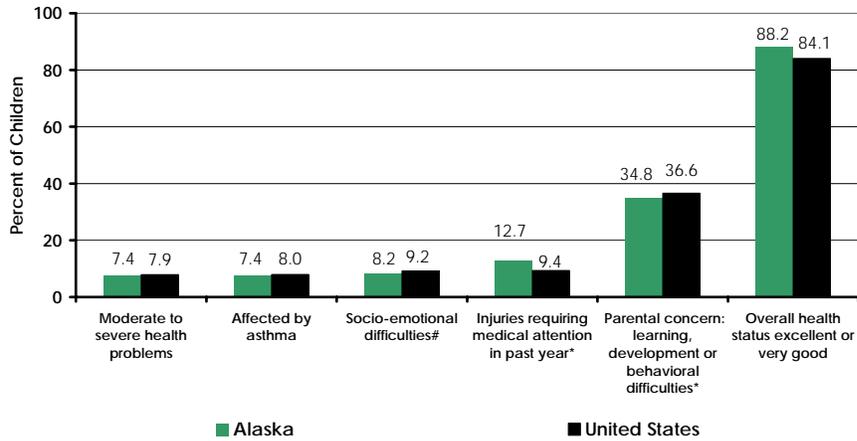
The National Survey of Children's Health was conducted from January 2003 through July 2004. The survey was one of the first to address multiple aspects of children's health and well-being and to provide estimates for child health indicators at both the state and national level (3). The survey was supported and developed by the U.S. Maternal and Child Health Bureau of the Health Resources and Services Administration and conducted by the National Center for Health Statistics of the Centers for Disease Control and Prevention. Children's health status was measured through parents' reports of their children's overall health status, specific conditions, their concerns about their children's development and behavior, access to health care and parents' satisfaction with the health care their children receive (4).

- ◆ Eighty-eight percent of Alaskan parents reported that their child's health status was good or excellent, compared to 84% of U.S. parents as a whole.
- ◆ Consistent with Alaska's well-publicized high injury rates, 13% of Alaska parents reported that their child had injuries requiring medical attention during the past year compared to the U.S. estimate of 9%. For most other health status indicators, Alaska and the U.S. had similar estimates of child health status.
- ◆ Health care indicators were generally worse for Alaskan children than for U.S. children, with percentages for Alaskan children from 2% to 8% lower than the U.S. estimates.

Data Source: The National Survey of Children's Health.

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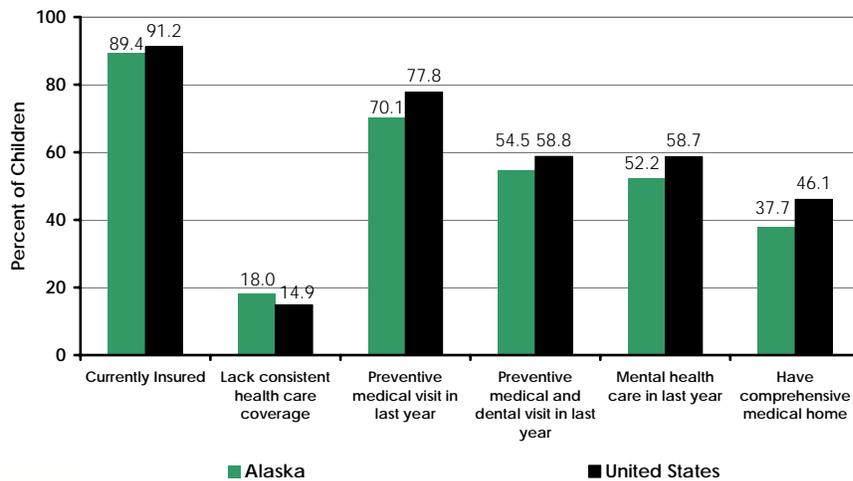
Health Status Indicators (Ages 0 - 17 Years) Alaska and United States, 2003



*Among children 0 - 5 years.
Among children 3 - 17 years.

Data Source: The National Survey of Children's Health. Prepared by MCH Epidemiology Unit.

Health Care Indicators (Ages 0 - 17 Years) Alaska and United States, 2003



Data Source: The National Survey of Children's Health. Prepared by MCH Epidemiology Unit.

Early Childhood Health

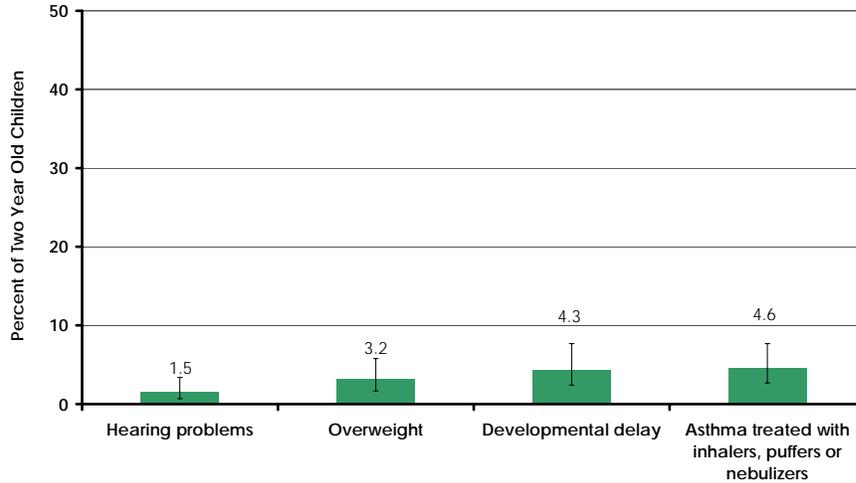
The Alaska Childhood Understanding Behaviors Survey (CUBS) was initiated in 2006 as a follow-up survey to the Alaska Pregnancy Risk Assessment Monitoring System (PRAMS). CUBS is an on-going surveillance program that uses a mail questionnaire format to collect information about the health and experiences of Alaskan preschoolers and their mothers. Results from CUBS are representative of mothers of children born in Alaska in 2004. CUBS asks questions related to the child's eating habits, general and specialized health care utilization and access, use of child care, and child development and other behaviors, as well as questions related to maternal experiences and parenting behaviors.

- ◆ In 2006, 4.6% of mothers indicated that a health care provider had diagnosed their two-year-old with asthma that needed to be treated with inhalers, puffers or nebulizers.
- ◆ In 2006, mothers reported that 4.3% of two-year-olds had been diagnosed with developmental delay. Among these children, 67.5% were enrolled in the Early Intervention/Infant Learning Program, and 77.7% had received care from a speech or language therapist.
- ◆ Mothers reported that 8.6% of two-year-olds had been diagnosed with pneumonia treated with antibiotics in 2006. Reports of pneumonia were much more common among Alaska Native children compared to non-Natives (24.5% vs. 3.3%) .
- ◆ Tooth decay or cavities on either the front or back teeth was reported for 8.7% of two-year-olds. Rates of any tooth decay were higher among Alaska Native children (24.3%) compared to non-Native children (3.4%). Most reports of tooth decay among two-year-olds were decay or cavities on the front teeth, with 3.2% of mothers reporting that their child had decay on both the front and back teeth.

Data Source: Alaska Childhood Understanding Behaviors Survey (CUBS).

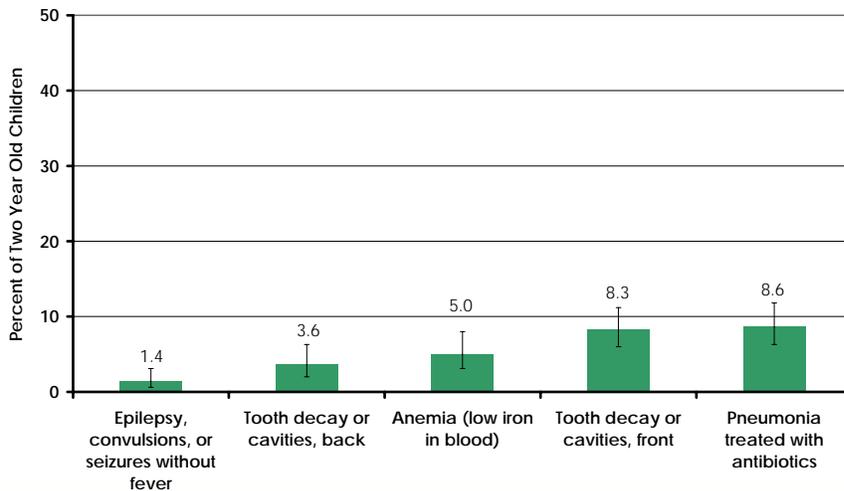
Child Health

Current Health Conditions, Children Age 2 Years Alaska, 2006



Data Source: Alaska Childhood Understanding Behaviors Survey (CUBS), MCH Epidemiology Unit.

Medical History of Specific Health Conditions Children Age 2 Years, Alaska, 2006



Data Source: Alaska Childhood Understanding Behaviors Survey (CUBS), MCH Epidemiology Unit.

Special Health Care Needs

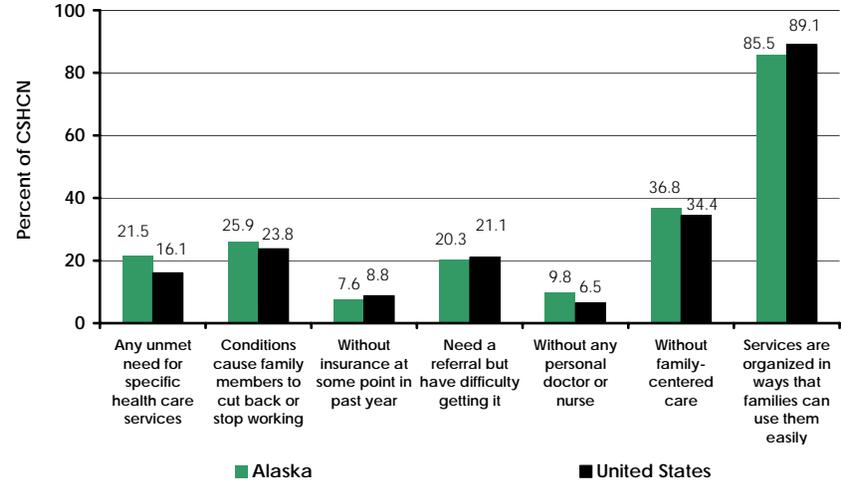
The National Survey of Children with Special Health Care Needs assesses the prevalence and impact of special health care needs among children in all 50 states and the District of Columbia. The survey explores the extent to which children with special health care needs (CSHCN) have medical homes, adequate health insurance, and access to needed services. Parents and guardians are also asked about functional difficulties, care coordination, satisfaction with care, and transition services.

- ◆ According to the 2005-2006 National Survey of Children with Special Health Care Needs (5), 11.9% of Alaskan children 0 - 17 years old (n=22,406) were CSHCN, compared to 12.8% of children in the U.S.
- ◆ In Alaska, 17.4% of households have children with special needs and 40.8% of those households were below the 200% federal poverty level.
- ◆ Four percent of CSHCN in Alaska were not insured at the time of the survey and 7.6% were uninsured at some point in the past 12 months. Of those insured, 33.1% indicated their coverage was inadequate.
- ◆ Twenty percent of Alaskan CSHCN needing a referral had difficulty getting one. An estimated 7% of CSHCN rely on the emergency room for services or do not have a usual source of health care.
- ◆ In Alaska, 18.4% of CSHCN families experienced financial problems due to the child's health needs and 26% of CSHCN families had family members cut back or stop working due to health needs.

Data Source: National Survey of Children with Special Health Care Needs.

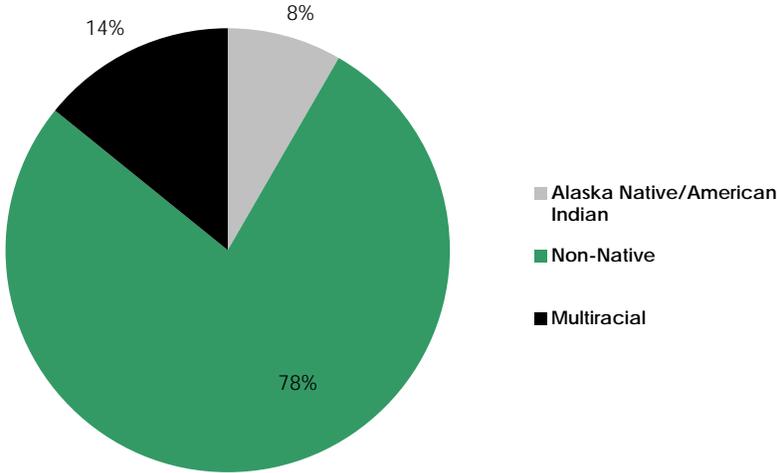
Child Health

System Performance for Children with Special Health Care Needs (Ages 0 - 17), Alaska and United States, 2005-2006



Data Source: National Survey of Children with Special Health Care Needs. Prepared by MCH Epidemiology Unit.

Children with Special Health Care Needs (Ages 0 - 17 Years) by Alaska Native Status, Alaska, 2005-2006



Data Source: National Survey of Children with Special Health Care Needs. Prepared by MCH Epidemiology Unit.

EPSDT Participation

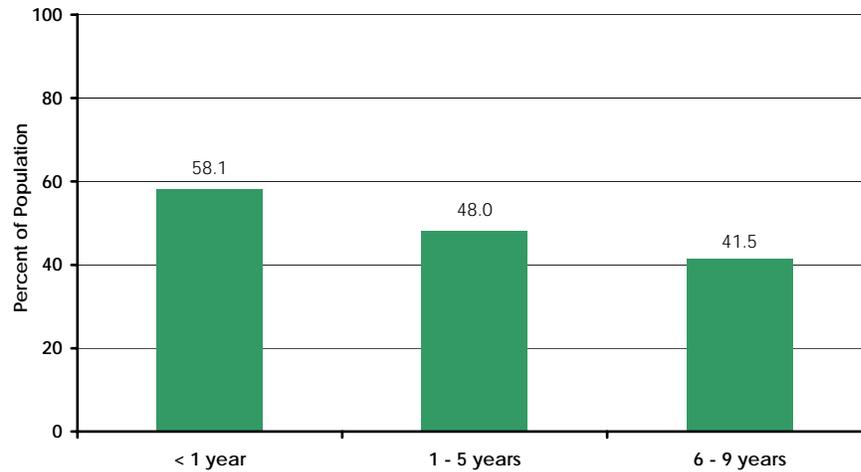
The Early Periodic Screening, Diagnosis and Treatment (EPSDT) Program, a component of Medicaid, is designed to improve the health of low-income children. Its mission is to assess children's health status and ensure they receive continuous and comprehensive medical care. EPSDT does not monitor population-based eligibility. To assess EPSDT participation in Alaska, we defined EPSDT "eligible" as a child having been enrolled at some point in time during the federal fiscal reporting period for 2005.

- ◆ Approximately 58% of infants under one year of age, 48% of children 1 - 5 years, and 42% of children 6 - 9 years were eligible for EPSDT well child care in 2005.
- ◆ Of the children who were eligible for EPSDT well child care in 2005, 87% of infants, 49% of children 1 - 5 years, and 16% of children 6 - 9 years received at least one medical screening.
- ◆ Approximately 54% of children 6 - 9 years who were eligible for EPSDT received dental services, including cleanings, fluoride, dental exams and treatment. This proportion has increased by 26% since 1999.

Data Source: Alaska Division of Health Care Services.

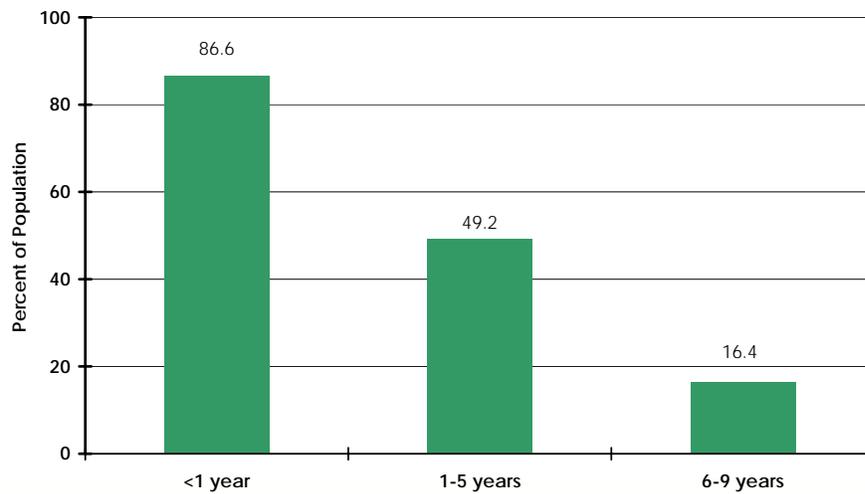
Child Health

EPDST Enrollment, Percent of Population by Age Group Alaska, 2005



Data Sources: Alaska Division of Health Care Services; Alaska Department of Labor .
Prepared by MCH Epidemiology Unit

EPDST-Eligible Children Receiving at Least One Well Child Medical Screening by Age Group, Alaska, 2005



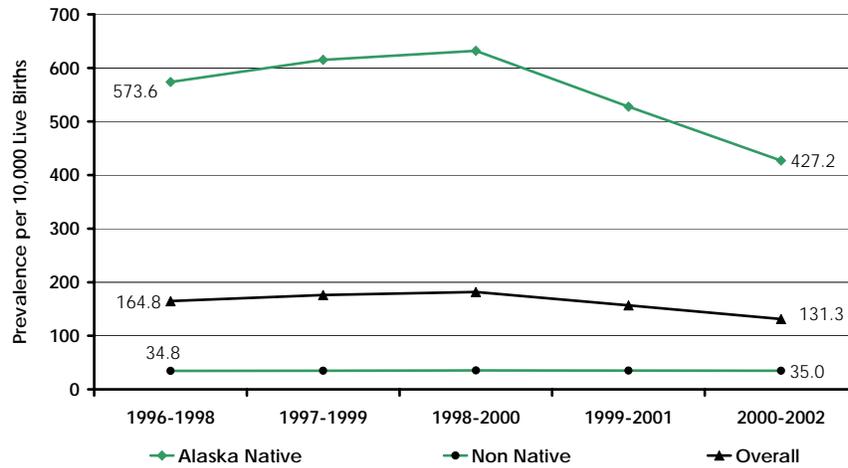
Data Sources: Alaska Division of Health Care Services; Alaska Department of Labor .
Prepared by MCH Epidemiology Unit

Fetal Alcohol Spectrum Disorders

Fetal alcohol spectrum disorders (FASDs) comprise a wide range of disabilities resulting from maternal alcohol use during pregnancy. One of these conditions, 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 U.S. states who conduct public health surveillance for alcohol-related conditions, Alaska has the highest documented FAS birth prevalence (6).

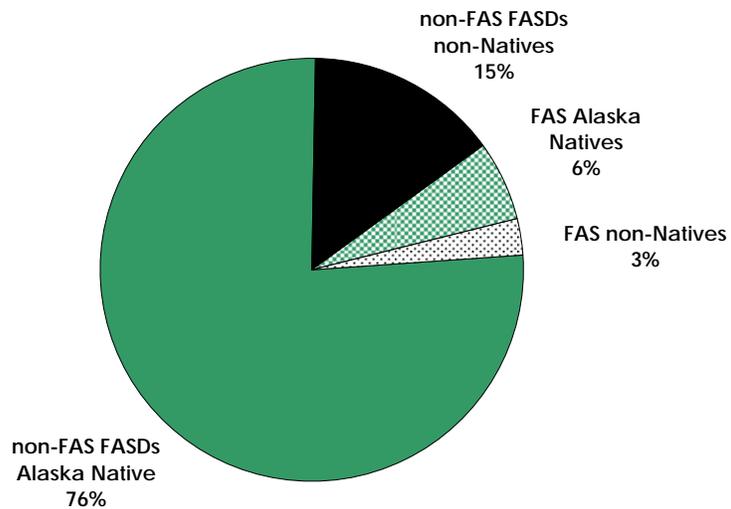
- ◆ FASDs are preventable birth defects that are highly prevalent in Alaska, affecting more than 150 births each year. Because FASDs are often not diagnosed until a child reaches school age, the birth prevalence of FASDs cannot be calculated reliably until the birth cohort is at least 5 years of age.
- ◆ The prevalence of FASD was 152 per 10,000 among children born in 1996-2002. The average prevalence of FASDs among Alaska Native children (516/10,000 live births) was almost 15 times that of non-Native children (35/10,000 live births) during 1996-2002.
- ◆ Children with FAS comprise a small proportion of the FASD cases reported to the Alaska Birth Defects Registry. About 9% of children with FASD who were born during 1996-2002 met the surveillance case definition for FAS.
- ◆ During 1996-2002, the statewide prevalence of Fetal Alcohol Syndrome was 14 per 10,000 live births. At 39 per 10,000, the prevalence of FAS among Alaska Native children was almost seven times that of non-Natives (6.8 per 10,000).
- ◆ While encouraging, an apparent declining trend in FASD prevalence in Alaska may be misleading, as children in younger birth cohorts may not yet have been diagnosed.

Prevalence of FASDs by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2002



Data Source: Alaska Birth Defects Registry (8/1/2007), MCH Epidemiology Unit.

Distribution of FASD Reports by FAS Diagnosis and Alaska Native Status, Alaska, Birth Years 1996-2002



Data Source: Alaska Birth Defects Registry (8/1/2007), MCH Epidemiology Unit.

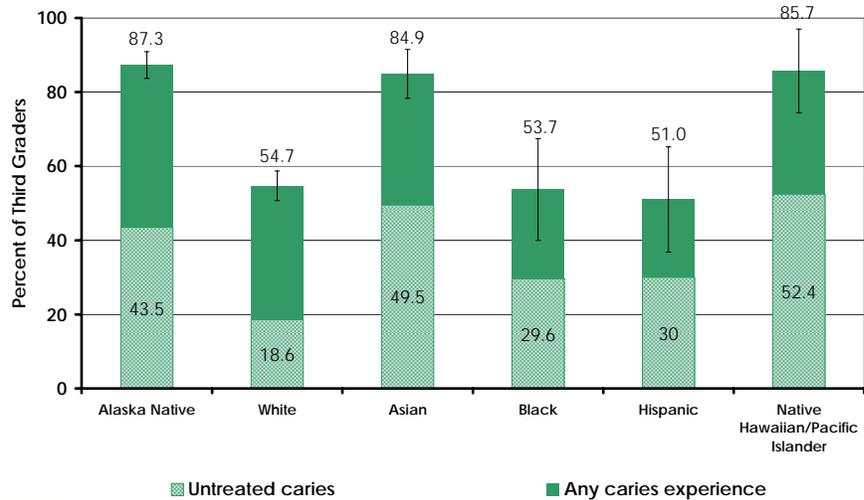
Oral Health

Dental caries, or tooth decay, is the most prevalent chronic disease of childhood. Among children, oral disease and oral pain have been associated with speech problems, difficulty eating, sleep problems, poor performance in school and reduced self esteem (7). This common disease of childhood is preventable.

- ◆ Sixty-five percent of Alaska third graders who participated in an open mouth assessment by dental professionals in 2004-2005 had caries experience (treated/restored and untreated tooth decay) and 28% had untreated caries (8).
- ◆ Alaska Natives, Asians and Native Hawaiian/Pacific Islanders had significantly higher prevalence of dental caries (87%, 85%, and 86%, respectively) than whites, blacks and Hispanics (55%, 54% and 51%), respectively.
- ◆ The prevalence of untreated caries was significantly lower for white children (19%) than for Alaska Natives (44%), Asians (50%) and Native Hawaiian/Pacific Islanders (52%). About 30% of blacks and Hispanics had untreated caries.
- ◆ Dental sealants were present in over half of the children surveyed (52%), meeting the Healthy People 2010 target of 50% for sealant utilization and surpassing the national NHANES 1988-1994 baseline of 23%.
- ◆ Alaska Native children had a significantly higher prevalence of dental sealant utilization (68%) compared to children in other race groups. Despite the excellent use of sealants, Alaska Native children were at least 1.8 times more likely to have urgent dental care needs than white children. Asian and Native Hawaiian/Pacific Islander third-graders had lower utilization of dental sealants and were also more likely to have urgent dental care needs than white third-graders.

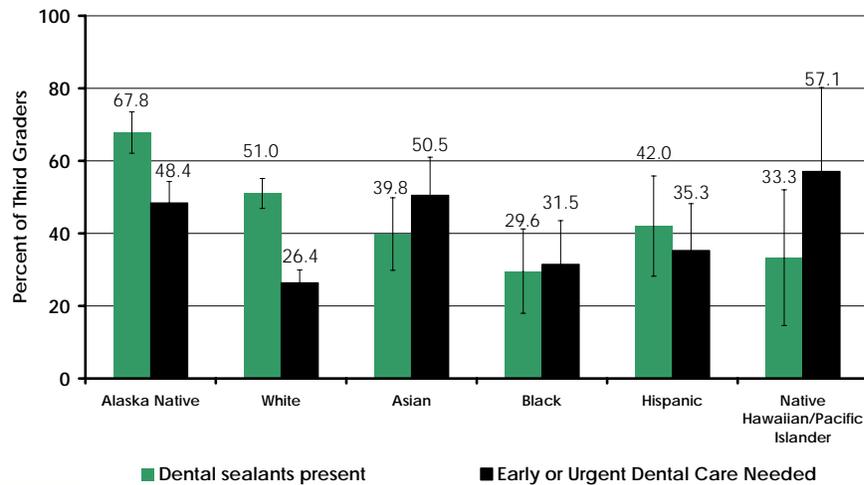
Data Source: Alaska Oral Health Program.

Dental Caries among Third Graders by Race Alaska, 2004-2005 School Year



Data Source: Alaska Oral Health Program. Prepared by MCH-Epidemiology Unit.

Presence of Dental Sealants and Urgent Dental Care Needs among Third Graders by Race, Alaska, 2004-2005



Data Source: Alaska Oral Health Program. Prepared by MCH-Epidemiology Unit.

Child Abuse and Neglect

Child maltreatment places children at risk for injury, death, and emotional stress that can lead to developmental and social problems. Victims of child maltreatment are more likely as adults to develop physical and mental health problems, including alcoholism, depression, drug abuse, eating disorders, obesity, sexual promiscuity, smoking, suicide, and certain chronic diseases (9). Maltreatment-related deaths include deaths resulting from physical abuse, neglect or gross negligence by a care-giver or other adult.

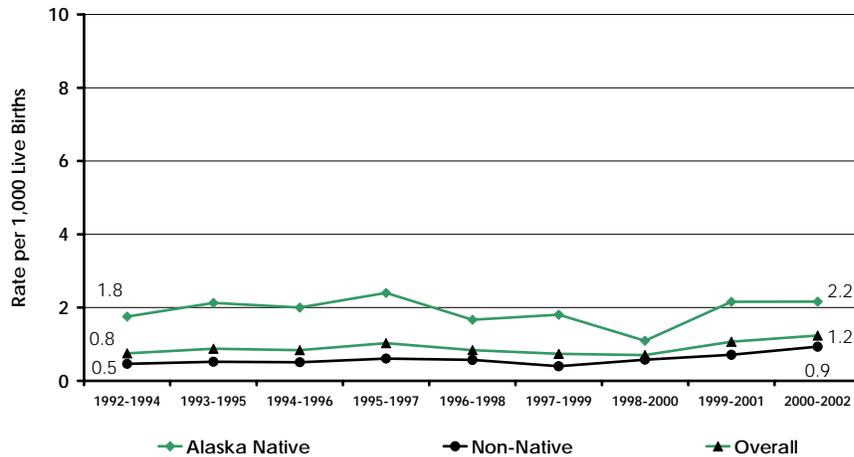
- ◆ On average, 12 infant deaths per year involve child maltreatment. During 1992-2002, the infant mortality rate in Alaska declined by 18% while the overall rate of maltreatment-related infant mortality did not change significantly.
- ◆ Trends in Maltreatment-related infant death rates for Alaska Native and non-Native infants were not significant during 1992-2002. During the time period, the maltreatment-related infant death rate remained 3.2 times higher for Alaska Native infants.
- ◆ During 1992-2002, the proportion of infant deaths due to physical abuse, neglect or gross negligence varied by Alaska Native status. Among Alaska Natives, 3.4% of all infant deaths were related to physical abuse, 6.7% to neglect and 6.7% to gross negligence. Among non-Native infant deaths, the proportions by category were 4.2%, 2.5% and 3%, respectively.
- ◆ Physical abuse was more frequently determined to be the mechanism of maltreatment-related infant mortality in Anchorage/Mat-Su, the Interior and Southeast Alaska. In the more rural regions of the state, child maltreatment deaths were more likely to be categorized as resulting from neglect or negligence.

Data source: Alaska Surveillance of Child Abuse and Neglect (Alaska SCAN).

Note: Regional map of Alaska is found on page 7.

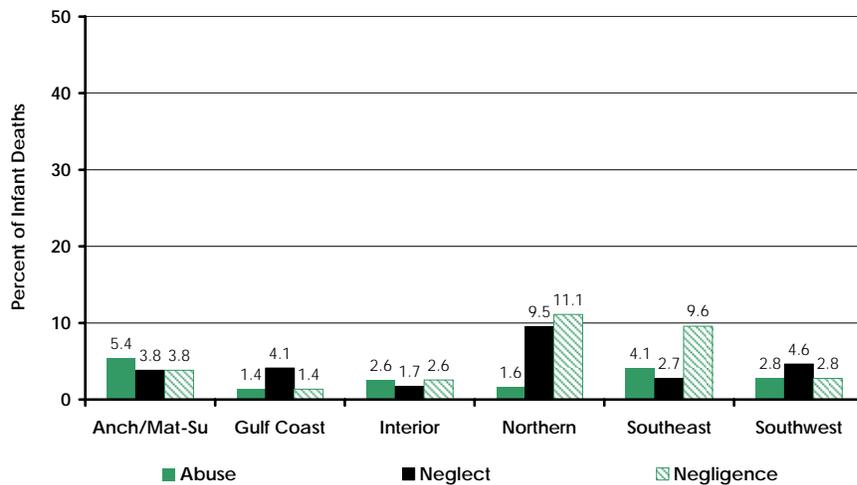
Child Health

Maltreatment-specific Infant Mortality by Alaska Native Status, Three Year Moving Averages, Alaska, 1992-2002



Data Source: Alaska Surveillance of Child Abuse and Neglect (Alaska SCAN), MCH Epidemiology Unit.

Proportion of Infant Deaths due to Physical Abuse, Neglect or Negligence by Region, Alaska, 1992-2002



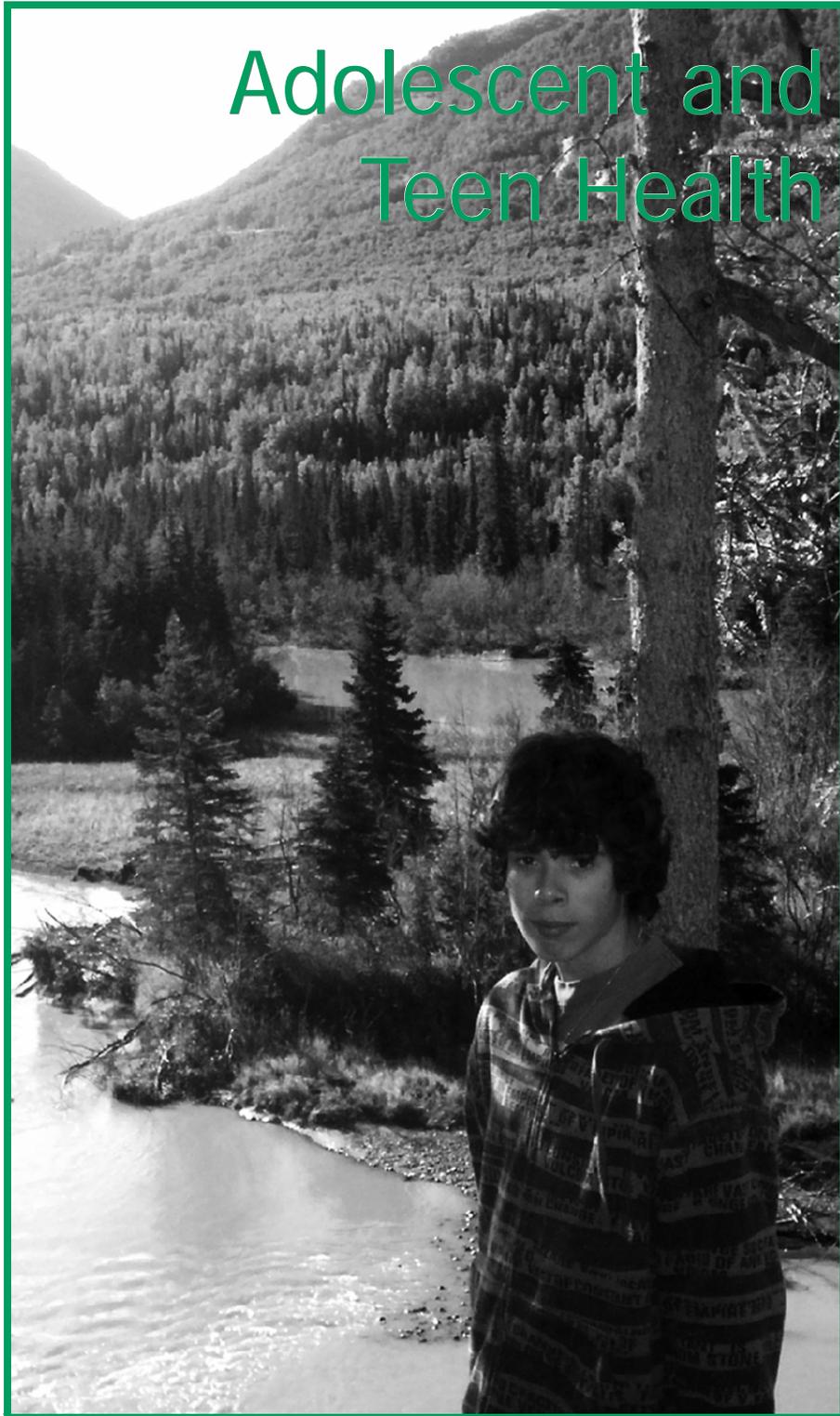
Data Source: Alaska Surveillance of Child Abuse and Neglect (Alaska SCAN), MCH Epidemiology Unit.

Chapter References

Chapter 7: Children's Health

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Adolescent and Teen Health



Mortality Rates and Causes

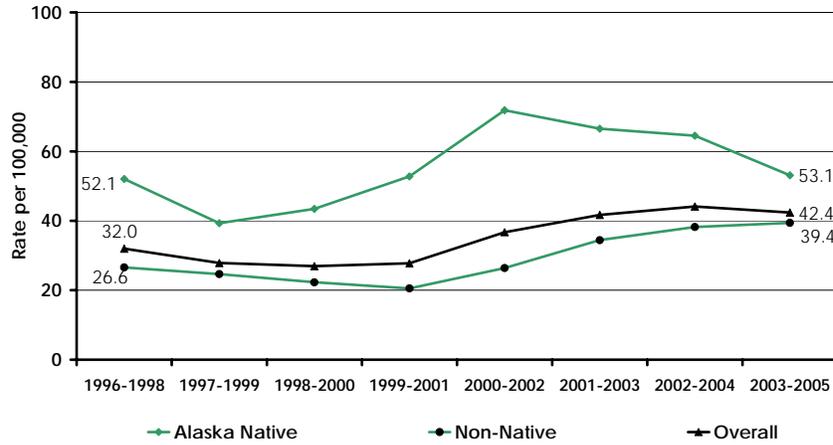
Nationally, unintentional injury, assault and suicide, all preventable causes of death, accounted for 48.7% of deaths to adolescents (ages 10 through 14 years) in 2005. From 1996-2005, 68.7% of deaths among Alaskan adolescents were in these three categories. There has been no decline in the mortality rate among Alaskan adolescents during this ten year period.

- ◆ Alaska's adolescent mortality rate in 2003-2005 was 42.4 per 100,000 – 33% higher than the 2005 national rate of 18.1 per 100,000 and more than 2.5 times the Healthy People 2010 target of 16.8 per 100,000.
- ◆ During 2003-2005, the mortality rates for Alaskan males and females were 53.1 and 31.3 per 100,000 respectively. Nationally, adolescent mortality rates were 21.5 and 14.4 per 100,000 for males and females during 2005.
- ◆ Mortality for Alaska Native adolescents during 2003-2005 was nearly one-third higher than that of non-Native adolescents (53.2 compared to 39.4 per 100,000).
- ◆ The leading cause of death to Alaskan adolescents from 1996-2005 was unintentional injuries, accounting for 49% of deaths to adolescents. Suicide was the second leading cause of death (3.4 per 100,000) and accounted for 11% of all adolescent deaths.
- ◆ During 1996-2005 the suicide rate among Alaskan adolescents was more than 2.5 times higher than the 2003 national rate of 1.3 per 100,000. Among Alaska Natives adolescents, the suicide rate (5.7 per 100,000) was twice that of non-Native adolescents (2.8 per 100,000).

Data Source: Alaska Bureau of Vital Statistics.

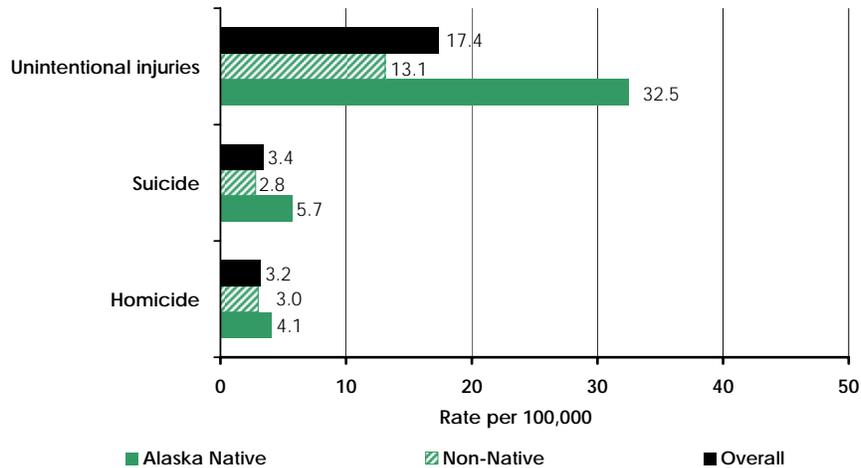
Adolescent Health

Adolescent Mortality (Ages 10 - 14 Years) by Alaska Native Status, Three Year Moving Averages, Alaska, 1996-2005



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

Most Common Causes of Adolescent Mortality by Alaska Native Status, Alaska, 1996-2005



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

Unintentional Injury Mortality

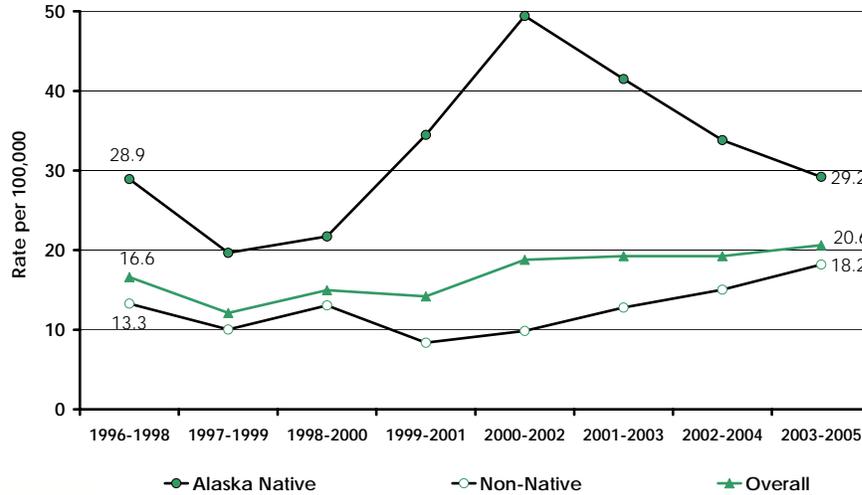
Unintentional injury is the leading cause of mortality among adolescents (ages 10 through 14) for both Alaska and the nation. From 1996-2005, 50% of all Alaskan adolescent deaths were due to unintentional injury. The rate of unintentional injury mortality among Alaskan adolescents has been on the rise since 1997-1999.

- ◆ Alaska's adolescent unintentional injury mortality rate during 2003-2005 was 20.6 per 100,000, more than three times the 2005 national rate of 6.4 per 100,000.
- ◆ During 2003-2005, Alaska's adolescent unintentional injury mortality rate was 29.2 and 18.2 per 100,000 for Alaska Native and non-Native adolescents, respectively.
- ◆ During the decade spanning 1996 through 2005, the Northern and Southwest regions of Alaska had significantly higher adolescent unintentional injury mortality rates compared to the Anchorage/Mat-Su region. The unintentional injury rate for adolescents in the Anchorage/Mat-Su region was 11.5 per 100,000, compared to 47.7 and 35.2 per 100,000, for the Northern and Southwest regions, respectively.
- ◆ Motor vehicle crashes, the leading cause of adolescent mortality, accounted for 43% of unintentional injury deaths among adolescents during 1996-2005.
- ◆ The second leading cause of adolescent unintentional injury mortality in Alaska was drowning, which accounted for 16% of unintentional injury mortality during 1996-2005. Deaths caused by drowning occurred almost 6 times more frequently among Alaska Native adolescents (8.1 per 100,000) compared to non-Native adolescents (1.4 per 100,000).

Data Source: Alaska Bureau of Vital Statistics.

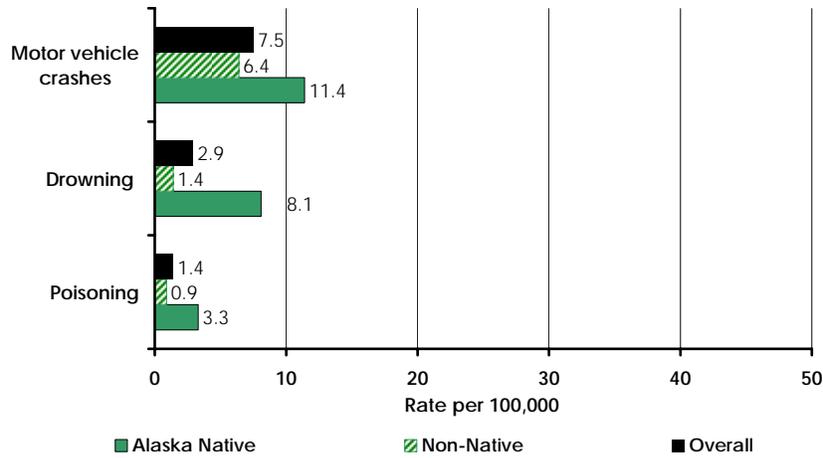
Adolescent Health

Unintentional Injury Mortality (Ages 10 - 14) by Alaska Native Status, Three Year Moving Averages, Alaska, 1996-2005



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

Most Common Causes of Unintentional Injury Mortality (Ages 10 - 14) by Alaska Native Status, Alaska, 1996-2005



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

Mortality Rates and Causes: Teens

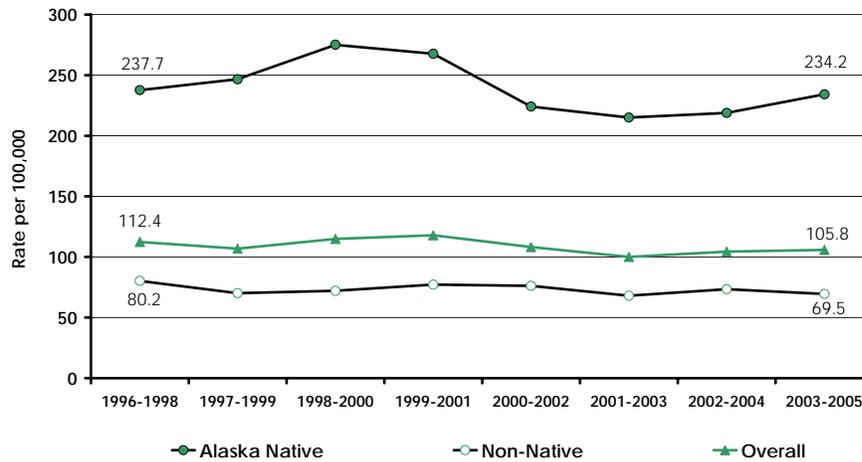
Nationally, unintentional injury, assault and suicide accounted for 75% of teen mortality (ages 15 through 19) during 2005. During 1996-2005, 82% of deaths among Alaskan teens were due to these three preventable causes of death. There was no significant decline in the overall mortality rate among Alaskan teens during 1996-2005.

- ◆ Alaska's teen mortality rate during 2003-2005 was 105.8 per 100,000. Teen mortality in Alaska was 1.6 times the 2005 national rate of 65.1 per 100,000. A 62% decrease in teen mortality would be required to meet the Healthy People 2010 target of 39.8 per 100,000.
- ◆ There was a consistent and significant difference in the teen mortality rate for Alaska Native and non-Native teens. During 2003-2005 the Alaska Native teen mortality rate was 234.2 per 100,000, more than three times non-Native teen rate (69.5 per 100,000).
- ◆ The leading cause of mortality among non-Native teens in Alaska during 1996-2005 was unintentional injury, accounting for 49% of deaths. Suicide was the leading cause of death among Alaska Native teens, accounting for 47% of teen mortality.

Data Source: Alaska Bureau of Vital Statistics.

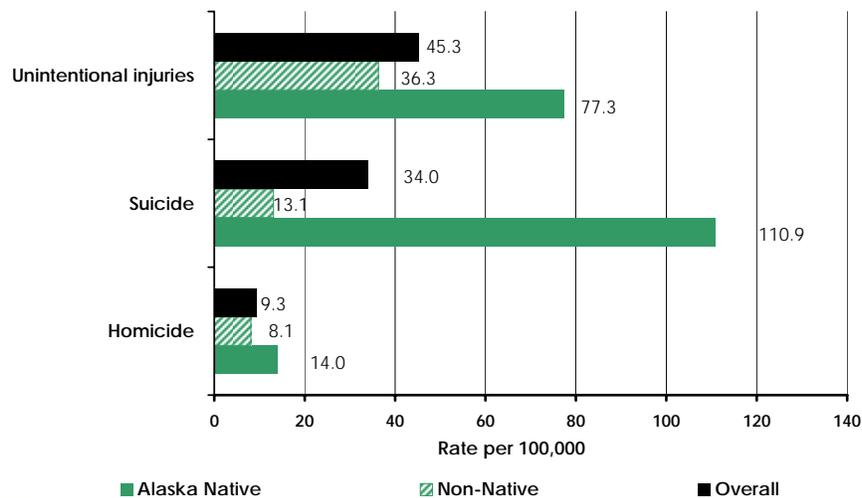
Teen Health

Teen Mortality (Ages 15 - 19 Years) by Alaska Native Status Three Year Moving Averages, Alaska, 1996-2005



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

Most Common Causes of Teen Mortality (Ages 15 - 19 Years) by Alaska Native Status, Alaska, 1996-2005



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

Unintentional Injury Mortality: Teens

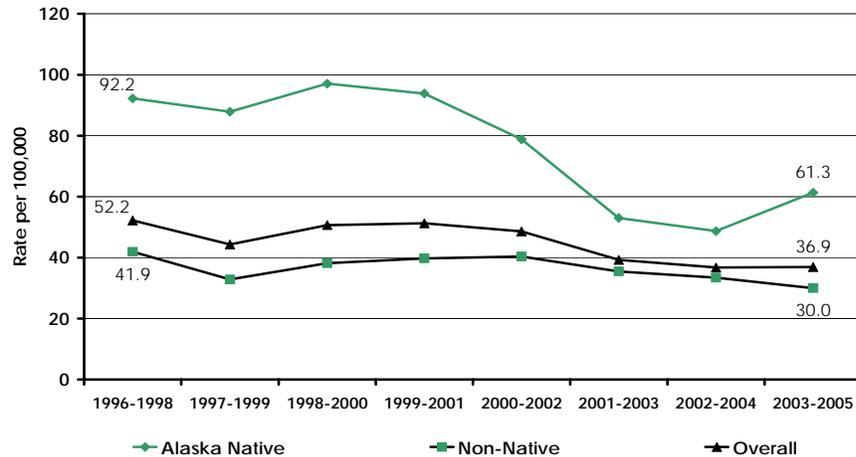
Nationally, unintentional injury accounts for 48% of teen mortality (ages 15 through 19). During 1996-2005, 42% of deaths among Alaskan teens were due to unintentional injury, with more than half of those caused by motor vehicle crashes.

- ◆ During 2003-2005, Alaska's unintentional injury mortality rate among teens (36.9 per 100,000) was 17% higher than the 2005 national rate of 31.4 per 100,000. There was an overall decrease in teen mortality due to unintentional injury during 1996-2005.
- ◆ The unintentional injury mortality rate among Alaska Native teens was 61.3 per 100,000 during 2003-2005, twice that of non-Native teens (30.0 per 100,000).
- ◆ During 1996-2005, the highest rates of unintentional injury mortality among teens occurred in the Southwest and Northern regions of Alaska (110.9 and 82.0 per 100,000, respectively), and the lowest in the Anchorage/Mat-Su region (32.4 per 100,000).
- ◆ The leading cause of unintentional injury mortality among Alaskan teens during 1996-2005 was motor vehicle crashes, accounting for 55% of unintentional injury deaths and nearly one-fourth of all teen mortality.
- ◆ Among Alaska Native teens, drowning was the second leading cause of unintentional injury mortality during 1996-2005. The mortality rate from drowning was 7 times the rate for non-Native teens (14.0 and 2.0 per 100,000, respectively).

Data Source: Alaska Bureau of Vital Statistics.

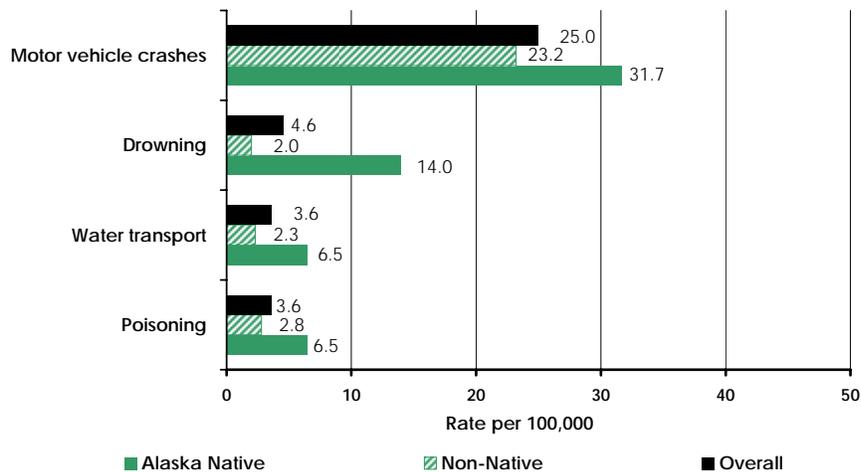
Teen Health

Unintentional Injury Mortality (Ages 15 - 19 Years) by Alaska Native Status, Three Year Moving Averages Alaska, 1996-2005



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

Most Common Causes of Unintentional Injury Mortality (Ages 15 - 19 Years) by Alaska Native Status Alaska, 1996-2005



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

Homicide and Suicide: Teens

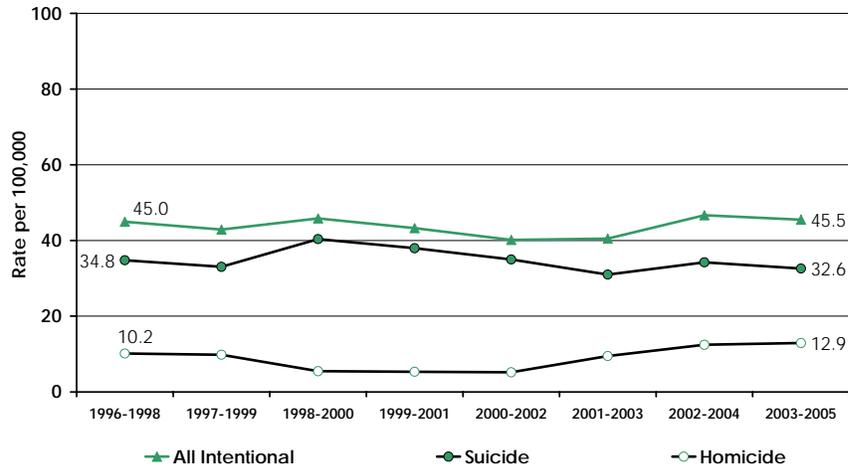
Intentional injuries (suicide and homicide) are the second and third leading causes of teen mortality in Alaska. Overall, Alaska's teen suicide and homicide rates did not improve during the decade spanning 1996-2005.

- ◆ During 2003-2005, intentional injury mortality among Alaska teens (45.5 per 100,000) was more than 2.5 times higher than the 2004 national rate of 17.5 per 100,000.
- ◆ The teen suicide rate was 110.8 per 100,000 among Alaska Natives during 1996-2005, more than eight times higher than the non-Native rate (13.1 per 100,000).
- ◆ The teen suicide rate for males during 1996-2005 was 50.8 per 100,000 compared to 20.7 per 100,000 for females. Males were 2.4 times more likely to commit suicide than female teens, with Alaska Native males at greatest risk (164.2 per 100,000).
- ◆ Although the overall teen suicide rate did not improve during 1996-2005, there was a statistically significant decline in the teen suicide rate among Alaska Native males, declining from 261 per 100,000 in 1996 to 78.7 per 100,000 in 2005.
- ◆ In 2003-2005, the teen homicide rate in Alaska (12.9 per 100,000) was 39% higher than the 2004 national baseline of 9.3 per 100,000.
- ◆ The teen homicide rate was almost four times higher among Alaska males (14.5 per 100,000) than females (3.7 per 100,000) during 1996-2005.

Data Source: Alaska Bureau of Vital Statistics.

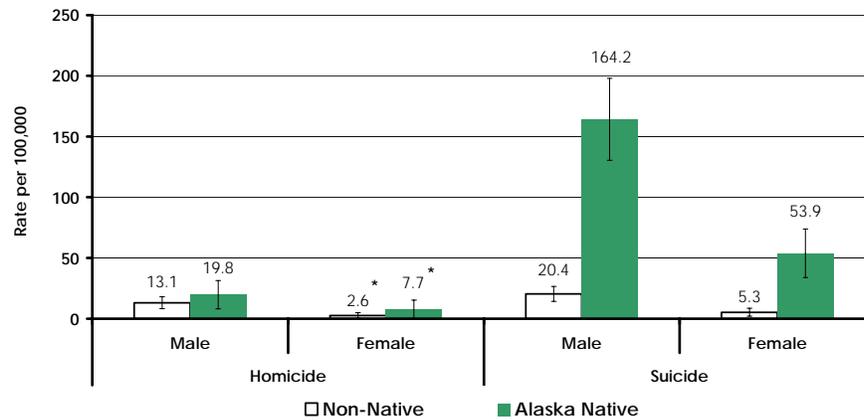
Teen Health

Homicide and Suicide (Ages 15 - 19 Years) Three Year Moving Averages, Alaska, 1996-2005



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

Homicide and Suicide (Ages 15 - 19 Years) by Sex and Alaska Native Status, Alaska, 1996-2005



* Rate is based on < 6 deaths. Use caution when interpreting rates based on small numbers.

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

Maternal Health



Pre-Pregnancy Body Mass Index (BMI)

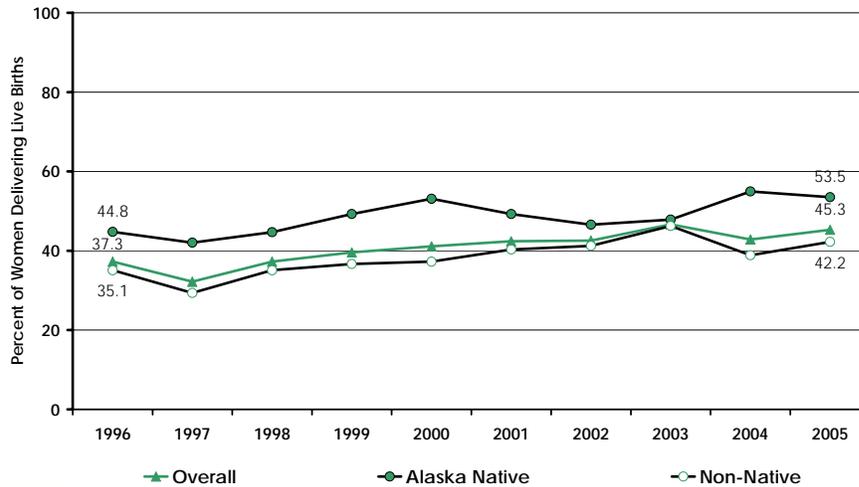
Women who are overweight or obese and become pregnant have a heightened risk of many ill-health consequences for themselves or their infants. Pre-pregnancy obesity has been associated with a higher risk of diabetes and congenital anomalies (1). In Alaska, overweight status among the adult population remained relatively stable from 1991 to 2005, but obesity followed the national trend of significantly increasing prevalence (2).

- ◆ In 2005, 45% of Alaskan women who delivered a liveborn infant were considered to be overweight or obese before they got pregnant. The prevalence of pre-pregnancy overweight or obesity in Alaska has increased 21.6% during 1996-2005. Both non-Native women and Alaska Native women showed similar increasing trends.
- ◆ Alaska Native women had a consistently higher prevalence of overweight or obesity than non-Native women over the ten-year timeframe of 1996-2005. In 2005, over half of all Alaska Native mothers of newborns were classified as overweight or obese prior to becoming pregnant.
- ◆ For 2004-2005, non-Native women showed a higher proportion of underweight and normal pre-pregnancy body mass index than Alaska Native women (11.4% versus 5.7% and 48.1% versus 40.1%, respectively).

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

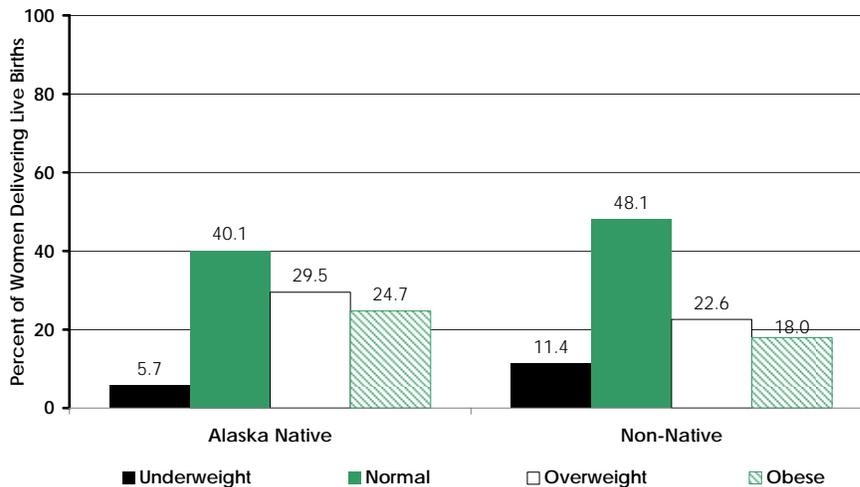
Maternal Health

Pre-pregnancy Overweight or Obesity by Year and Alaska Native Status, Alaska, 1996-2005



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

Pre-pregnancy Body Mass Index (BMI) by Alaska Native Status, Alaska, 2004-2005



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

Maternal Morbidity

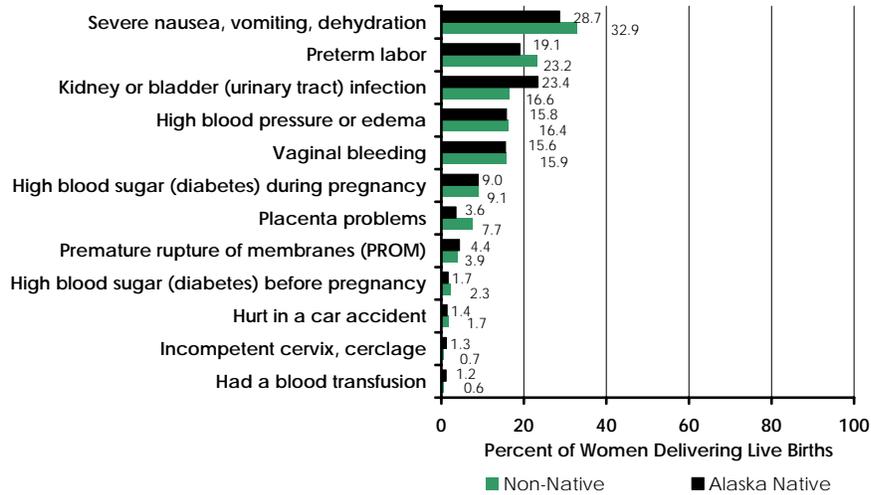
The tip of the iceberg has been used to describe the estimated 300 pregnancy-related deaths that occur in the U.S. every year. The rest of the iceberg refers to the large pool of surviving women who have experienced pregnancy-related and childbirth-related complications in a given year. Hospitalization for pregnancy-related complications is a surprisingly frequent event, that has required an average of more than 2 million hospital days of care per year, totaling more than 1 billion dollars annually (3).

- ◆ The most prevalent self-reported pregnancy-related condition during 2004-2005 for both Alaska Native women (28.7%) and non-Native women (32.9%) was severe nausea, vomiting, or dehydration. This was followed by kidney or bladder infection for Alaska Natives (23.4%) and preterm labor for non-Natives (23.2%).
- ◆ Alaska Native women reported significantly lower prevalences of severe nausea, vomiting or dehydration and preterm labor than non-Native women, but a significantly higher prevalence of kidney or bladder [urinary tract] infection. Non-Native women were twice as likely as Alaska Native women to report problems with the placenta (such as abruptio placentae or placenta previa), 7.7% compared with 3.6%, respectively.
- ◆ Among mothers who reported at least one pregnancy-related morbid condition, 21.0% stated that they stayed in the hospital for at least one day because of that condition. This did not differ by Alaska Native status. However, a significantly larger proportion of non-Native women (39.6%) compared to Alaska Native women (26.5%) were advised by their doctor or nurse to be on bedrest for 2 or more days.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

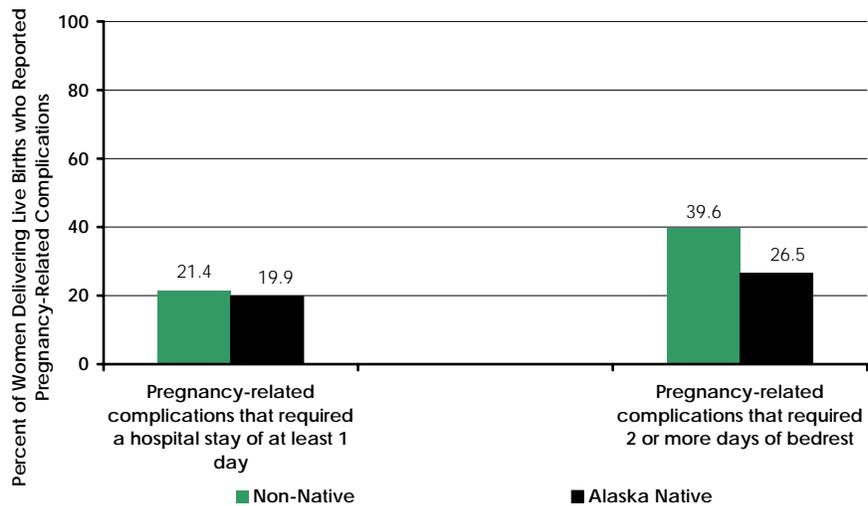
Maternal Health

Self-Reported Pregnancy-Related Complications by Alaska Native Status, Alaska, 2004-2005



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

Impact of Pregnancy-Related Complications by Alaska Native Status, Alaska, 2004-2005



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

Maternal Mental Health

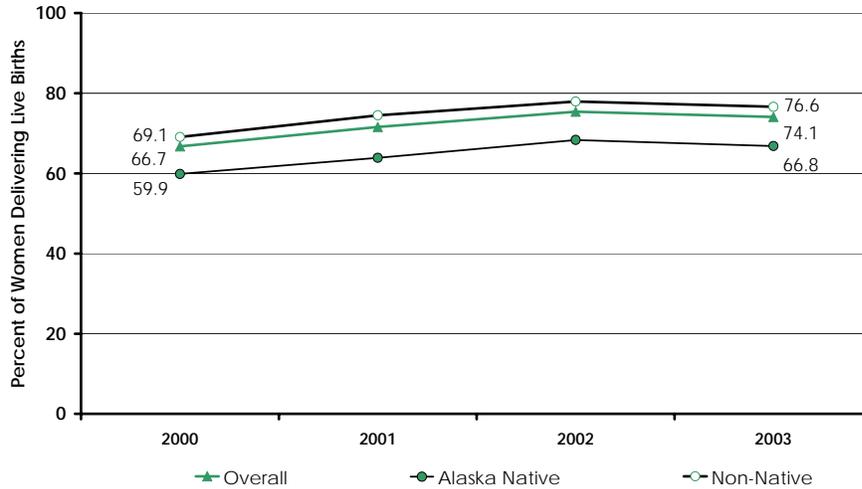
Perinatal depression is depression occurring during pregnancy or within a year after delivery. Exact numbers are not known but researchers believe that depression is one of the most common complications during and after pregnancy.

- ◆ Over one quarter (26%) of the population of women who delivered a live born infant in 2003 indicated that the time during their pregnancy was either a “moderately hard time”, a “very hard time”, or “one of the worst times of my life”. This estimate remained stable over the 2000-2003 timeframe.
- ◆ Among mothers of newborns, nearly three-quarters (74.1% in 2003) indicated that a health care worker talked with them about “baby blues” or postpartum depression either during pregnancy or after delivery, an 11% increase from 2000.
- ◆ During 2000-2003, Alaska Native mothers of newborns were consistently less likely to have a health care worker talk with them about postpartum depression than non-Native mothers.
- ◆ Around 62% of Alaskan mothers of newborns indicated they were somewhat depressed in the months after their delivery. Five percent said they were “very depressed”.
- ◆ Nearly 26% of somewhat depressed mothers said they wanted to see a professional in 2003. Although the overall percentage of somewhat depressed mothers had not changed appreciably during 2000-2003, this represented a 29% increase over the 20% prevalence from 2000.
- ◆ In 2003, 15.3% of mothers of newborns indicated that they had already seen a professional about their depression. This was a 72% increase from the 9% prevalence in 2000.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

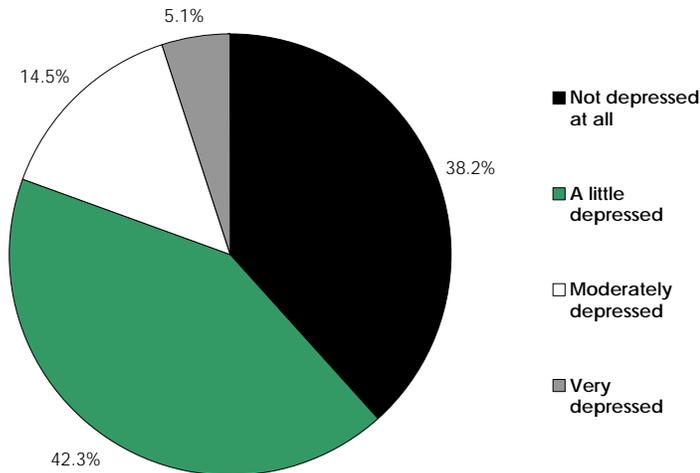
Maternal Health

Prevalence of a Health Care Worker Discussing Postpartum Depression with Mother by Year, Alaska, 2000-2003



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

Self-Reported Postpartum Depression among Women Delivering Live Births, Alaska, 2003



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

Postpartum Depression

Depression among mothers of newborns has surfaced as an important maternal and child health concern. The emotional well-being of mothers is important to their relationships with their spouses or partners, mother-infant bonding, and behavior of the newborn. Studies suggest that identification and treatment of maternal depression should continue beyond the postpartum period in order to prevent negative consequences of this illness for mothers and their children.

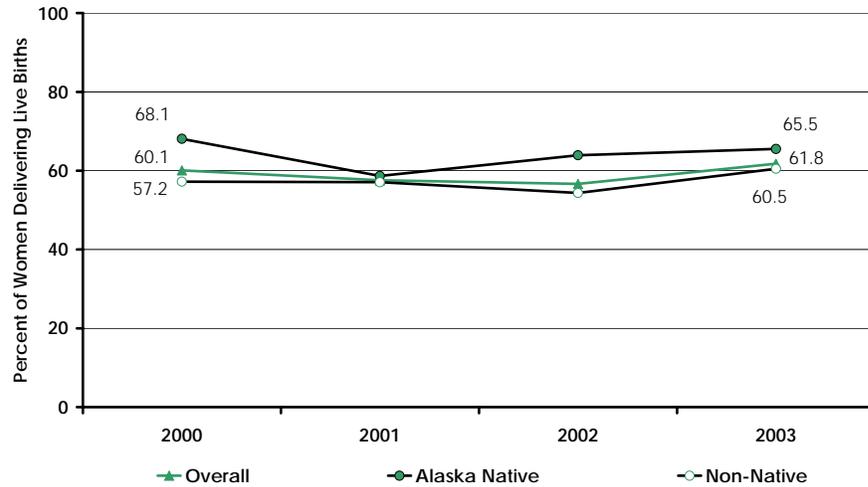
- ◆ In 2003, 62% of Alaskan mothers of newborns indicated they had some amount of postpartum depression in the months after their delivery (i.e. they reported they were “a little”, “moderately”, or “very” depressed).
- ◆ During 2003, (the most recent year of PRAMS survey data available), no significant disparity with respect to Alaska Native status was found for self-reported postpartum depression.
- ◆ During 2002-2003, the reported prevalence of postpartum depression ranged from 56.7% in the Gulf Coast region to 64.8% in the Southwest region, however, there were no significant differences by region.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: [Regional map of Alaska is found on page 7.](#)

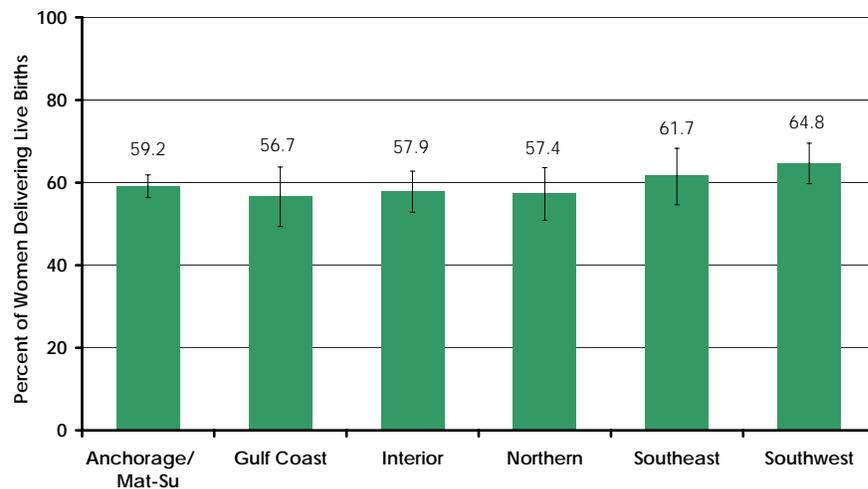
Maternal Health

Self-Reported Postpartum Depression by Year and Alaska Native Status, Alaska, 2000-2003



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

Self-Reported Postpartum Depression by Region Alaska, 2002-2003



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

Postpartum Alcohol Use

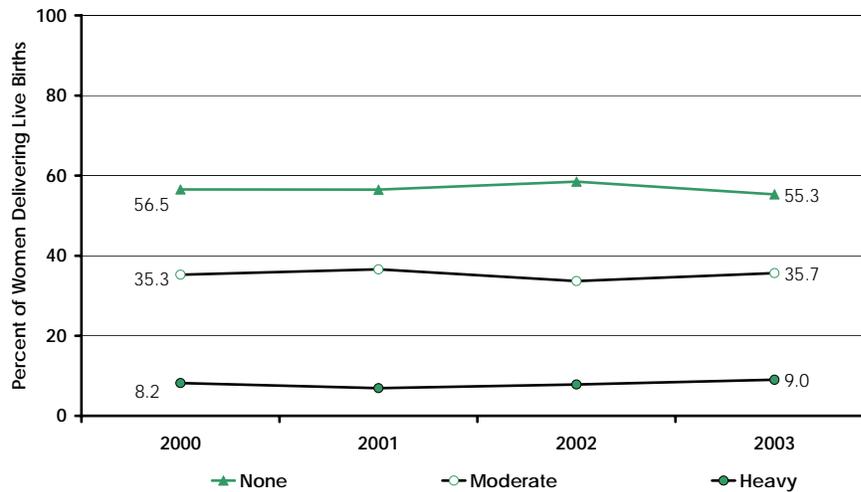
Postpartum alcohol use can negatively impact families and, when contraception is not practiced, unnecessarily put a fetus at risk of fetal alcohol effects. The Alaska PRAMS survey used for birth years 2000-2003 captured postpartum alcohol use and binge drinking (5 alcoholic drinks or more at one sitting). Women's drinking levels were categorized as none, moderate (three or fewer drinks during an average week and reporting binge drinking no more than one time), and heavy (4 or more drinks during an average week and reporting binge drinking 2 or more times).

- ◆ During 2003, 55.3% of postpartum women were non-drinkers, 35.7% were moderate drinkers, and 9% were heavy drinkers. Annual postpartum drinking prevalences during 2000-2003 were consistent across the four-year period.
- ◆ Nearly twice as many non-Native mothers report moderate postpartum drinking compared to Alaska Native women (39.7% and 22.0%, respectively).
- ◆ Alaska Native mothers were 1.4 times more likely than non-Native mothers to report being a heavy drinker during the postpartum period.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

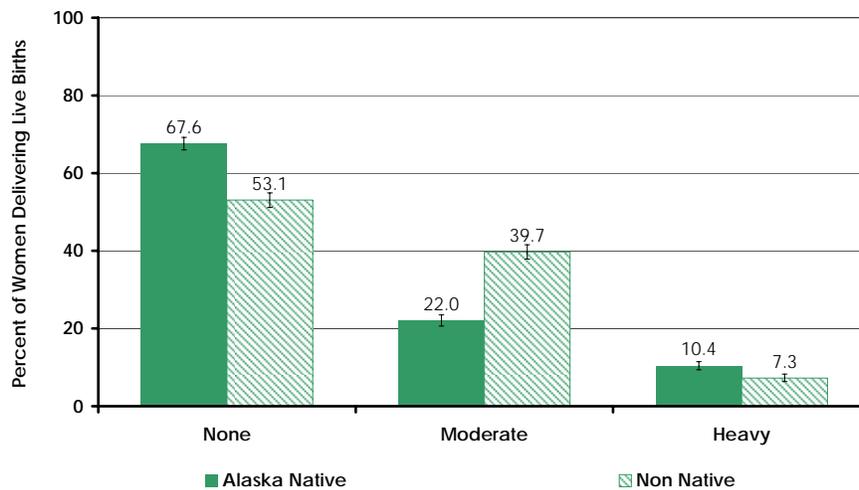
Maternal Health

Postpartum Alcohol Use by Year and Drinking Level Alaska, 2000-2003



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

Postpartum Drinking Level by Alaska Native Status Alaska, 2000-2003



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

Postpartum Tobacco Use

Postpartum smoking endangers the health of the mother, the outcome of future pregnancies, and the health of children in the home. Women who smoke are at increased risk for many cancers, heart disease, high blood pressure and other leading causes of female mortality and morbidity.

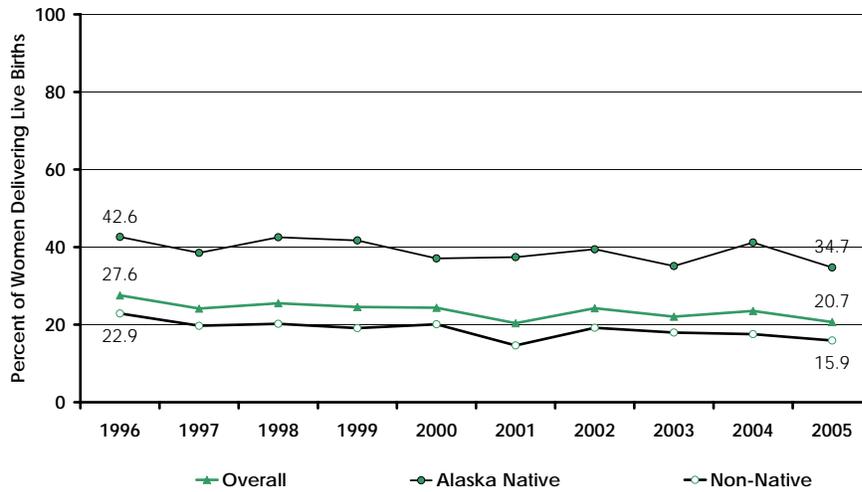
- ◆ Around 21% of Alaskan women reported smoking cigarettes after delivering a liveborn infant during 2005. This finding is comparable to the national estimate for smoking prevalence among adult females (18.1%) (4) and the prevalence of smoking among Alaskan women ages 18 or older (22%) (2).
- ◆ The prevalence of postpartum smoking in Alaska decreased by 25% between 1996 and 2005. Postpartum cigarette smoking declined 30.5% among non-Native and 18.6% among Alaska Native mothers.
- ◆ The Alaska Native/non-Native disparity in postpartum smoking prevalence has not improved since 1991. In 2005, 35% of Alaska Native women – compared to 16% of non-Native women – reported that they smoked cigarettes postpartum.
- ◆ The overall postpartum smoking prevalence in Alaska was 1.3 times higher than the prevalence of smoking during the last three months of pregnancy, indicating that some women who refrain from smoking during pregnancy start smoking again in the postpartum period.
- ◆ Women in the Northern region of Alaska were significantly more likely to smoke after having a baby (64.1%) than women from any other region of Alaska.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: [Regional map of Alaska](#) is found on page 7.

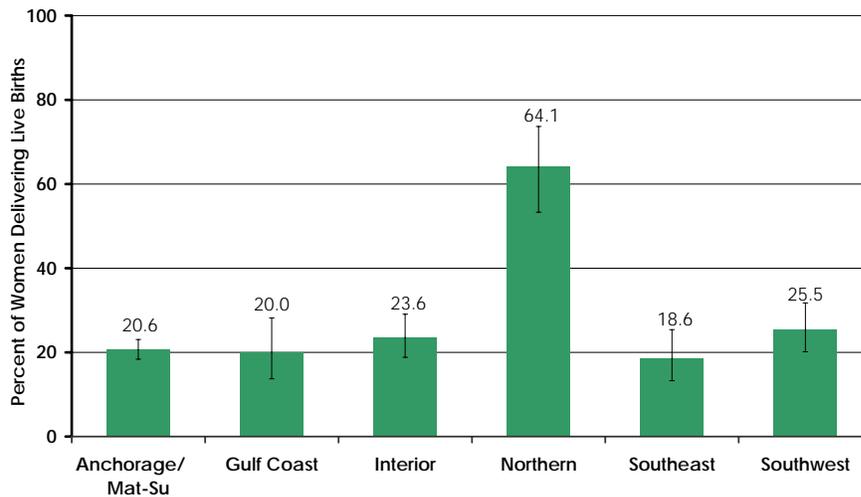
Maternal Health

Postpartum Smoking by Year and Alaska Native Status Alaska, 1996-2005



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

Postpartum Smoking by Region Alaska, 2004-2005



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

Postpartum Smoking Cessation

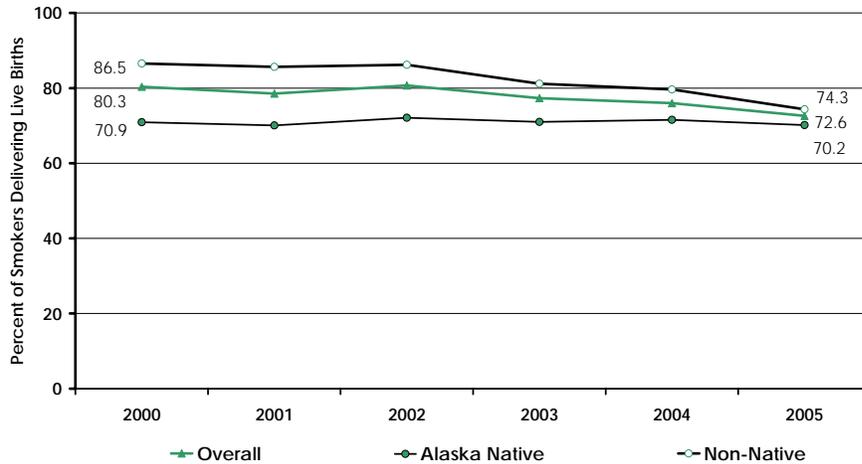
Making a decision to quit smoking is an important first step toward improved maternal health. Research shows that self-help strategies alone are only marginally effective and that counseling and pharmacotherapy used either alone or in combination can improve quit rates (5). Understanding trends in intention to quit and perceived barriers to smoking cessation can help programs tailor smoking interventions more effectively.

- ◆ Around 20% of Alaskan women smoked cigarettes postpartum during 2005. Among postpartum smokers, 72.6% overall indicated that their intention was to quit smoking within six months.
- ◆ Intention to quit smoking declined by 14% during 2000-2005 among non-Native postpartum women (from 86.5% to 74.3%) but did not change for Alaska Native postpartum women.
- ◆ The number one barrier to quitting smoking among postpartum smokers was the craving for a cigarette (81.5% for 2000-2003). About 63% of postpartum smokers identified “loss of a way to handle stress” and “other people around me smoke” as the second and third ranked barriers to quitting.
- ◆ Non-Native postpartum smokers (68.5%) were statistically more likely to identify “loss of a way to handle stress” as a barrier to quitting smoking than Alaska Native smokers (54.9%).
- ◆ Significant Alaska Native/non-Native differences were noted for three other barriers to quitting smoking. “Fear of gaining weight” and “costs of medicines or classes to help you quit” were barriers cited more often among non-Natives; “lack of support from others to quit smoking” was cited more often by Alaska Native postpartum smokers.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

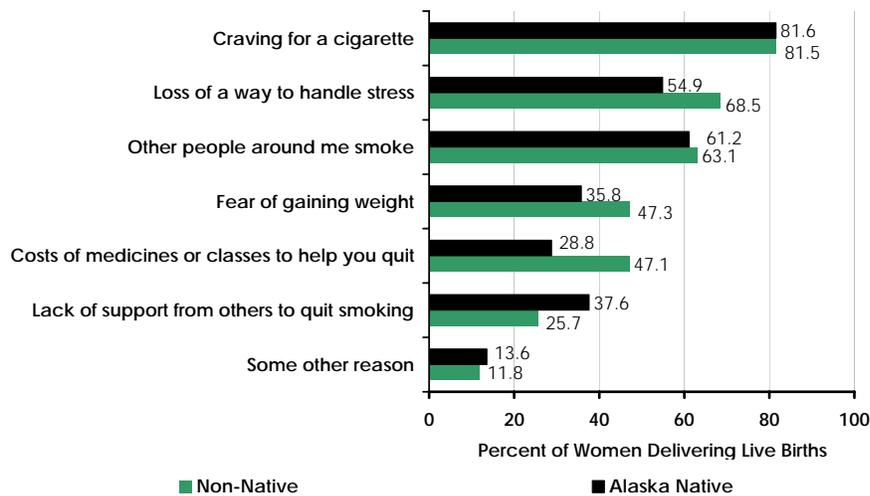
Maternal Health

Postpartum Intention to Quit Smoking (Want to Quit in Next 6 Months) by Year and Alaska Native Status Alaska, 2000-2005



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

Barriers to Quitting Postpartum Smoking by Alaska Native Status, Alaska, 2000-2003



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

Physical Abuse Before Pregnancy

Women who are abused prior to pregnancy are more at risk for physical abuse during pregnancy than those that never experienced abuse (6). When experienced during pregnancy, physical abuse has been associated with an increased risk of poor maternal and infant outcomes, including caesarian delivery, hospitalization for maternal complications, low maternal weight gain and low infant birth weight (7,8). Additionally, abused women are more likely to have other risk factors for poor pregnancy outcomes, such as late entry into prenatal care, smoking and drug and alcohol use (8).

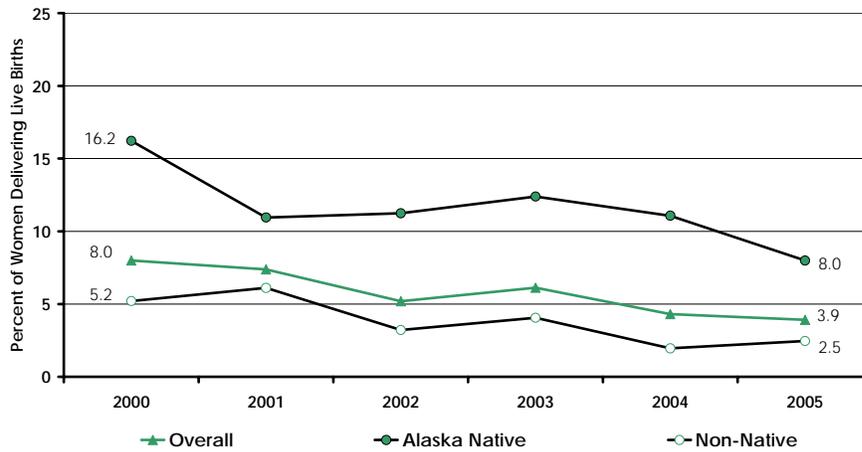
- ◆ Over a six-year period, the prevalence of women who had a live-born infant and reported that their husband or partner physically abused them during the 12 months before they got pregnant declined by over 50%, from 8.0% in 2000 to 3.9% in 2005.
- ◆ Although both Alaska Native women and non-Native women independently reported a 50% decline in the prevalence of pre-pregnancy physical abuse by their husbands or partners during 2000-2005, Alaska Native women were 3.2 times more likely to report abuse than non-Native women at the end of that timeframe (8.0% compared with 2.5%, respectively).
- ◆ The regions with the two highest prevalences of pre-pregnancy physical abuse by a husband or partner were the Northern and Southwest regions. The Northern region showed nearly 13% of women who delivered their infant in 2003-2005 reported pre-pregnancy physical abuse by their husband or partner. The Southwest region showed under 10%, while the remaining regions ranged from 3.3% to 4.5%.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: [Regional map of Alaska is found on page 7.](#)

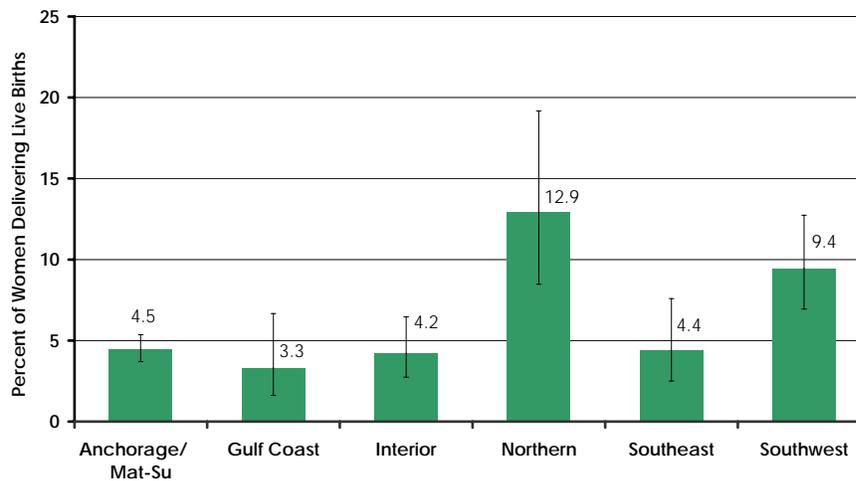
Maternal Health

Physical Abuse by Husband or Partner during the 12 Months Before Pregnancy by Year and Alaska Native Status, Alaska, 2000-2005



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

Physical Abuse by Husband or Partner during the 12 Months Before Pregnancy by Region, Alaska, 2003-2005



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

Chapter References

Chapter 9: Maternal Health

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Women's Health



Female Mortality

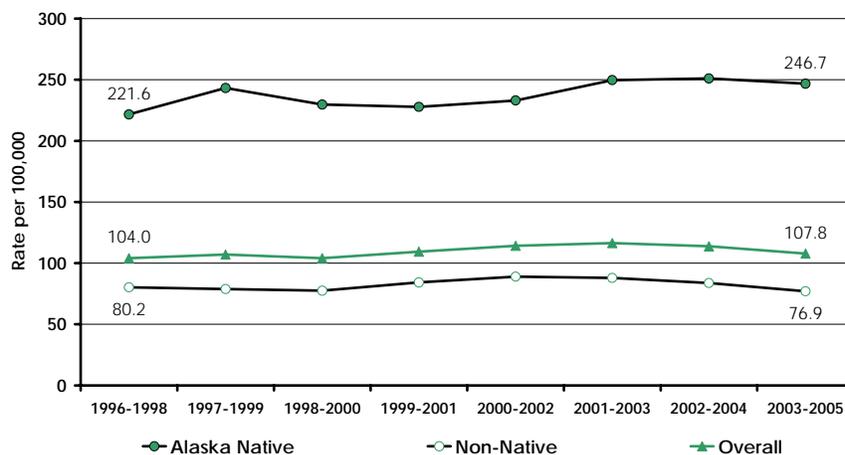
As a sentinel event, mortality is an acceptable indicator for learning about a population's health status. As with other Alaskan populations, women of childbearing age are substantially affected by unintentional injuries, the leading manner of death in this population. As women get older, the mortality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

- ◆ In 2003-2005, the mortality rate for Alaskan women of childbearing age (15 - 44 years) was 107.8 per 100,000 population, 22% higher than the 2003 national average of 88.2 per 100,000.
- ◆ The mortality rate has consistently been three times higher among Alaska Native women compared to non-Native women over the last fifteen years.
- ◆ Over the last decade one-fourth (25.5%) of all deaths among Alaska women of childbearing age were caused by unintentional injuries. This was slightly more than the U.S. 2005 proportion of 23%.
- ◆ The unintentional injury mortality rate for Alaskan women ages 15 - 44 years from 1996-2005 was 27.8 per 100,000. This was 43% higher than the 2005 U.S. rate for women 15 - 44 years of 19.5 per 100,000.
- ◆ Malignant neoplasm (cancer) made up 15.8% of all deaths among Alaskan women ages 15 - 44 years over the last decade. In the same period, suicide and diseases of the heart were the third and fourth leading causes of death, comprising 12% and 8% of total mortality, respectively.

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

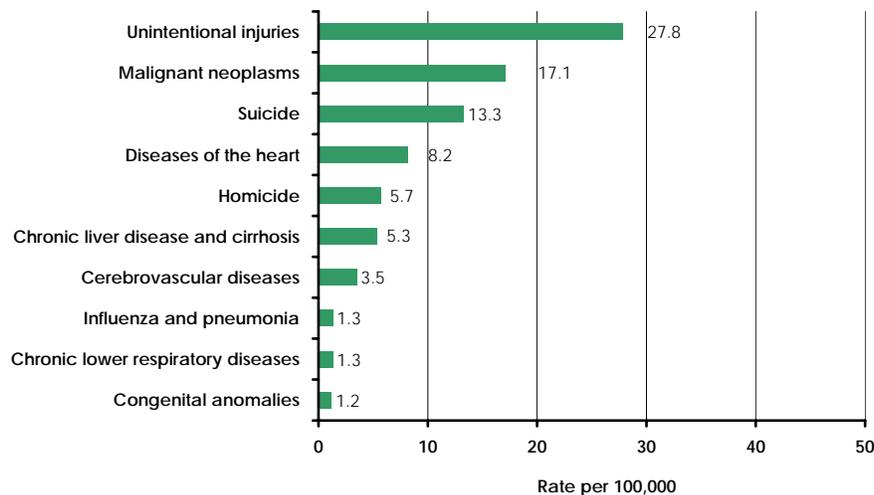
Women's Health

Female Mortality Rates Ages 15 - 44 by Alaska Native Status, Three Year Moving Averages, Alaska, 1996-2005



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

Most Common Causes of Female Mortality, Ages 15 - 44 Alaska, 1996-2005



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

Women's Health Status

Overall health status is a widely used measure of quality of life. The Centers for Disease Control's Behavioral Risk Factor Surveillance System monitors health status indicators in all 50 states, and participating U.S. territories and protectorates (District of Columbia, Guam, Puerto Rico and the U.S. Virgin Islands) (1). In 2005, the national estimate for women ages 18 years or older who considered themselves to be in very good or excellent overall health was 53.5% (2).

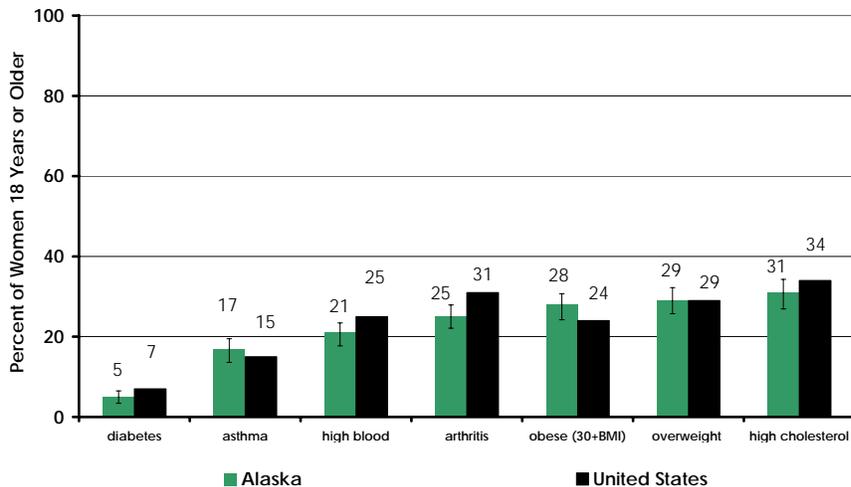
- ◆ During 2005, 56% of Alaskan women ages 18 or older reported good or excellent overall health status.
- ◆ Significantly lower prevalences of diabetes (5%), high blood pressure (21%) and arthritis (25%) were reported by Alaskan women during 2005 compared to national estimates (7%, 25% and 31%, respectively).
- ◆ A significantly higher prevalence of obesity was reported by Alaskan women (28%) during 2005 compared to the national estimate (24%).
- ◆ Alaskan women reported higher prevalences of binge drinking (more than 5 alcoholic drinks on one occasion) (10%) and being a current smoker (22%) than the national estimates during 2005 (7% and 19%, respectively).
- ◆ The proportion of Alaskan women who reported having no health care coverage during 2005 (18%) was significantly higher than the national estimate (13%).

Data sources: Alaska Behavioral Risk Factor Surveillance System (BRFSS) and CDC National BRFSS.

Note: BRFSS prevalence estimates are not age-adjusted. Differences between BRFSS estimates for Alaska and the U.S. could be explained by differences in the age structures of the two populations.

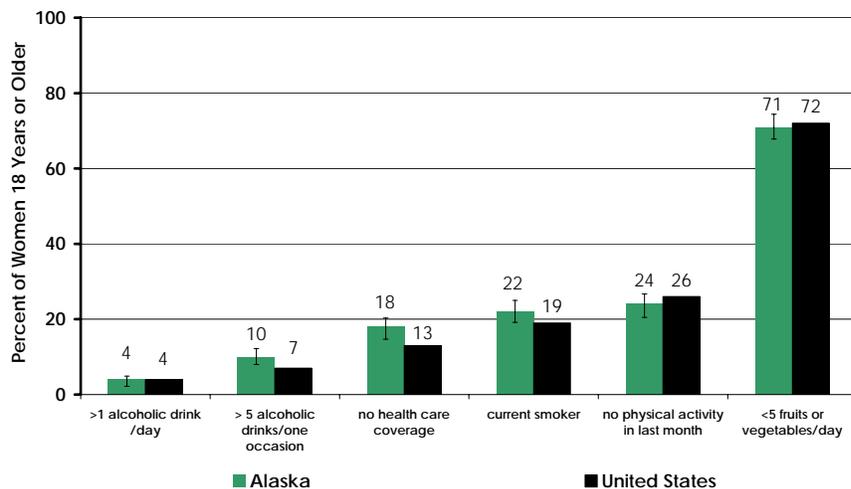
Women's Health

Chronic Health Conditions among Women 18 Years or Older, Alaska and United States, 2005



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

Chronic Disease Risk Factors among Women 18 Years or Older, Alaska and United States, 2005



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

Controlling Partner

Domestic violence may include emotional abuse or threats made against a person in addition to actual physical abuse. Alaska PRAMS added a question in 2000 that asks the mother whether her husband or partner threatened her, limited her activities against her will, or made her feel unsafe in any other way. This indicator measures whether a controlling or threatening partner is reported for any of three periods: during the 12 months prior to pregnancy, during pregnancy, or since the new baby was born.

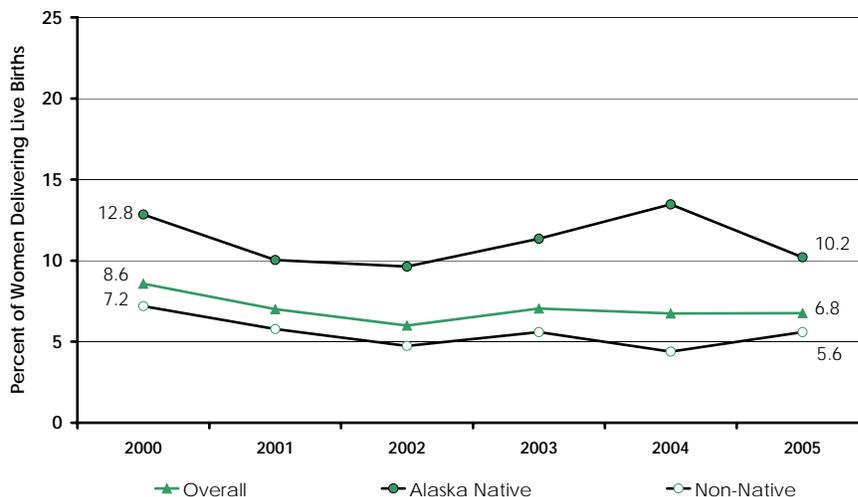
- ◆ The prevalence of a controlling or threatening partner among Alaska women with newborns declined 30% during 2000-2002 (8.6% to 6.0%) but remained constant during 2003-2005.
- ◆ Although both Alaska Native women and non-Native women showed decreasing trends of reporting a controlling partner, the Alaska Native prevalence was consistently twice as high as that of non-Natives for this indicator.
- ◆ The prevalence of a controlling partner varied by region from a low of 4.6% in the Gulf Coast, to a high of 13.6% in the Northern region for 2003-2005. The second and third highest prevalences of controlling partner were 11.0% in the Southwest and 7.3% in the Southeast.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: Regional map of Alaska is found on page 7.

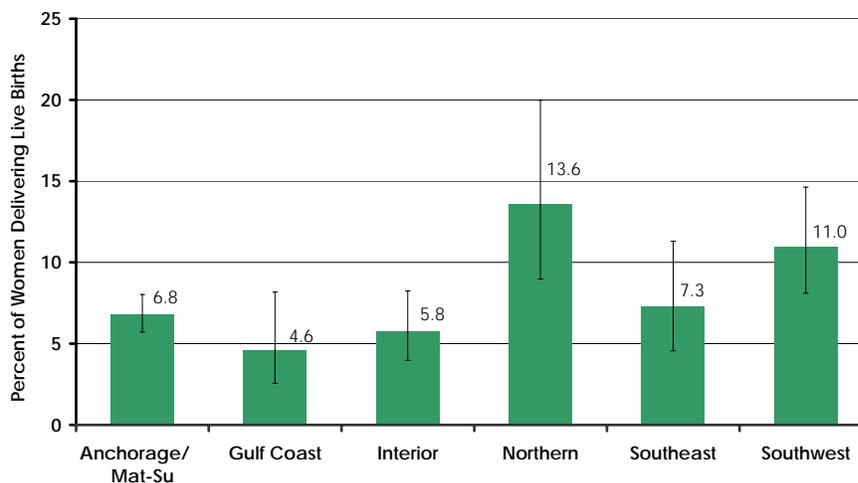
Women's Health

Controlling Partner by Year and Alaska Native Status Alaska, 2000-2005



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

Controlling Partner by Region Alaska, 2003-2005



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

Life Stressors

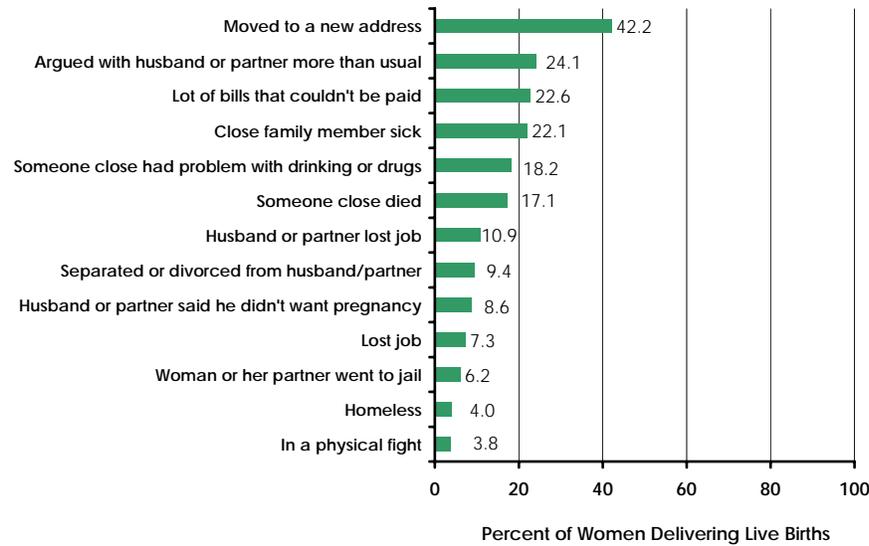
Pregnancy and its anticipated changes to a woman's and family's lifestyle can be stressful. Even in the absence of other significant life events, depression may ensue. Extreme stress can have an impact on the baby's health as well. When stressful life events happen that also include the spouse or partner, the whole family unit is affected.

- ◆ The most prevalent stressor for an Alaskan woman who has recently delivered a newborn is moving to a new address (42.2%) during the 12 months before her new baby was born. The next two most prevalent stressors were arguing with her husband or partner more than usual (24.1%) and having a lot of bills that she couldn't pay (22.6%).
- ◆ Approximately 370 Alaskan women were homeless in 2005 at some point during the 12 months before delivering a newborn.
- ◆ During the ten-year period 1996-2005, four life stressors showed significant trends of *decreasing* prevalence: argued with her husband or partner more than usual, had a lot of bills she couldn't pay, her husband or partner said he did not want the pregnancy, and she was in a physical fight.
- ◆ The single stressor that showed a significant upward trend in the overall prevalence was the woman or her husband or partner going to jail during the 12 months before her new baby was born. The increase occurred during 1996-2000 when the overall prevalence went from 4.3% to 7.7% in 2000, a 78% increase. The prevalence from 2000-2005 has remained fairly constant around 7%.
- ◆ During 2005, nearly 650 Alaskan women or their spouses or partners were reportedly jailed at some point during the 12 months before the woman delivered her newborn.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Women's Health

Life Stressors among Women Recently Delivering a Live Birth, Alaska, 2004-2005



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

Life Stressors with Significant Overall Ten-Year Trends among Women Recently Delivering a Live Birth by Alaska Native Status, Alaska, 2005

Life stressors in the 12 months before delivering infant	2005 Prevalence	
	Non-Native	Alaska Native
Argued with husband or partner more than usual	24.0	27.9
Lot of bills that couldn't be paid	21.4	23.5
Husband or partner said he didn't want pregnancy	9.2	9.9
Woman or her partner went to jail	4.5	12.6
Woman was in a physical fight	2.9	8.4

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

Breast and Cervical Health

Cancer screening significantly reduces mortality from breast and cervical cancers. Early detection successfully identifies pre-invasive and invasive lesions that can be treated in early stages. The National Cancer Institute (NCI) recommends a screening mammography for women age 40 every one to two years. Women ages 18 or older should get a Pap test to detect cervical cancer at least once every three years.

- ◆ Compared to the 2006 national estimates, the prevalence of having received a Pap test within the last three years was 3% higher among Alaskan women in 2006, while the prevalence of having received screening mammographies according to NCI recommendations was 3% lower .
- ◆ During the eleven year period between 1996 and 2006, cancer screening indicators for Alaska women did not show improvement. The prevalence of having a Pap test within the last three years decreased from 93% to 87% and the prevalence of having a mammogram within the last two years decreased from 76% to 73%. There were no significant differences in the prevalence of breast and cervical cancer screening rates by Alaska Native and non-Native status (1).

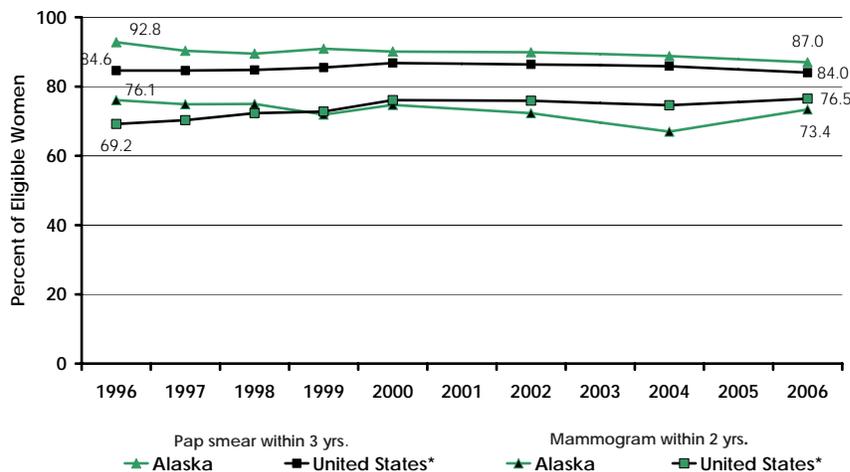
Breast and Cervical Health Check (BCHC) is the State of Alaska's Breast and Cervical Cancer Early Detection Program. BCHC provides funding for breast and cervical cancer screening and diagnosis for women ages 18 - 64 with limited incomes who have little or no health insurance.

- ◆ Between 1995 and 2005 the number of women receiving breast and cervical cancer screening through BCHC increased from 501 to 9,139 – a 17-fold increase. The majority of women who received BCHC services in 2005 were non-Native (83%).

Data Sources: CDC Behavioral Risk Factor Surveillance System, Breast and Cervical Health Check Program.

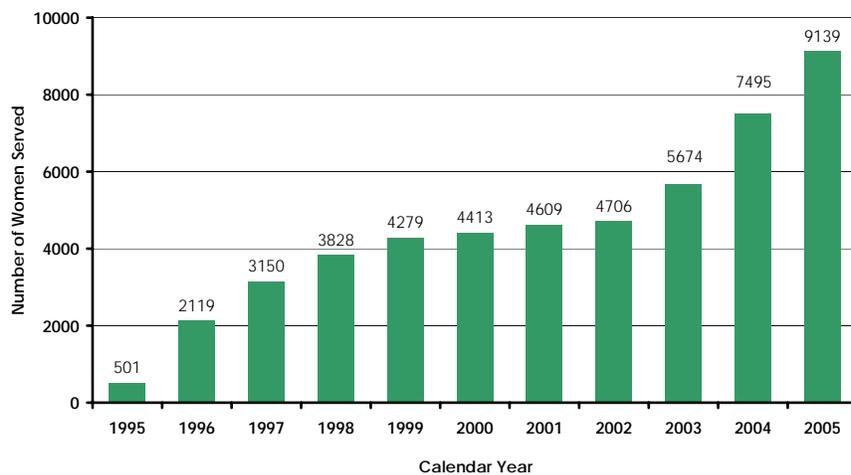
Women's Health

Women's Cancer Screening by Year Alaska and United States, 1996-2006



* States, D.C. and territories
Data Source: Alaska Breast and Cervical Health Check Program. Prepared by MCH Epidemiology Unit.

Women Receiving Services through the Breast and Cervical Health Check Program, Alaska, 1995-2005



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

Oral Health

Maintaining good oral health during pregnancy is essential. Hormonal changes that occur during pregnancy may increase the adverse effects of dental plaque, resulting in a condition called “pregnancy gingivitis”. Oral infections or disease are associated with an increased risk for poor birth and pregnancy outcomes such as preterm birth, low birth weight or gestational diabetes (3).

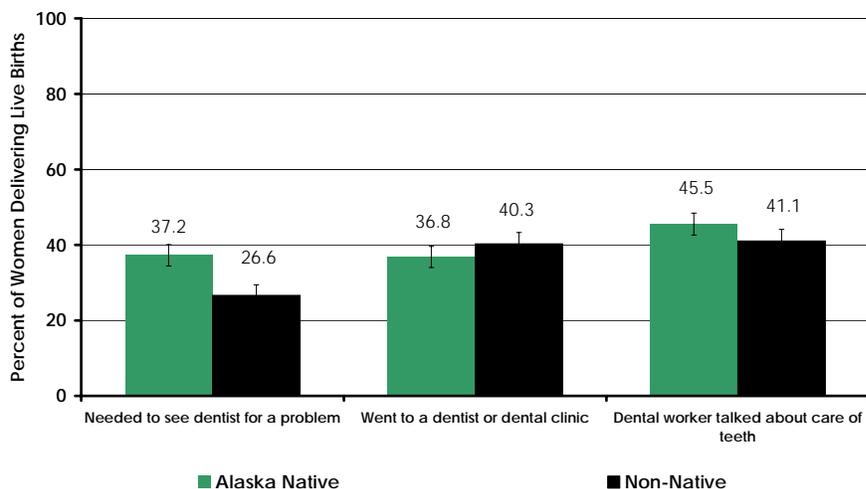
- ◆ During 2004-2005, a significantly higher percentage of Alaska Native mothers of newborns (37.2%) needed to see a dentist for a problem during their pregnancy compared with non-Native mothers (26.6%).
- ◆ About the same percentage of Alaska Native women and non-Native women indicated they went to a dentist or dental clinic (36.8% and 40.3%, respectively). A slightly higher prevalence of Alaska Native women (45.5%) mentioned that a dental or other health care worker talked with them about how to care for her teeth and gums than non-Native women (41.1%).
- ◆ Among women who said they needed to see a dentist for a problem during their pregnancy, 56.1% said they actually went to a dentist or dental clinic during their pregnancy.
- ◆ Regionally, disparities exist in the prevalence of women who recently delivered a liveborn infant and who stated that they had ever had their teeth cleaned. Four regions all showed a minimum of 92% (Anchorage/Mat-Su, Gulf Coast, Interior, and Southeast) while two regions – Northern and Southwest – showed prevalences of 65.8% and 62.8%, respectively.

Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

Note: Regional map of Alaska is found on page 7.

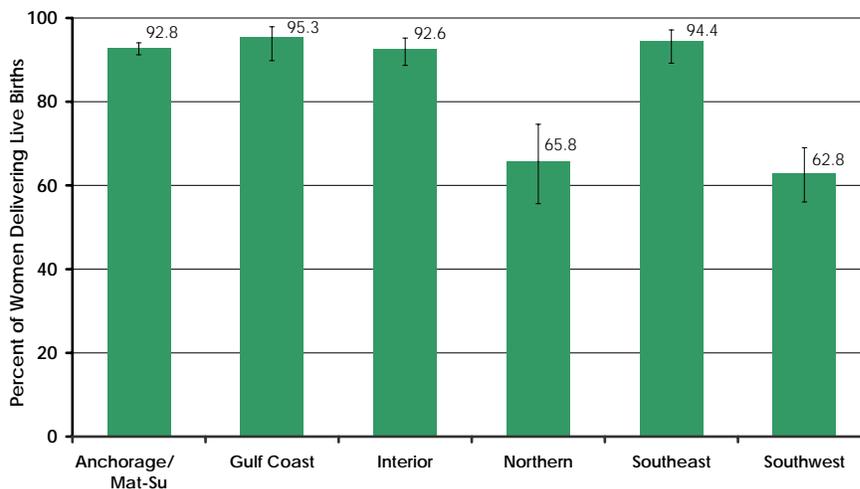
Women's Health

Oral Health Issues during Pregnancy by Alaska Native Status, Alaska, 2004-2005



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

Ever had Teeth Cleaned among Mothers of Newborns by Region, Alaska, 2004-2005



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

Postpartum Employment

Almost 50% of mothers return to work within the first year of their infants' life. Scientific interest in maternal employment has focused predominantly on its impact on children. For example, women who planned to commence work prior to six weeks postpartum were significantly less likely to initiate breastfeeding compared with those not intending to work postpartum (4). Better postpartum health outcomes have been shown to be associated with more control over work and home activities, more social support at work and home, and less job stress (5).

- ◆ Alaska's prevalence of postpartum working (or in school)* mothers stayed constant (42%) during the 2000-2003 time period. No racial disparities were identified.
- ◆ The prevalence of postpartum working (or in school) mothers during 2002-2003 did not differ appreciably by region of residence in Alaska.

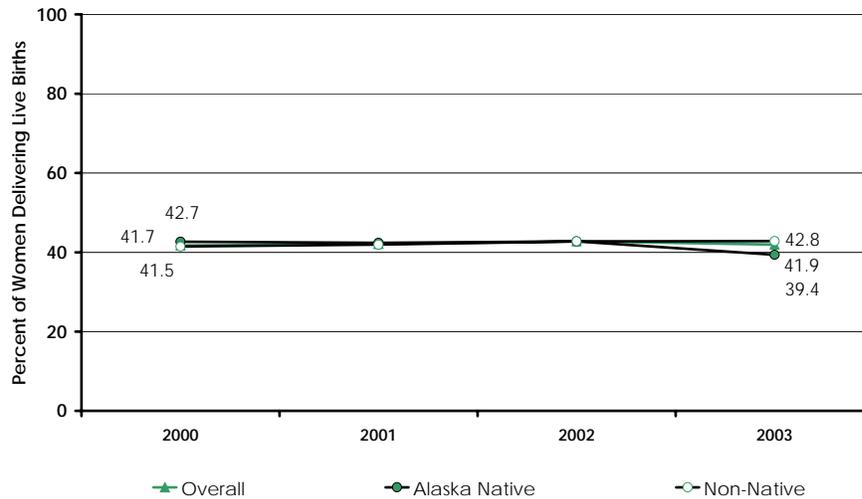
Data Source: Alaska Pregnancy Risk Assessment Monitoring System.

*Note: 16 weeks postpartum on average.

Note: [Regional map of Alaska is found on page 7.](#)

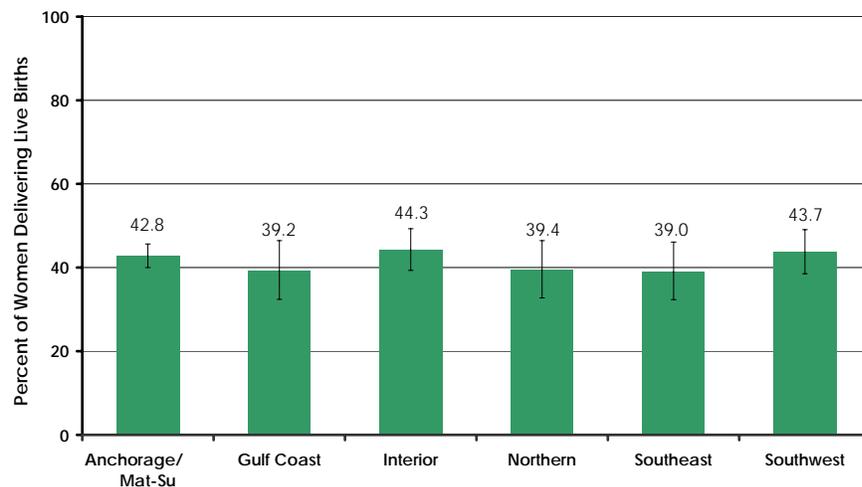
Women's Health

Mothers Currently Working or in School* by Year and Alaska Native Status, Alaska, 2000-2003



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.
* 16 weeks postpartum on average.

Mothers Currently Working or in School* by Region Alaska, 2002-2003



Data Source: Alaska Pregnancy Risk Assessment Monitoring System, MCH Epidemiology Unit.
* 16 weeks postpartum on average.

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Chapter 10: Women's Health

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Key Indicators of Maternal and Child Health



Healthy Alaskans 2010 Targets

2010 Objectives	Data Source	Estimate Year(s)	Alaska 2010 Target*
Reduce fetal and infant deaths			
Fetal deaths at 20 or more weeks of gestation per 1,000 live births and fetal deaths	BVS	5.4 (2003-05)	3.8
Reduce infant deaths			
All infant deaths per 1,000 live births	BVS	5.7 (2003-05)	4.5
Neonatal deaths per 1,000 live births		3.5 (2003-05)	2.5
Post-neonatal deaths per 1,000 live births		2.5 (2003-05)	2.3
Reduce infant deaths due to:			
Infant deaths due to birth defects per 1,000 live births	MIMR	1.9 (1992-2002)	1.5
Sudden infant deaths due to SIDS and unexplained asphyxia per 1,000 live births		2.0 (1992-2002)	1.0
Reduce child deaths			
Children ages 1 - 4 years, deaths per 100,000	BVS	39.6 (2003-05)	34.0
Children ages 5 - 9 years, deaths per 100,000		16.3 (2003-05)	17.0
Reduce adolescent and young adult deaths			
Adolescents ages 10 - 14 years, deaths per 100,000	BVS	42.4 (2003-05)	14.0
Adolescents ages 15 - 19 years, deaths per 100,000		105.8 (2003-05)	70.0
Young adults ages 20 - 24 years, deaths per 100,000		154.0 (2000-04)	90.0

Maternal and Child Health Indicators

2010 Objectives	Data Source	Estimate Year(s)	Alaska 2010 Target*
Reduce maternal deaths			
Pregnancy – associated deaths per 100,000	MIMR	53.1 (1990-99)	50.0
Pregnancy – related deaths per 100,000		7.4 (1990-99)	4.0
Increase maternal prenatal care (APNCU index)			
Percent beginning PNC in first trimester of pregnancy	BVS	80.5 (2005)	85.0
Percent with adequate prenatal care* (APNCU Index)		64.0 (2005)	75.0
Reduce low and very low birth weight			
Low birth weight, percent of live births	BVS	5.9 (2005)	4.0
Very low birth weight, percent of live births		0.9 (2005)	0.8
Reduce preterm births			
Preterm births(<37 wks gestation), percent of live births	BVS	10.7 (2005)	8.6
Increase percentage of infants put down to sleep on their backs			
Percent of infants put down to sleep on their backs	PRAMS	70.2 (2005)	70.0
Reduce neural tube defects and fetal alcohol syndrome			
Neural tube defects per 10,000 live births	ABDR	5.2 (2002-05)	5.0
Children with fetal alcohol syndrome per 10,000 live births	ABDR	14.0 (1996-2002)	0.5

Healthy Alaskans 2010 Targets

2010 Objectives	Data Source	Estimate Year(s)	Alaska 2010 Target*
Improve prenatal risk factors			
Percent of women who took multivitamins or prenatal vitamins one month before pregnancy	PRAMS	49.0 (2004-05)	75.0
Percent cigarette smoking (last 3 months of pregnancy)		16.0 (2005)	15.0
Percent drinking alcohol (last 3 months of pregnancy)		5.3 (2005)	3.5
Percent using marijuana (during pregnancy)		5.8 (2005)	3.5
Percent using cocaine (during pregnancy)		0.3 (2002)	0.0
Increase mothers who breastfeed			
Percent ever initiated breastfeeding	PRAMS	90.6 (2005)	95.0
Percent breastfeeding at 1 month postpartum		81.1 (2005)	80.0
Decrease the proportion of live births that occur as a result of an unintended pregnancy			
Percent of women who delivered a live-born infant whose pregnancy was unintended (wanted later or not at all)	PRAMS	43.0 (2005)	35.0
Increase the proportion of people who use contraception that are age 18 years or older and at risk of unintended pregnancies			
Percent of females age 18 years or older using contraception	BRFSS	82.9 (2002)	85.0
Reduce the proportion of females delivering live births despite use of a reversible contraceptive method			
Percent of women who delivered a live-born infant despite using birth control	PRAMS	24.3 (2005)	10.0

Maternal and Child Health Indicators

2010 Objectives	Data Source	Estimate Year(s)	Alaska 2010 Target*
Reduce teen pregnancy			
Births per 1,000 females ages 15 - 17 years	BVS	17.3 (2005)	25.0
Percent high school students never engaging in sexual intercourse before age 15	YRBS	83.5 (2003)	85.0
Percent middle school students never engaging in sexual intercourse before age 15		84.0 (1999)	90.0
Percent of high school students using condom at last intercourse	YRBS	67.2 (2003)	75.0
Percent of high school students using condom or hormonal method at last intercourse		86.5 (2002)	85.0

* Alaska Department of Health and Social Services, Division of Public Health. Healthy Alaskans 2010: Targets and Strategies for Improved Health. Juneau, Alaska. April 2002.

Title V Program Indicators

National Performance Measures		
National Performance Measure #	Indicator	Estimate (Year)
1	The percent of screen positive newborns who received timely follow up to definitive diagnosis and clinical management for condition(s) mandated by their state-sponsored newborn screening programs.	100 (2006)
2	The percent of children with special health care needs age 0 - 17 whose families partner in decision-making at all levels and are satisfied with the services they receive.	51.8 (2005/2006)
3	The percent of children with special health care needs age 0 - 17 who receive coordinated, ongoing, comprehensive care in a medical home.	39.3 (2005/2006)
4	The percent of children with special health care needs age 0 - 17 whose families have adequate private and/or public insurance to pay for the services they need.	62.3 (2005/2006)
5	The percent of children with special health care needs age 0 - 17 whose families report the community-based service systems are organized so they can use them easily.	85.1 (2005/2006)
6	The percent of youth age 12 - 17 with special health care needs who received the services necessary to make transitions to all aspects of adult life.	42.2 (2005/2006)
7	The percent of children 19 to 35 months who have received a full schedule of age appropriate immunizations for Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza and Hepatitis B.	75.4 (2005)
8	The rate of birth (per 1,000) for teenagers age 15 through 17 years.	17.3 (2005)
9	The percent of third grade children who have received protective sealants on at least one permanent molar tooth.	17.4 (2005)

Maternal and Child Health Indicators

National Performance Measures		
National Performance Measure #	Indicator	Estimate (Year)
10	The rate of deaths to children age 14 years or younger caused by motor vehicle crashes per 100,000 children.	6.5 (2003-2005)
11	The percent of mothers who breastfeed their infants at 6 months of age.	46.8 (2005)
12	The percent of newborns who have been screened for hearing before hospital discharge.	91.8 (2006)
13	The percent of children without health insurance.	9.2 (2004-2005)
14	The percentage of children, ages 2 to 5 years, receiving WIC services with a BMI at or above the 95th percentile.	21.7 (2006)
15	The percent of women who smoke in the last three months of pregnancy.	16.0 (2006)
16	The rate (per 100,000) of suicide deaths among youths age 15 through 19.	32.6 (2003-2005)
17	The percent of very low birth weight infants delivered at facilities for high-risk deliveries.	76.8 (2005)
18	The percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.	80.5 (2005)

Title V Program Indicators

State Performance Measures		
State Performance Measure #	Indicator	Estimate (Year)
1	The percent of mothers of newborns who say their physician or health plan would not start prenatal care as early as they wanted or they could not get an appointment as early as they wanted.	12.5 (2005)
2	The percent of women who smoked during the last 3 months of pregnancy among women who smoked 3 months prior to pregnancy and were talked to about the effects of smoking by a prenatal health care provider.	53.8 (2005)
3	The percent of children ages 10-11 who are at-risk for being overweight.	40.1 (2003)
4	The rate of substantiated reports of harm to children per 1,000 children age 0 to 18.	22.1 (2005)
5	The percentage of women who recently had a live-born infant who reported their prenatal health care provider advised them not to drink alcohol during their pregnancy.	79.5 (2005)
6	The percent of unintended pregnancies that resulted in a live birth among women who reported having a controlling partner during the 12 months prior to getting pregnant.	51.1 (2005)
7	Percent of women who recently had a live-born infant who reported that they always or often felt down, depressed, or hopeless since their new baby was born.	9.3 (2005)
8	The prevalence at birth of Fetal Alcohol Spectrum Disorders (FASD).	16.3 (2006)
9	The percent of infants who are reported to have a Cleft Lip/Palate defect who access the Title V sponsored Cleft Lip and Palate Specialty Clinic within the first year of life.	28.4 (2004-2006)

Maternal and Child Health Indicators

National Outcome Measures		
National Outcome Measure #	Indicator	Estimate (Year)
1	Infant mortality rate per 1,000 live births.	6.7 (2001-2005)
2	The ratio of the black infant mortality rate to the white infant mortality rate.	1.6 (2001-2005)
3	Neonatal mortality rate per 1,000 live births.	3.1 (2001-2005)
4	Post-neonatal mortality rate per 1,000 live births.	3.6 (2001-2005)
5	Perinatal mortality rate per 1,000 live births plus fetal deaths.	7.4 (2001-2005)
6	Child death rate per 100,000 children age 1 through 14.	32.1 (2001-2005)

Indicator Definitions



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, 1990-2005.

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, 1990-2005.

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, 1996-2005.

Postpartum Birth Control

Percent of mothers of newborns who indicated that they were doing something to keep from getting pregnant. Methods printed as part of the question for the respondent were not having sex at certain times [rhythm], the pill, condoms, IUD, having their tubes tied, or their partner having a vasectomy. In addition to these methods, Norplant®, shots (Depo-Provera®), diaphragm, and foam were

Indicator Definitions

printed on the survey for delivery years of 2000-2003; withdrawal and cervical ring were added on the survey for delivery years 2004-2005.

Numerator: Number of women who indicated that they were doing something to keep from getting pregnant (approximately 3 months postpartum on average).

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2000-2005.

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), 1996-2005.

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 the APNCU Index.

Denominator: Total number of live births.

Data Source: Alaska Bureau of Vital Statistics, 1996-2005.

Indicator Definitions (continued)

Mothers Receiving Prenatal Care in the First Trimester

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, 1996-2005.

Prenatal Care Counseling

Percent of mothers who indicated that a doctor, nurse, or other health care worker talked with them about listed topics on the survey during any of their prenatal care visits. Only discussions were counted, not reading materials or videos.

Numerator: Number of women who indicated that a doctor, nurse, or other health care worker talked with them about a particular topic during any of their prenatal care visits.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2004-2005.

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), 1996-2005.

Multivitamin or Prenatal Vitamin Use Before Pregnancy

Percent of women who indicated they took a multivitamin or prenatal

Indicator Definitions

vitamin during the month before they got pregnant with their new baby.

Numerator: Number of women who indicated they took a multivitamin or prenatal vitamin (either 1 to 3 times a week, 4 to 6 times a week, or every day of the week) during the month before 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), 2004-2005.

Multivitamin or Prenatal Vitamin Use During Pregnancy

Percent of women who indicated they took a multivitamin or prenatal vitamin during the last 3 months of their pregnancy.

Numerator: Number of women who indicated they took a multivitamin or prenatal vitamin (either 1 to 3 times a week, 4 to 6 times a week, or every day of the week) 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), 2004-2005.

Medicaid Coverage for Prenatal Care

Percent of women who indicated Medicaid or Denali KidCare paid for a portion of their prenatal care. (Medicaid responses obtained from a survey check box, Denali KidCare obtained from write-in responses.)

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

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

Indicator Definitions (continued)

Medicaid Coverage for Prenatal Care (continued)

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2005.

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), 1996-2005.

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 pushed, hit, slapped, kicked, or otherwise physically hurt them during their pregnancy. (NOTE: Data collection during 1996-1999 identified this as “physical abuse” on the survey. Data collected from 2000 on did not say “physical abuse” in any part of the question. It also 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), 1996-2005.

Prenatal Alcohol (Any Use)

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

Indicator Definitions

Numerator: Number of women who drank any alcohol (including responses of “less than 1 drink a week”) 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), 1996-2005.

Prenatal 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), 2001-2005.

Prenatal Cigarette Use

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

Numerator: Number of women who smoked cigarettes (including responses of “less than 1 cigarette a day”) 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 from 2000 on changed the timeframe 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), 1996-2005.

Indicator Definitions (continued)

Prenatal Smokeless Tobacco Use

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), 1996-2003.

Prenatal Iq'mik Use

Percent of women who used a mixture of ash and tobacco sometimes known as iq'mik or blackbull during pregnancy.

Numerator: Number of women who used iq'mik (as defined above) during pregnancy.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2004-2005.

Prenatal Spit Tobacco Use

Percent of women who used spit tobacco, chew or snuff that was not a mixture of ash and tobacco during pregnancy. [Question specifically identifies Copenhagen or other store-bought brand as an example. This contrasts with iq'mik.]

Numerator: Number of women who used spit tobacco (as defined above) during pregnancy.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2004-2005.

Indicator Definitions

Prenatal Marijuana Use

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), 1996-2005.

(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, 1996-2005.

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, 1996-2005.

Indicator Definitions (continued)

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, 1996-2005.

Fetal Mortality

Fetal mortality is expressed as the number of deaths from 20 weeks gestation to birth per 1,000 live births plus fetal deaths. 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 to birth.

Denominator: Total number of live births plus fetal deaths.

Data Source: Alaska Bureau of Vital Statistics, 1996-2005.

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, 1996-2005.

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, 1996-2005.

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, 1996-2005.

Breastfeeding (Initiation)

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

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

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2005.

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), 1996-2005.

Indicator Definitions (continued)

Breastfeeding (8 weeks)

Percent of mothers of newborns who indicated that they had breastfed their newborn for least 8 weeks.

Numerator: Number of women who indicated they had breastfed their newborn for at least 8 weeks.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2005.

Bed sharing, Mother-Infant

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 starting 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), 1996-2005.

Shaken Baby Awareness

Percent of mothers of newborns (on average, 16 weeks postpartum) who indicated that they had ever heard or read about what can happen if a baby is shaken.

Numerator: Number of women who indicated they had heard or read about what can happen if a baby is shaken.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2000-2003.

Indicator Definitions

Back-sleeping Infants

Percent of mothers of newborns who indicated (on average, 16 weeks postpartum) that they most often put their infant down on his/her back to sleep.

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), 1996-2005.

Exposure to Tobacco Smoke

Percent of mothers of newborns who indicated (on average, 16 weeks postpartum) that their newborn was in the same room with someone who is smoking for any 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), 1996-2005.

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 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, 1996-2005.

Indicator Definitions (continued)

Immunization Coverage

Immunization coverage is presented for individual vaccines and for the combined series of vaccines. A completed series is defined as four doses of Diphtheria Tetanus Pertussis (DTP) vaccine, three doses of polio vaccine, one dose of measles, mumps, rubella (MMR) vaccine, three doses of Haemophilus Influenza type b (Hib) vaccine, and three doses of hepatitis B (HepB) vaccine. If the child has completed all of the vaccine series listed they have completed the combined series of vaccines (4:3:1:3:3 series). The data applies to children ages 19 - 35 months old.

Numerator: Number of children ages 19 - 35 months with completed series for combined or individual vaccines.

Denominator: Number of household units surveyed during the stated time period adjusted for sampling and population characteristics.

Data Source: *The National Immunization Survey, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention.*

Fetal Alcohol Spectrum Disorders (FASD)

FASD prevalence is defined as the number children reported to the ABDR with ICD-9 code 760.71 (infant affected by maternal alcohol use) per 10,000 live births during a given birth year(s). FASD prevalence is reported by birth year. FASD trends are presented in three year moving averages. Only reported children who were matched to Alaska birth certificates are included in prevalence estimates. Infant's race is determined by mother's race as listed on the infant's birth certificate.

Numerator: Number of children reported to the ABDR with ICD-9 code 760.71

Denominator: Total number of live births.

Data Source: *Alaska Birth Defects Registry (ABDR), 1996-2002.*

Fetal Alcohol Syndrome (FAS)

Children with FAS make up a subset of children with FASD. FAS prevalence is expressed as the number of cases of FAS (as determined

Indicator Definitions

by medical chart review of reported FASD cases) per 10,000 live births. FAS prevalence is reported by birth year. FAS trends are presented in three year moving averages. Only reported children who were matched to Alaska birth certificates are included in prevalence estimates. Infant's race is determined by mother's race as listed on the infant's birth certificate.

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 Birth Defects Registry (ABDR), 1996-2002.

Untreated Dental Caries

Visual dental assessment by dentists on third-grade children to assess the presence of untreated tooth decay (cavities) on any primary and permanent teeth. Assessments were made in 50 elementary schools across Alaska – 10 schools for each BRFSS region.

Numerator: Number of Alaska third-grade children with untreated tooth decay

Denominator: Total number of Alaska third-grade children enrolled in one of the 50 schools assessed where the parent consented and the child assented.

Data Source: Alaska Dental Basic Screening Survey, Third-Grade Dental Assessments, Alaska Oral Health Program, 2004-2005 School Year.

Caries Experience

Visual dental assessment by dentists on third-grade children to assess the presence of any untreated tooth decay (cavities) or treated dental decay (fillings) on primary and permanent teeth. Assessments were made in 50 elementary schools across Alaska – 10 schools for each BRFSS region.

Indicator Definitions (continued)

Caries Experience (continued)

Numerator: Number of Alaska third-grade children with untreated or treated tooth decay.

Denominator: Total number of Alaska third-grade children enrolled in the 50 schools assessed where the parent consented and the child assented.

Data Source: *Alaska Dental Basic Screening Survey, Third-Grade Dental Assessments, Alaska Oral Health Program, 2004-2005 School Year.*

Dental Sealants

Visual dental assessment by dentists on third-grade children to assess the presence of at least one dental sealant on at least one permanent molar. Assessments were made in 50 elementary schools across Alaska – 10 schools for each BRFSS region.

Numerator: Number of Alaska third-grade children with at least one dental sealant on a permanent molar.

Denominator: Total number of Alaska third-grade children enrolled in the 50 schools assessed where the parent consented and the child assented.

Data Source: *Alaska Dental Basic Screening Survey, Third-Grade Dental Assessments, Alaska Oral Health Program, 2004-2005 School Year.*

Early or Urgent Dental Treatment Need

Visual dental assessment by dentists on third-grade children to assess treatment needs for untreated caries, spontaneous bleeding of the gums, swelling or ulceration of oral soft tissues. This indicator includes early dental care treatment needs (treatment recommended within several weeks) and urgent/emergency dental treatment needs (care recommended within 24 hours). Assessments were made in 50 elementary schools across Alaska – 10 schools for each BRFSS region.

Indicator Definitions

Numerator: Number of Alaska third-grade children with early or urgent dental treatment recommended.

Denominator: Total number of Alaska third-grade children enrolled in the 50 schools assessed where the parent consented and the child assented.

Data Source: Alaska Dental Basic Screening Survey, Third-Grade Dental Assessments, Alaska Oral Health Program, 2004-2005 School Year.

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, 1996-2005.

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, 1996-2005.

Indicator Definitions (continued)

Pre-pregnancy overweight or obesity

Percent of women whose body mass index (as calculated from self-reported weight and height just before pregnancy) 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), 1996-2005.

Postpartum Depression

Percent of mothers of newborns who indicated (on average, 16 weeks postpartum) that in the months after delivering their newborn they were either “a little depressed”, “moderately depressed”, or “very depressed”.

Numerator: Number of women who indicated that in the months after delivering their newborn they were either “a little depressed”, “moderately depressed”, or “very depressed”.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2005.

Postpartum Drinking

Percent of mothers of newborns who indicated (on average, 16 weeks postpartum) that they consumed any amount of alcohol since their new baby was born.

Numerator: Number of women who drank any alcohol (including responses of “less than 1 drink a week”) since their new baby was born.

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

Indicator Definitions

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2005.

Postpartum Smoking

Percent of mothers of newborns who indicated (on average, 16 weeks postpartum) that they smoke cigarettes “now”.

Numerator: Number of women who smoke cigarettes (including responses of “less than 1 cigarette a day”) “now”. (NOTE: The question was asked of women who had smoked at least 100 cigarettes in their lifetime. Data collection from 2000 on changed the timeframe 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), 1996-2005.

Physical Abuse by Husband/Partner during the 12 Months Before Pregnancy

Percent of women who indicated that their husband or partner pushed, hit, slapped, kicked, or otherwise physically hurt them 12 months before their pregnancy. (NOTE: Data collection during 1996-1999 identified this as “physical abuse” on the survey. Data collected from 2000 on did not say “physical abuse” in any part of the question. It also added the term “choked”.)

Numerator: Number of women who experienced physical abuse by their husband/partner 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), 1996-2005.

Indicator Definitions (continued)

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, 1996-2005.

Controlling Partner

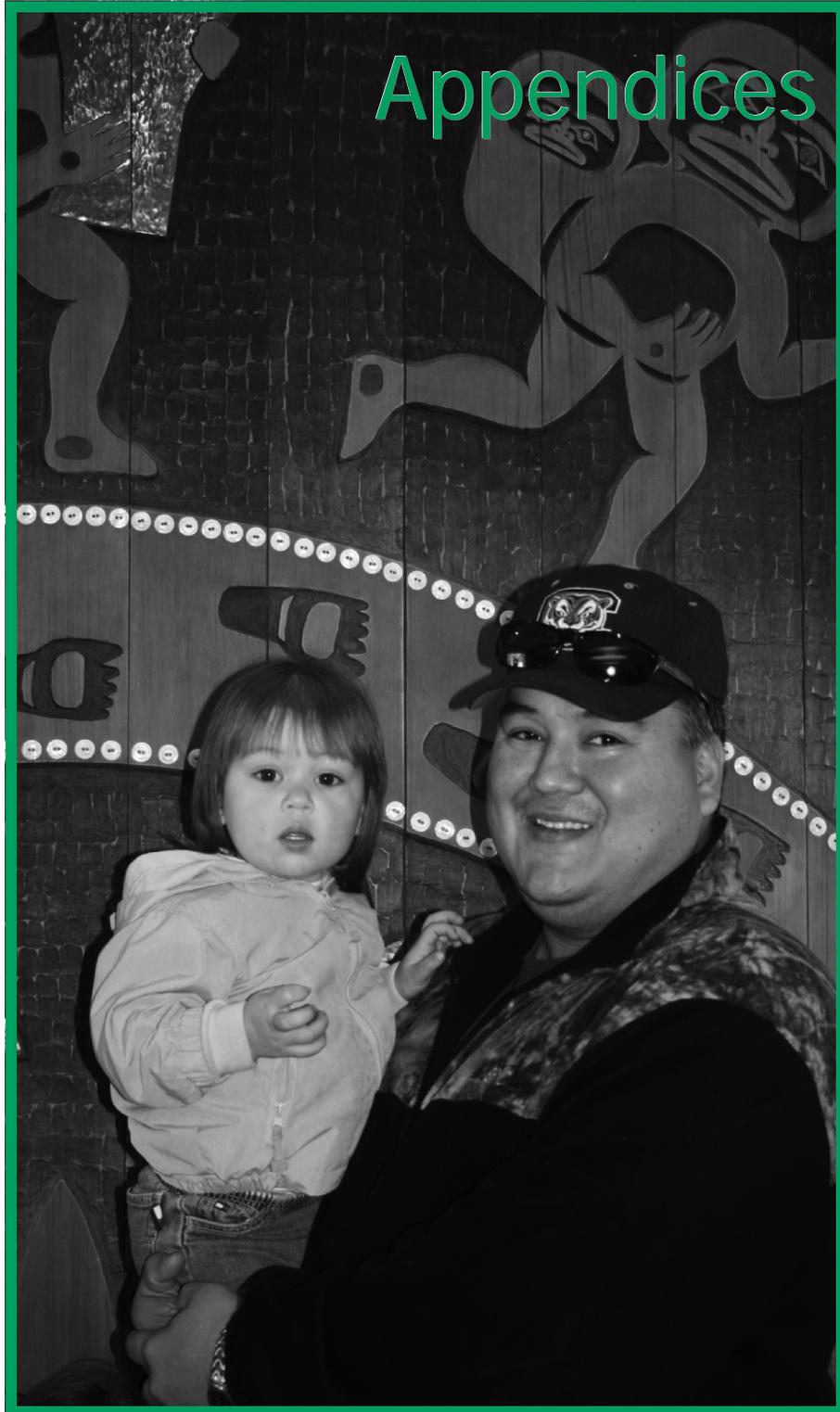
Percent of women who indicated their husband or partner threatened her, limited her activities against her will, or made her feel unsafe in any other way during either the 12 months before she got pregnant, during her most recent pregnancy, or since her new baby was born (on average, 16 weeks postpartum).

Numerator: Number of women who indicated their husband or partner threatened her, limited her activities against her will, or made her feel unsafe in any other way during either the 12 months before she got pregnant, during her most recent pregnancy, or since her new baby was born.

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

Data Source: Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2005.

Appendices



Technical Notes

Statistical Significance

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 $\alpha=.05$.

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:

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

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:

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

Trend Analyses

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. Trend analyses were completed using linear regression. We utilized PROC LOGISTIC in SAS (or in SUDAAN for PRAMS indicators) to test for linear trend at the 95% confidence level. P values $\leq .05$ were considered to be statistically significant.

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

Comparison Between Groups

We utilize relative percent difference, rate ratios and prevalence ratios to make comparison between groups.

Relative Percent Difference

We used relative percent difference to compare differences between groups and when comparing Alaska to the United States overall.

$$RPD = \frac{(P_1 - P_2)}{P_2} \times 100 = \left(\frac{P_1}{P_2} - 1 \right) \times 100$$

where P_1 = prevalence of event in population 1
 P_2 = prevalence of event in population 2

Note: 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 in-

Technical Notes (continued)

Rate Ratios and Prevalence Ratios

Prevalence ratios, the ratio of two prevalence estimates, are used to compare the prevalence for two populations and are similar to rate ratios which compare rates for two populations. Relative prevalence and rate ratios (RR) are 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 or prevalence for population 1

$Rate_2$ = rate or prevalence 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 prevalence 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.

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Appendix A

Acronyms

AAP:	American Academy of Pediatrics
ABDR:	Alaska Birth Defects Registry
APNCU:	Adequate prenatal care utilization
ATV:	All terrain vehicle
BCHC:	Breast and Cervical Health Check
BMI:	Body Mass Index
BRFSS:	Behavioral Risk Factor Surveillance System
BVS:	Alaska Bureau of Vital Statistics
CDC:	Centers for Disease Control and Prevention
CPT1:	Carnitine Palmitoyl Transferease-1
CSHCN:	Children with special health care needs
CUBS:	Childhood Understanding Behaviors Survey
D.C.:	District of Columbia
DKC:	Denali KidCare
DTP:	Diphtheria, tetanus, pertussis
EPSDT:	Early and Periodic Screening, Diagnosis and Treatment
ETS:	Environmental Tobacco Smoke
FAS:	Fetal Alcohol Syndrome
FASD:	Fetal Alcohol Spectrum Disorder
FASSNet:	Fetal Alcohol Syndrome Surveillance Network
HA:	Healthy Alaskans
HepB:	Hepatitis B
Hib:	Haemophilus influenza b
HIV:	Human Immunodeficiency Virus
HP:	Healthy People
IUD:	Intrauterine device
LBW:	Low Birth Weight
Mat-Su:	Matanuska Susitna Valley
MCAD:	Medium-Chain acyl-CoA Dehydrogenase
MCH:	Maternal and Child Health
MIMR:	Maternal Infant Mortality Review
MMR:	Measles, mumps, rubella
NCHS:	National Center for Health Statistics
NCI:	National Cancer Institute
NHANES:	National Health and Nutrition Examination Survey

Appendix B

NTD:	Neural tube defect
OPHL:	Oregon Public Health Laboratory
PKU:	Phenylketonuria
PNC:	Prenatal care
PRAMS:	Pregnancy Risk Assessment Monitoring System
PROM:	Premature rupture of membranes
SBS:	Shaken Baby Syndrome
SCAN:	Surveillance of Child Abuse and Neglect
SIDS:	Sudden Infant Death Syndrome
SUIDS:	Sudden Unexplained Infant Death Syndrome
Tandem MS:	Tandem mass spectrometry
U.S.:	United States
VLBW:	Very Low Birth Weight
VLCAD:	Very Long Chain Acyl CoA Dehydrogenase
WCFH:	Women's, Children's and Family Health
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 into prenatal care, number of prenatal visits, and gestational age of infant at birth.

Adolescent: Age from 10 through 14 years.

Alaska Native: In this publication, “Alaska Native” refers to all of Alaska’s indigenous people, including people of American Indian, Eskimo, and Aleut heritage.

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

Body Mass Index (BMI): Body mass index 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.

Appendix C

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 dysmorphism 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 1989, the rate is comprised of data from 1989-1991; 1990 is comprised of data from 1990-1992, and so forth.

Glossary (continued)

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 starting 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 population-based survey of Alaska resident women who have recently delivered a live-born infant. 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 and initiated by the State of Alaska in late 1990. 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

Appendix C

of Alaska's live birth records for infants between two and six months of age. Questions cover the pre-pregnancy, 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 2005 was 77%.

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.

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.

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