Alaska Maternal and Child Health Data Book 2014:

LIFE COURSE EDITION

Alaska Department of Health and Social Services
Division of Public Health
Section of Women's, Children's, and Family Health

ALASKA MATERNAL AND CHILD HEALTH DATA BOOK 2014: LIFE COURSE EDITION

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To find out more about the Alaska Maternal and Child Health Epidemiology Unit, visit:

http://dhss.alaska.gov/dph/wcfh/pages/mchepi/

To access an online version of this data book, visit:

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Introduction

A LETTER TO THE READER

We are pleased to present the *Alaska Maternal and Child Health Data Book 2014: Life Course Edition*. This book is the seventh in our series of reference books on the epidemiology of maternal, child and family health in Alaska. This version of the Maternal and Child Health (MCH) Data Book follows the Life Course Theory (LCT) framework. LCT is population-focused and firmly rooted in social determinants and social equity models. LCT is a framework that promotes optimal health and healthy development over a lifetime and across generations while advocating equity in health across communities and populations.

The four core life course concepts are timeline, timing, environment, and equity. They can be summarized as follows:

Timeline: Today's experiences and exposures influence tomorrow's health.

Timing: Health trajectories are particularly affected during critical or sensitive periods.

Environment: The broader community environment, that is, biologic, physical and social environment strongly affects the individual's capacity to be healthy.

Equity: While genetic makeup offers both protective and risk factors for disease conditions, inequality in health reflects more than genetics and personal choice.

The Life Course perspective integrates a focus on critical periods and early life events with an emphasis on the wear and tear a person experiences over time as a result of differences in protective and risk factors between population groups over the course of their lives.[1]

The Alaska Maternal and Child Health Data Book is produced by the MCH Epidemiology Unit of the Section of Women's, Children's, and Family Health in the Alaska Division of Public Health. Our purpose is to provide reliable data on maternal and child health issues for use in planning and evaluating programs, preventing poor health outcomes, and guiding public health policy. Through our programs and partners, we collect, analyze, and interpret information on women, children, and families. We hope the *Alaska MCH Data Book 2014: Life Course Edition* will be a helpful reference for all Alaskans concerned with improving the health and well-being of Alaskan families.

HOW TO USE THIS BOOK

The indicators in this data book are based on the Life Course Indicators identified by the national Association of Maternal & Child Health Programs (AMCHP). During 2012-2013, AMCHP coordinated an effort by a National Expert Panel and seven state teams to select and define life course measures that could be used to determine the success of the life course approach to maternal and child health programs. The collaborative effort led to the identification of 59 life course indicators that were grouped into thematic categories. As much as possible, these thematic categories align with the chapters in this data book. More information on the AMCHP life course indicators can be found here: http://www.amchp.org/programsandtopics/data-assessment/Pages/LifeCourseIndicators.aspx

Most of the indicators have at least two charts. These may include trend lines, bar charts, or pie charts. Additionally, the data findings are described in a page of bullet points opposite the charts. In some cases, additional data which are not shown graphically are described in the text.

Because Alaska has a small population dispersed across a large area, it is at times not practical to use a statewide estimate to describe a health-related problem in a particular area of the state. Therefore, we are pleased to present bar charts of regional estimates for many indicators to help mitigate this issue. The regions we use are the six labor market regions defined by the Alaska Department of Labor and Workforce Development (http://labor.alaska.gov/research/census/maps/EconRegions2013.pdf).

Alaska has a diverse population and because differences often exist between groups, a statewide estimate can be misleading. Where it is relevant or informative, we present information broken down by demographic classifications, including indicators of socioeconomic status, education, race, or age. Data are not presented for groups where the number of survey respondents or the population size is too small for the data to be reliable.

In order to properly interpret data, it is important to understand if findings are statistically significant. Differences or trends mentioned in the text are statistically significant, even if this is not explicitly stated. If an indicator either significantly increased or decreased over time, this is noted in the text describing the trend line.

For the purposes of this book, the term "Alaska Native" is used to describe persons who identified as either Alaska Native or American Indian.

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Theme 1:

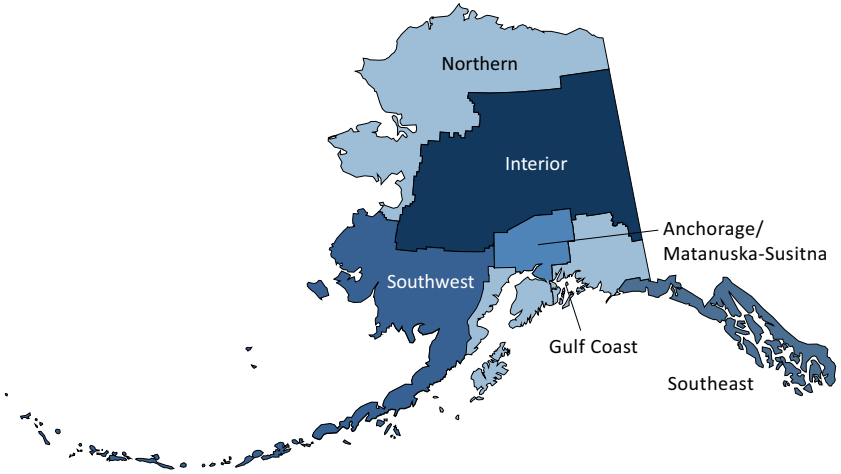
Maternal and Child Health Overview

Maternal and Child Health Overview

POPULATION SIZE

Geographically the nation's largest state, Alaska makes up approximately 16% of the United States land area, but only 0.2% of the population. The 2012 population estimate for Alaska was 732,298; 47.9% were female and 52.1% were male. The Maternal and Child Health (MCH) population consists of children less than 15 years of age and women of childbearing age (15-44 years).

- Alaska's MCH population in 2012 was 305,588 people, a larger proportion of the total population than that of the U.S. (42% versus 40%).
  - Twenty percent of both the Alaska and U.S. populations were comprised of women of childbearing age.
  - Alaska had a greater proportion of children aged 0-14 years than the U.S. (22% versus 20%) in 2012.
- In 2012, 71% of the Alaska population identified their race as White versus 79% of the United States. The American Indian/Alaska Native population (referred to in this databook as Alaska Native) makes up 17% of Alaska's population compared to only 1% of the U.S. population.
- Over half of the Alaska population lives in the Anchorage/Matanuska-Susitna (Anchorage/Mat-Su) region. Nearly one quarter (24%) of the total Alaska population lives in small communities of 2,500 people or less.

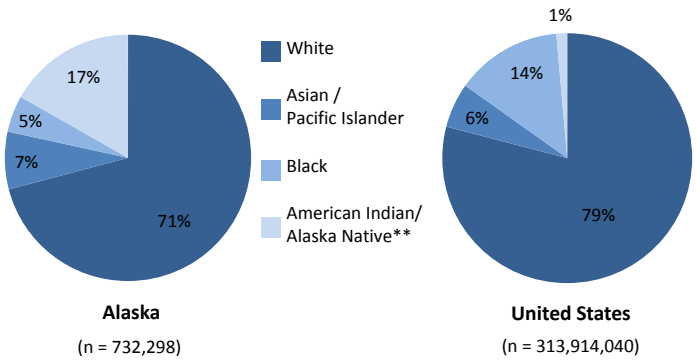


Data Sources: Alaska Dept. of Labor and Workforce Development, U.S. Dept. of Health and Human Services

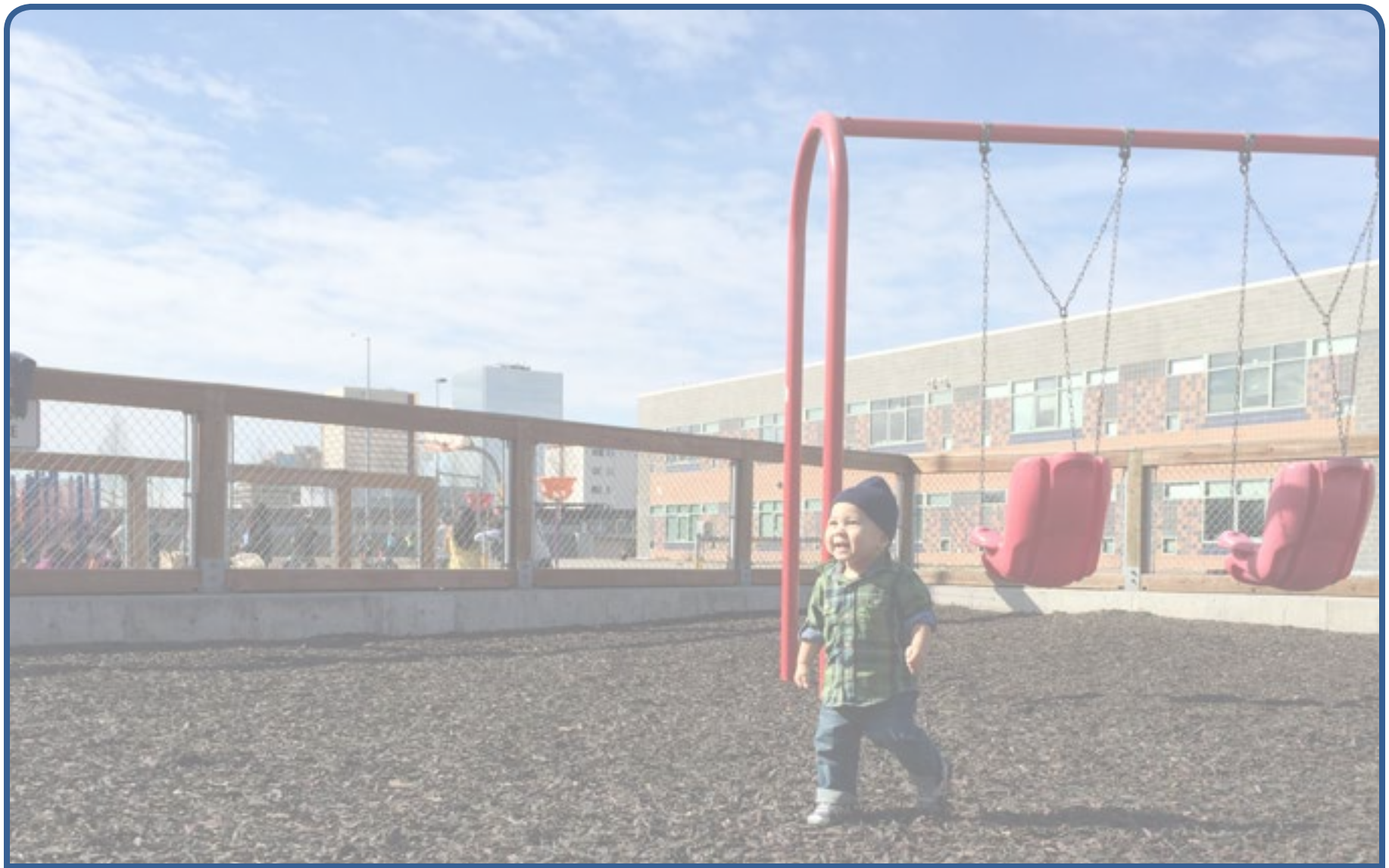
Maternal and Child Health Population
Alaska and U.S., 2012
Data Sources: Alaska Dept. of Labor and American Community Survey

Population Group	Age in Years	Alaska Population Estimate	U.S. Population Estimate
Infants	< 1	10,595	3,944,153
Children	1 - 4	44,129	16,257,209
Children	5 - 9	52,792	20,348,657
Adolescents	10 - 14	51,349	20,677,194
Women of Childbearing Age	15 - 44	146,723	62,374,964
Teen Women	*15 - 19*	23,696	10,736,677
Adult Women	*20 - 44*	123,027	51,638,287
Total MCH Population		305,588	123,602,177
Others		426,710	185,143,361
Total Population		**732,298**	**308,745,538**

Population Distribution, Bridged Race Estimates*
Alaska and U.S., 2012
Data Sources: Alaska Dept. of Labor, U.S. Dept. of Health and Human Services



* Bridged race estimates are race estimates that adjust data from surveys which allow reporting of more than one race group such that each respondent is assigned a single race.
** Throughout the data book the term "Alaska Native" will be used to represent this race category.



Theme 2:
Community Well-Being

POVERTY

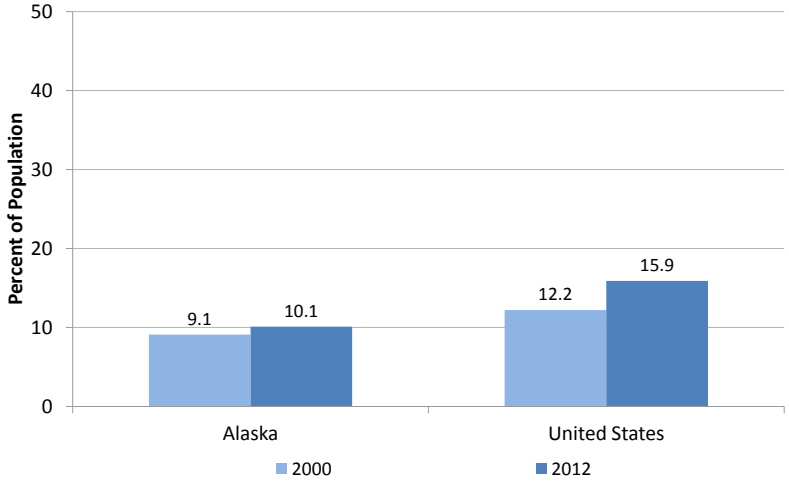
Poverty, a key indicator of health inequities, is associated with many negative health outcomes throughout life, especially when individuals are exposed at an early age. Poverty affects health both through decreased access to material resources, like health care and nutritional food, and through increased exposure to negative social and environmental factors, like violence, lead, and air pollution. Poverty is also associated with poor maternal health and birth outcomes such as infant mortality, low birth weight, and child maltreatment.[2]

In the American Community Survey, poverty status is determined by comparing annual income to a set of dollar values called poverty thresholds that vary by family size, the number of dependent children, and the age of the householder. If a family's total income is less than the corresponding threshold, then that family and every individual in it is considered to be living in poverty. The national poverty thresholds are updated annually to allow for changes in the cost of living using the Consumer Price Index.[3]

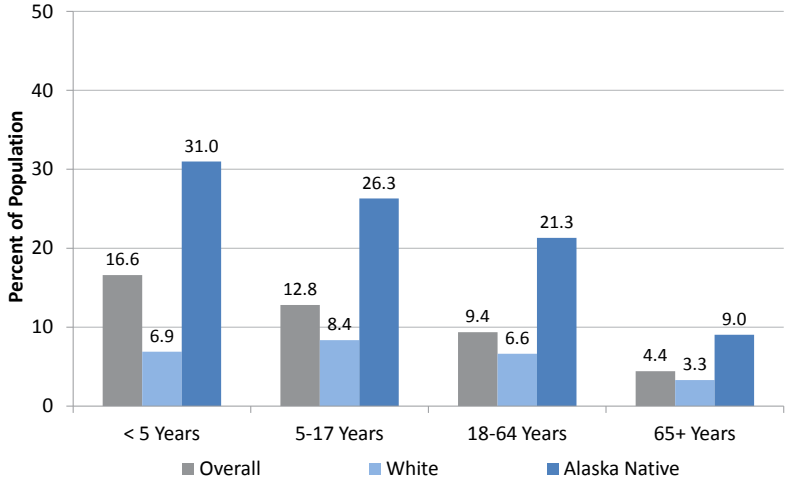
- Relative to the general U.S. population in 2012, proportionately fewer Alaskans lived in poverty (10.1% compared to 15.9%).
- Between 2000 and 2012, the percentage of U.S. residents living in poverty increased from 12.2% to 15.9%. The percentage of Alaska residents living in poverty did not significantly increase between 2000 (9.1%) and 2012 (10.1%).
- In 2012, a disproportionate number of Alaskan children lived in poverty compared to the general population. In Alaska, 13.9% of children under 18 years lived in poverty, compared to 8.8% of adults 18 years or older.
- In 2012, 22.4% of the total Alaska Native population in Alaska lived in poverty, compared to 6.6% of the White population. This disparity is also reflected across age groups.

Data Source: U.S. Census Bureau

Population Living Under the Federal Poverty Level
Alaska and U.S., 2000 and 2012
Data Source: American Community Survey



Population Living Under the Federal Poverty Level by Age Group and Race, Alaska, 2012
Data Source: American Community Survey



HOUSEHOLD FOOD INSECURITY

Food security is consistent, dependable access to adequate food for active, healthy living. It is especially important for children because their nutrition affects not only their current health, but also their physical, mental, and social development. Children in food-insecure households face higher risks of poor health and development outcomes than children in otherwise similar food-secure households. The U.S. Department of Agriculture (USDA) monitors the extent and severity of food insecurity in U.S. households through the Economic Research Survey, an annual, nationally representative survey, with special attention to households with children.

- During 2010-2012, 12.1% of Alaska households and 14.7% of U.S. households were classified as "Low Food Security," which means reduced quality, variety, or desirability of diet was reported. 4.4% of Alaska households and 5.6% of U.S. households were classified as "Very Low Food Security," which means multiple indications of disrupted eating patterns and reduced food intake were reported.

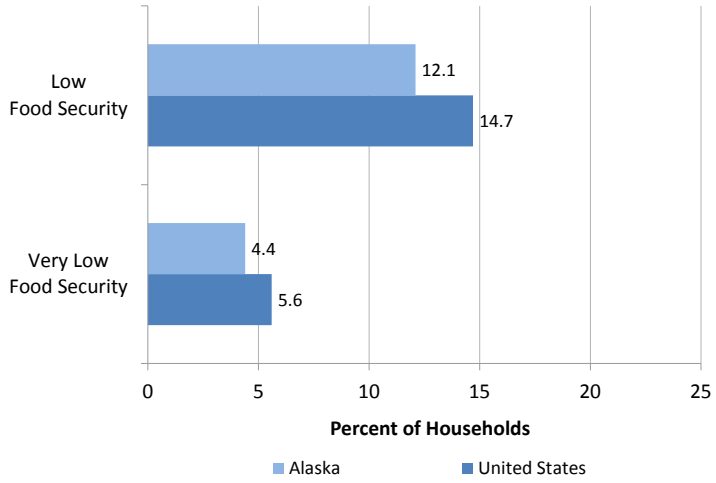
The Alaska Childhood Understanding Behaviors Survey (CUBS) monitors indicators of food insecurity among Alaska families by surveying mothers of 3-year-old children about their recent use of public services for food, cutting the size of meals, or skipping meals due to lack of food.

- During 2009-2012, 7.1% of all mothers of 3-year-olds in Alaska reported they cut the size of meals or skipped meals during the past 3 months because there wasn't enough food in their home. This prevalence varied by residence region.
- Several programs exist to help alleviate food insecurity. During 2009-2012, 38% of all mothers of 3-year-olds in Alaska reported using WIC to feed themselves and their family during the past three months. 23.4% reported using food stamps, 16.4% reported using a free or reduced price school lunch program, and 7.7% reported using a food bank or food pantry.
- Use of food services was associated with lower maternal education. During 2009-2012, mothers of 3-year-olds with less than 12 years of education were more likely to report recent use of all four services (WIC, food stamps, free or reduced price school lunch program, and food bank or food pantry), compared to mothers with more than 12 years of education.

Data Sources: USDA Economic Research Survey, Alaska CUBS

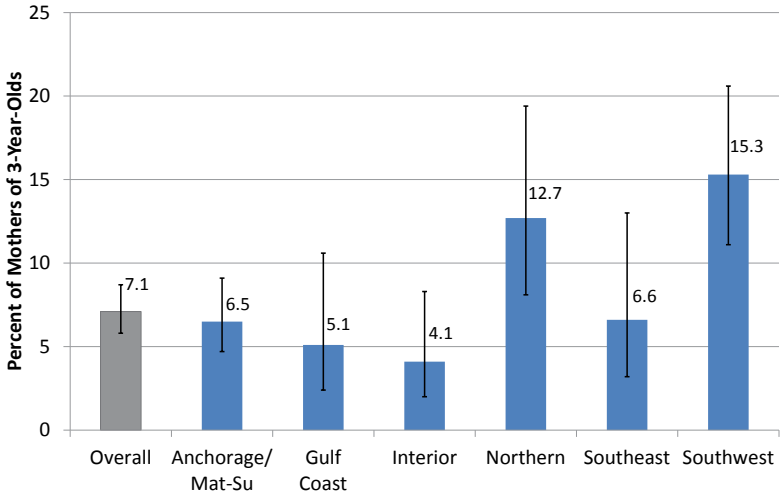
Low Food Secure and Very Low Food Secure Households Alaska and U.S., 2010-2012

Data Source: U.S. Department of Agriculture Economic Research Survey



Mothers of 3-Year-Olds Who Report Skipping or Cutting the Size of Meals During the Past 3 Months, by Region*, Alaska, 2009-2012

Data Source: CUBS, Alaska Division of Public Health



*See page 2 for regional map.

HOMELESSNESS

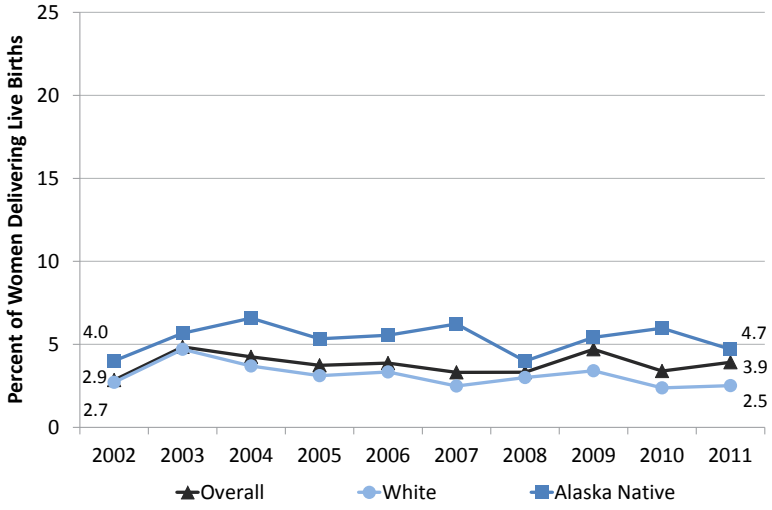
Homelessness is characterized by extreme poverty coupled with a lack of stable housing. Diverse at-risk groups (such as children on their own or with families, single adults, seniors, and veterans) each have differing factors that contribute to their homelessness. Living on the street or in homeless shelters may exacerbate existing health problems (such as diabetes, asthma, or mental health issues) or make them difficult to manage.[4]

Living on the street or in homeless shelters can mean exposure to the elements or crowded living conditions with a lack of privacy or security. This contributes to an increased risk of communicable diseases (such as sexually transmitted diseases or tuberculosis) and violence (physical, sexual, and mental). Medications to manage health conditions may be stolen, lost, or compromised due to weather or other factors.[4]

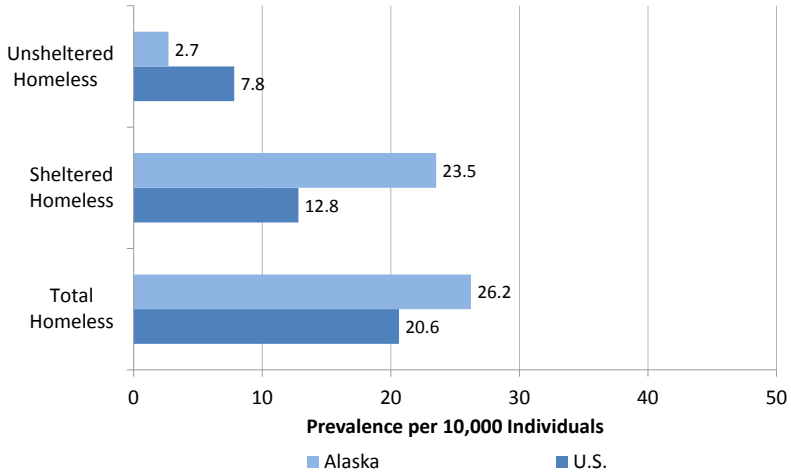
- The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) asked women who recently delivered a live birth whether they were homeless during the 12 months before their baby was born. The percentage who indicated that they were homeless did not significantly change during 2002-2011.
- In 2011, 3.9% of Alaska women were homeless in the 12 months before delivering their baby.
- In a point-in-time estimate for January 2010, prepared by the U.S. Department of Housing and Urban Development, the prevalence of homelessness in Alaska was 26.2 per 10,000 individuals. Alaska exceeded the U.S. homeless point prevalence for sheltered homeless (23.5 vs. 12.8 per 10,000) but had a lower prevalence of unsheltered homeless (2.7 vs. 7.8 per 10,000).

Data Sources: Alaska PRAMS, U.S. Dept. of Housing and Urban Development

Mothers Who Were Homeless 12 Months Before Birth of Baby
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



Experience of Homelessness Among Individuals
Alaska and U.S., 2010
Data Source: U.S. Dept. of Housing and Urban Development



HOMICIDE AND COMMUNITY VIOLENCE

The public health impact of homicide and other violent crimes reaches beyond the premature death of the victim to affect surviving family, friends, and the community. Survivors of violent crimes are at risk for posttraumatic stress disorder, major depressive episodes, and drug abuse/dependence.[5] Youth exposed to community violence have increased rates of anxiety, aggression, and future violent behavior. Violence can also affect the health of entire communities by increasing health care costs, decreasing property values, and disrupting social services.[6]

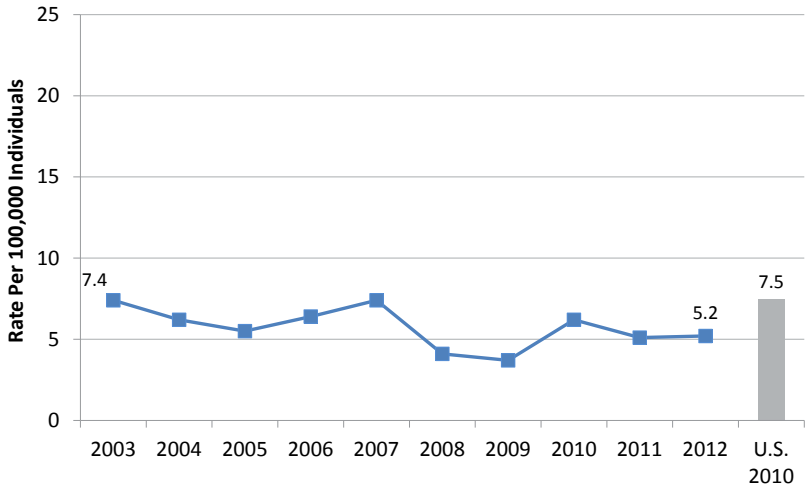
- In 2010, Alaska's homicide rate per 100,000 individuals was 6.2, compared to 7.5 for the U.S.
- During 2001–2010, homicide was the second leading cause of death among teens aged 15-19 years in the U.S. and the third leading cause of death among teens aged 15-19 years in Alaska.[6]

During 2011-2012, the National Survey of Children's Health (NSCH) asked parents of 0-17 year-olds whether their child was ever a victim or a witness of neighborhood violence.

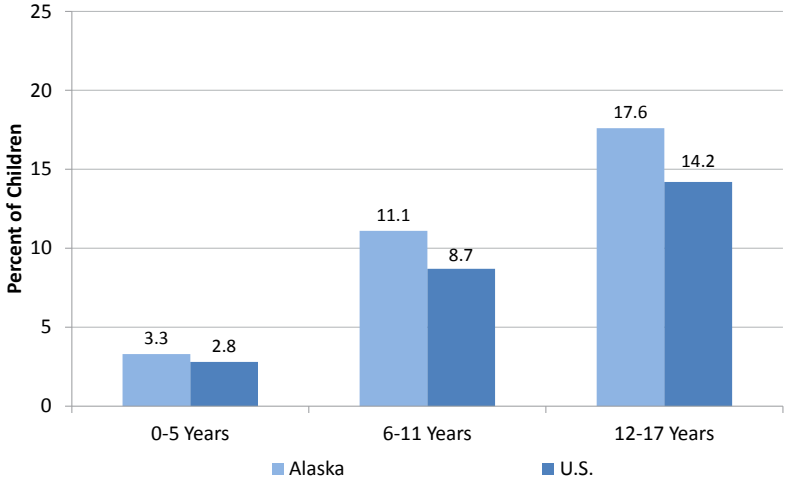
- Overall, 10.6% of Alaska parents of children aged 0-17 years and 8.6% of U.S. parents of children aged 0-17 years reported that their child was ever a victim or a witness of neighborhood violence.

Data Sources: Alaska Bureau of Vital Statistics, National Vital Statistics System, NSCH

Homicide in the Total Population
Alaska, 2003-2012 and U.S., 2010
Data Sources: Alaska Bureau of Vital Statistics, National Vital Statistics System



Child was Ever a Victim or Witness of Neighborhood Violence
by Age Group, Alaska and U.S., 2011-2012
Data Source: National Survey of Children's Health



INCARCERATION

Being incarcerated as a juvenile or an adult contributes to poor mental health and physical well-being, deficient education and under employment. Prisoners may be isolated from outside support systems, particularly if they are placed in facilities far from the community where they live. After many decades on the rise, the total U.S. correctional population, which includes those on probation, parole, and in prison, steadily decreased from 2009 through 2012. By the end of 2012, 2.9% of U.S. adults aged 18 years or older were supervised by the U.S. correctional system.

Some of the most evident disparities in incarceration rates nationwide are by race. In the Alaska prison and jail population, the proportion of Alaska Native people is twice their representation in the general population.

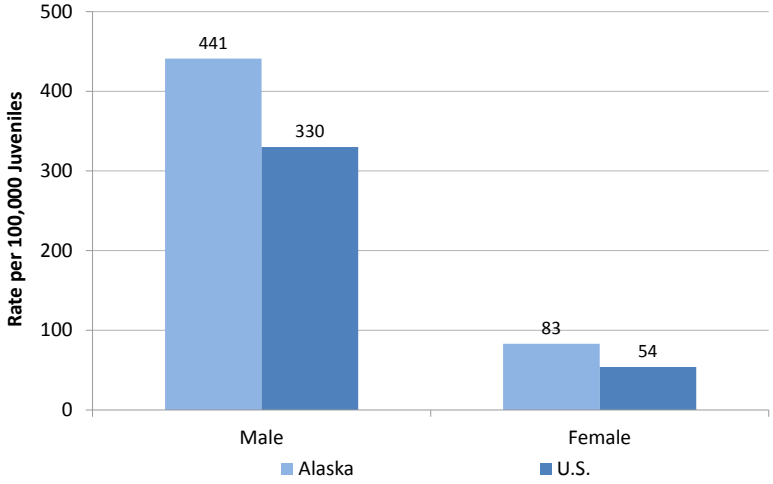
Four facilities in Anchorage, Fairbanks, Juneau, and Bethel serve as long-term detention centers for juveniles in Alaska. All facilities provide educational services through the local school system, as well as comprehensive medical and mental health services as necessary.

- Alaska's juvenile (13-17 years) residential placement in 2011 was 27% higher (270 per 100,000 juveniles) than the U.S rate of 196 per 100,000. The rate of placement in juvenile detention centers was higher for males than females.
- In Alaska, the rate of detention in 2011 among the Alaska Native juvenile population (568 per 100,000 juveniles) was more than double the rate of detention for all other races (270 per 100,000).
- The imprisonment rate for all Alaska adults in 2011 was 774 per 100,000 residents, 34% more than the rate for the total U.S population (511 per 100,000).
- Alaska PRAMS surveyed women who recently delivered a live birth about their experiences during the 12 months before their baby was born. During 2002-2011, both Alaska Native women and White women reported a decline in the prevalence of either themselves or their husbands/partners being incarcerated in the 12 months before delivery of their baby.

Data Sources: Office of Juvenile Justice and Delinquency Prevention, Bureau of Justice Statistics, Alaska PRAMS

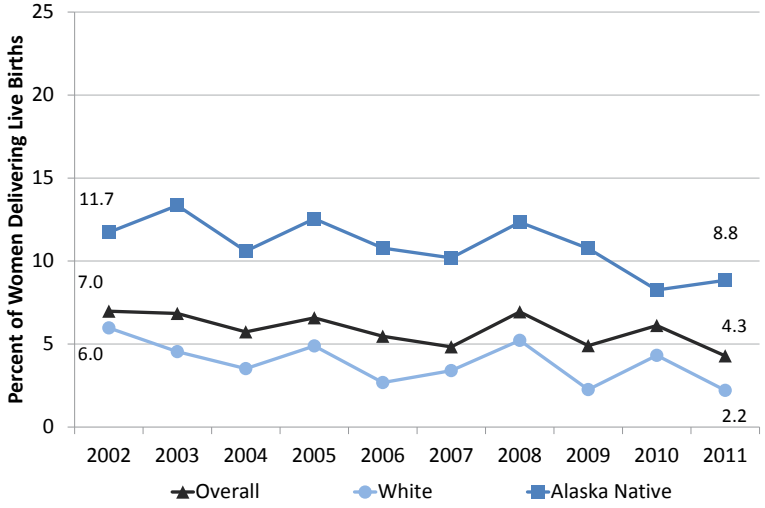
Juveniles Aged 13-17 Years in Residential Placement by Sex Alaska and U.S., 2011

Data Source: Office of Juvenile Justice and Delinquency Prevention



Husband/Partner or Mother Went to Jail 12 Months Before Birth of Baby, Alaska, 2002-2011

Data Source: PRAMS, Alaska Division of Public Health



SCHOOL READINESS

School readiness is a group of measures representing how prepared a child is to succeed in school, cognitively, socially and emotionally. Children who enter school with a basic knowledge of math and reading are more likely than their peers to experience later academic success, attain higher levels of education, and secure employment. Absence of these and other skills may contribute to even greater disparities over one's life span.[7]

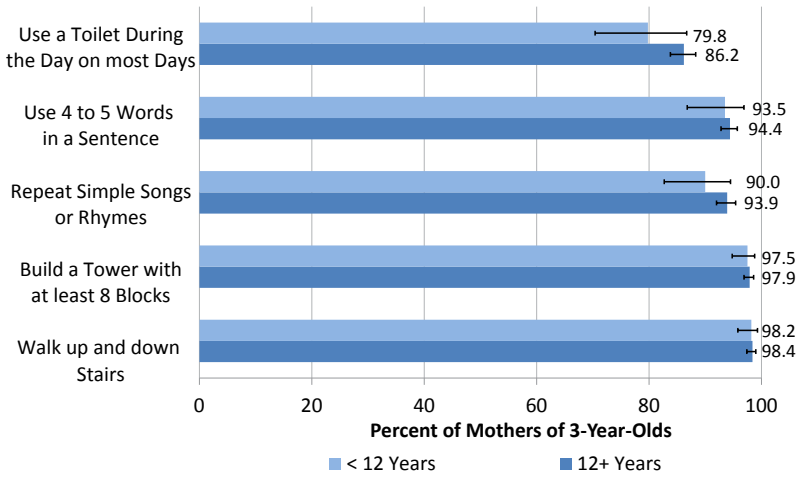
In an effort to measure indicators of overall school readiness, Alaska CUBS asked mothers of 3-year-olds questions to determine their child's language development, preliterate skills, cognitive abilities, fine motor skills, and gross motor skills.

- During 2009-2011, at least 90% of all Alaska mothers of 3-year-olds indicated that their child could currently do all four developmental skills asked about on the survey, including using 4-5 words in a sentence, repeating simple songs or rhymes, building a tower with at least 8 blocks, and walking up and down stairs.
- During 2009-2011, 86.2% of mothers with more than 12 years of education responded that their 3-year-old child used the toilet during the day on most days, compared to 79.8% of mothers with less than 12 years of education. This milestone is an indicator of preschool readiness.
- The National Center for Education Statistics measured proficiency in reading and math among 4th graders in Alaska and the U.S. In 2013, Alaska's fourth grade students were less proficient in both reading (27%) and math (37%) than U.S. students (35% and 42%).

Data Sources: Alaska CUBS, National Center for Education Statistics

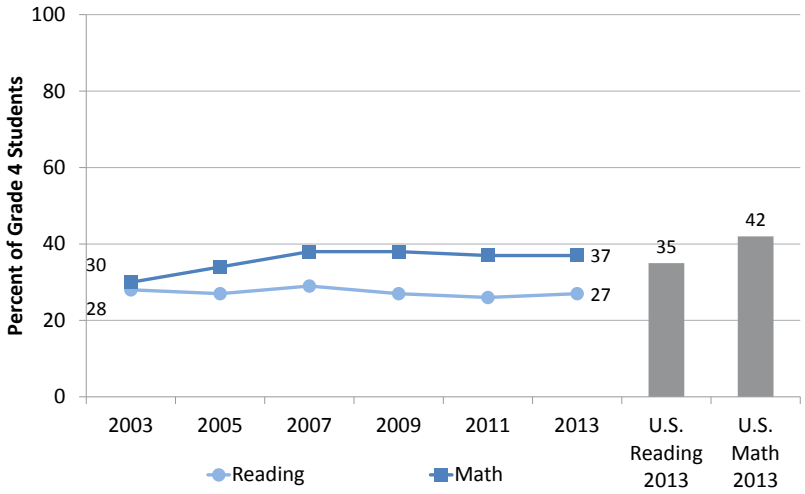
Developmental Milestones Among 3-Year-Olds by Maternal Education Alaska, 2009-2011

Data Source: CUBS, Alaska Division of Public Health



Grade 4 Proficiency in Reading and Math Alaska, 2003-2013 and U.S., 2013

Data Source: National Center for Education Statistics



BABY-FRIENDLY HOSPITALS

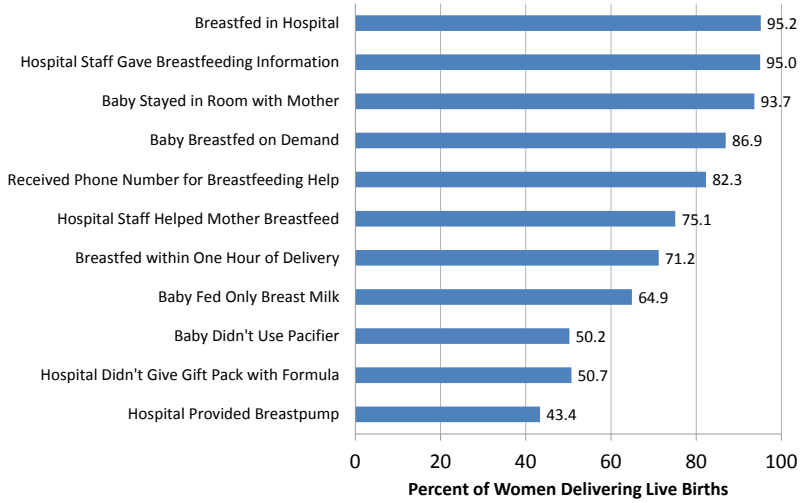
Birth facility policies and practices can significantly impact whether a woman chooses to start breastfeeding and how long she continues to breastfeed. The hospital-based Baby-Friendly accreditation initiative aims to improve maternity care procedures in birth facilities to support breastfeeding by encouraging implementation of ten practices recommended by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). They include a model breastfeeding policy, staff competency assessment, prenatal breastfeeding education, early initiation of breastfeeding, teaching breastfeeding techniques, limited use of supplements, rooming-in, teaching feeding cues, limited use of pacifiers, and post-discharge support.

Hospitals designated as Baby-Friendly have implemented policies based on all ten practices and offer an optimal level of care for lactation. A recent five-state study that included Alaska PRAMS data found that breastfeeding initiation and duration increased among mothers with lower education who delivered in facilities with Baby-Friendly accreditation.[8]

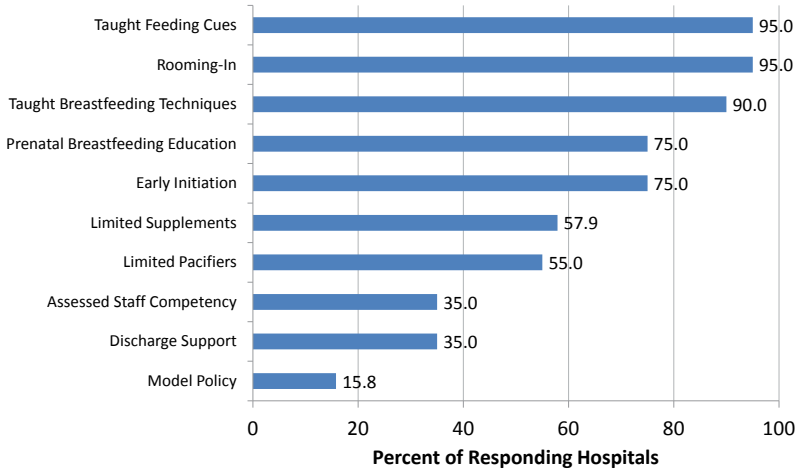
- The CDC Breastfeeding Report Card presents national data on Baby-Friendly hospitals. In 2013, 7.2% percent of U.S. live births and 21.7% of Alaska live births occurred in hospitals that were designated Baby-Friendly.
- During 2009-2011, the Alaska PRAMS survey asked women with recent hospital deliveries of a live-born infant to report on their experiences. The most common baby-friendly hospital practices reported were breastfeeding in the hospital (95.2%), hospital staff gave breastfeeding information (95.0%), and baby stayed in the room with the mother (93.7%).
- Maternity Practices in Infant Nutrition and Care (mPINC), conducted by the CDC, is a national survey of maternity care practices related to breastfeeding. In 2011, 77% of the 26 eligible Alaska hospitals and birth facilities responded. 95% of those reported teaching feeding cues and rooming-in. Only 15.8% had a model breastfeeding policy.

Data Sources: CDC Breastfeeding Report Card, Alaska PRAMS, mPINC

Maternal Experience of In-Hospital Breastfeeding Support
Alaska, 2009-2011
Data Source: PRAMS, Alaska Division of Public Health



Alaska Hospitals with Baby-Friendly Hospital Policies and Practices
Alaska, 2011
Data Source: mPINC Survey, U.S. CDC



WATER FLUORIDATION POLICIES

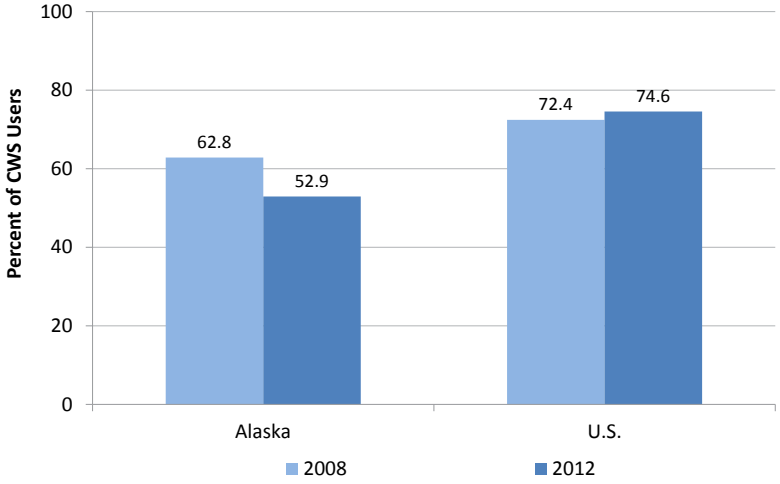
The U.S. Centers for Disease Control and Prevention has recognized water fluoridation as one of the ten great public health achievements of the 20th century. Fluoride in water provides some protection from tooth decay for all people who drink the water or eat food prepared with fluoridated water. Community water fluoridation is the controlled adjustment of fluoride in a public water supply. While fluoride occurs naturally in water across the U.S., it is usually lower than the optimal concentration needed to prevent dental caries.[9]

- Between 2008 and 2012 the U.S. population served by community water systems with fluoridated water rose from 72.4% to 74.6%. During the same period the Alaska population served by community water systems with fluoridated water dropped from 62.9% to 52.9%.
- The Alaska Oral Health Program collects information on fluoridation by community water systems. In State Fiscal Year (SFY) 2013, 32 water systems provided fluoridated water in Alaska, serving a total of 337,303 Alaskans.
- Several cities in Alaska do not fluoridate their community water systems, including Fairbanks and Palmer, which discontinued water fluoridation in 2011.
- In SFY 2013, the regions of Alaska with the highest percentage of the population served by fluoridated community water systems were Anchorage/Mat-Su (72.6%) and Northern (53.9%). The regions with the lowest percentage of the population served were Gulf Coast (3.8%) and Interior (7.4%).

Data Sources: CDC Water Fluoridation Reporting System, Alaska Oral Health Program

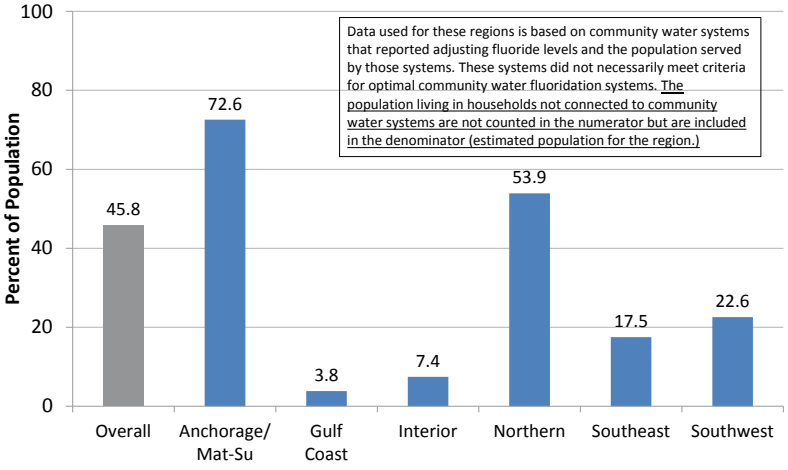
Homes on Community Water Systems (CWS) that Receive Optimally Fluoridated Water, Alaska and U.S., 2008 and 2012

Data Source: CDC Water Fluoridation Reporting System



Population Served by Fluoridated Community Water Systems by Region*, Alaska, SFY 2013

Data Source: Oral Health Program, Alaska Division of Public Health



*See page 2 for regional map.

Theme 3:

Economic Experiences

HIGH SCHOOL GRADUATION

High school graduation within a four-year period is correlated with an individual's earning potential and contributes to both current and future socioeconomic status. Youth who do not graduate high school within four years have greater odds of unemployment, poverty, and criminal behavior. A community or state's high school graduation rate is an indicator of life course health as it reflects economic experiences, social capital, and health trajectories of its residents. The educational achievement of youth is also related to a community's economic growth and stability.

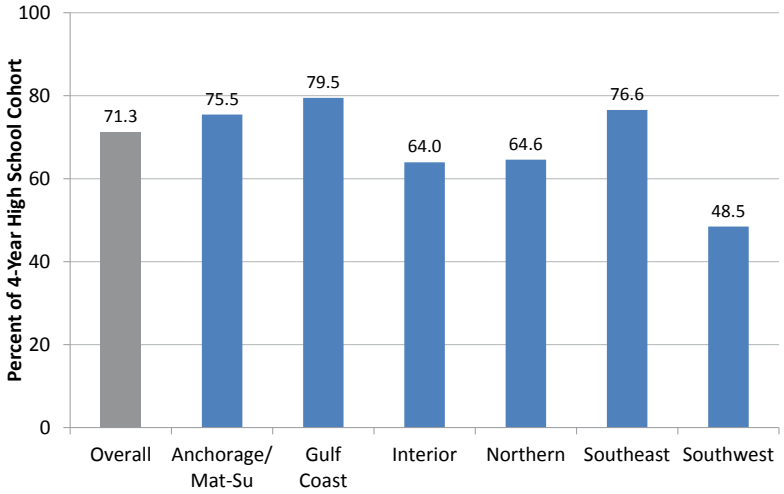
Beginning in 2010-2011, Alaska adopted the adjusted four-year cohort graduation rate required by the U.S. Department of Education for calculating graduation rates. This method requires every high school student to be assigned a cohort year based on when the student first entered ninth grade, with the expectation that the student will graduate in four years. The graduation rate is a proportion equal to the percent of students in the cohort group who graduate within four years.

- In Alaska, 71.8% of the four-year cohort which entered ninth grade in 2009 graduated in 2013. This represented 7,129 students graduating statewide from public high schools. This is a continuance of the upward trend of graduation rates from previous years.
- In 2013, the regions of Alaska with the highest percentage of high school students graduating with their four-year cohort were the Gulf Coast (79.5%) and Southeast (76.6%). The region with the lowest percentage of high school students graduating with their four-year cohort was Southwest Alaska (48.5%).

Data Source: Alaska Dept. of Education and Early Development

High School Graduation Rates
Alaska, 2004-2013
Data Source: Alaska Dept. of Education and Early Development

High School Graduation Rates by Region*
Alaska, 2013
Data Source: Alaska Dept. of Education and Early Development



*See page 2 for regional map.

MATERNAL EDUCATION

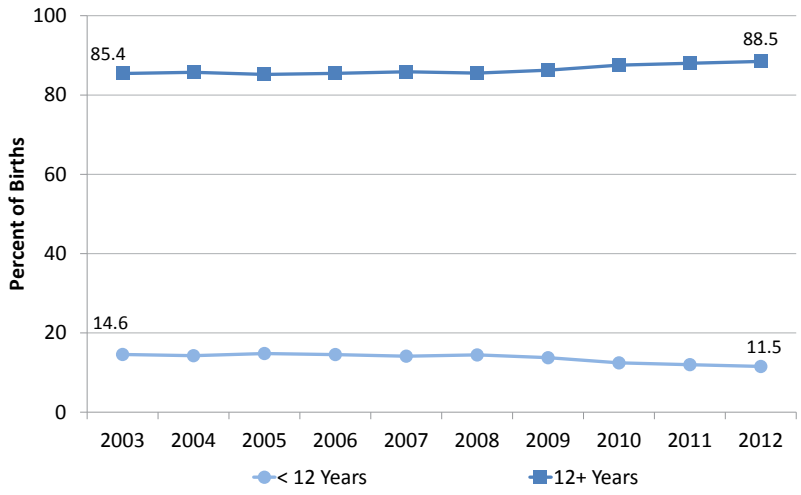
Educational attainment is one of the strongest predictors of health, and the protective health effects of graduating high school are well documented. Women who graduate are at a lower risk of experiencing a variety of adverse maternal and child health outcomes, including infant mortality, intimate partner violence, and low socioeconomic status.

In addition, maternal education is associated with the health and socioeconomic status of their children throughout their life course. Increased levels of maternal education are positively associated with increased levels of prenatal care, breastfeeding initiation, involved parenting, positive mother-child interaction, and parental advocacy for their child's needs.[10]

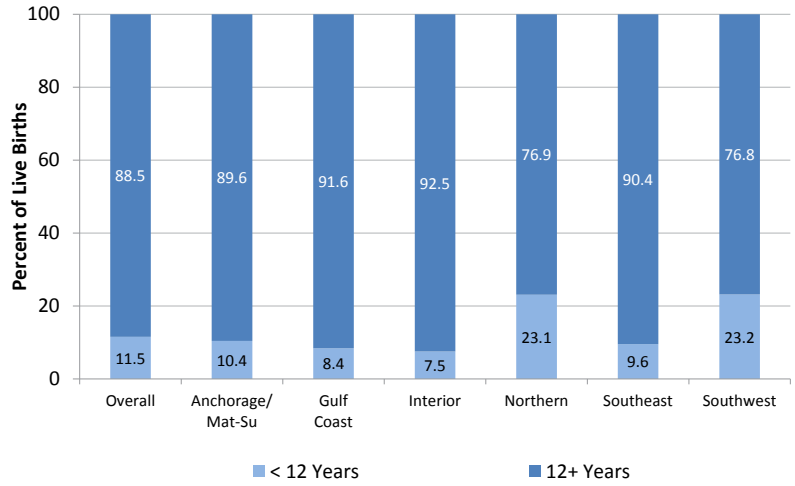
- In 2012, more than half (51.3%) of all births in Alaska were to mothers with more than 12 years of education, 37.1% had 12 years of education, and 11.5% had less than 12 years of education.
- While the majority of births in all regions were among mothers with 12 or more years of education, regional differences in maternal education levels exist in Alaska. In 2012, the percent of births to mothers with less than 12 years of education in the Northern (23.1%) and Southwest (23.2%) regions of Alaska was more than double the prevalence in the other four regions.

Data Source: Alaska Bureau of Vital Statistics

Annual Distribution of Births by Maternal Education
Alaska, 2003-2012
Data Source: Alaska Bureau of Vital Statistics



Distribution of Births by Region* and Maternal Education
Alaska, 2012
Data Source: Alaska Bureau of Vital Statistics



*See page 2 for regional map.

UNEMPLOYMENT

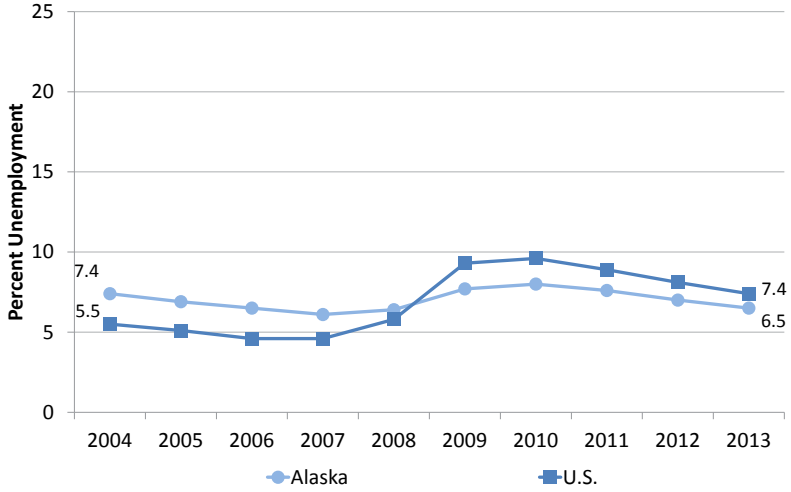
Unemployment affects the health of individuals and their dependents through reduced financial resources and access to health care. For adults, long-term unemployment may lead to decreased well-being that is never fully recovered, even after regaining employment. Parental unemployment is also associated with a myriad of poor children's health outcomes like preterm birth, maltreatment, neglect, sexual abuse, mental injury, low self-esteem, and increased self-destructive behavior among adolescents.[11]

Unemployment prevalence for individuals aged 16 years or older is tracked for Alaska by the Alaska Department of Labor and Workforce Development and for the United States by the U.S. Bureau of Labor Statistics.

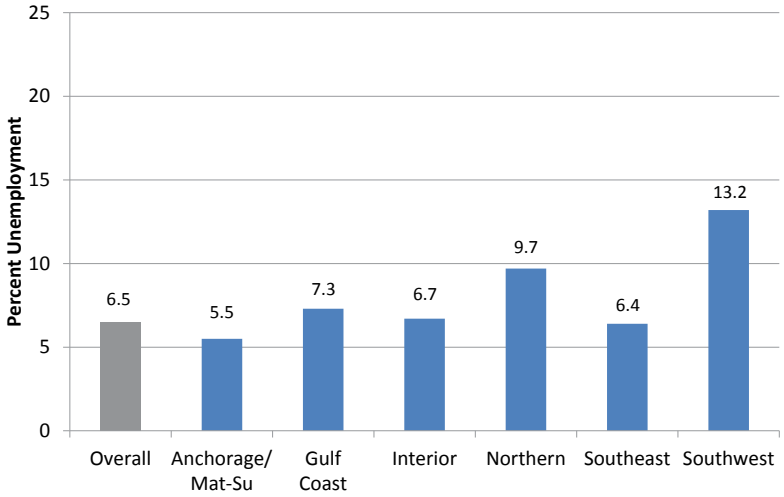
- In 2013, the prevalence of unemployment in Alaska was 6.5%, compared to 7.4% nationally.
- Unemployment was higher in Alaska than the U.S. from 2004 until 2008, when the U.S experienced an economic recession. Alaska was less impacted by the recession than the U.S. on average.
- The prevalence of unemployment varies by region of Alaska. In 2013, the prevalence of unemployment was highest in Southwest Alaska (13.2%) and lowest in Anchorage/Mat-Su (5.5%).

Data Sources: Alaska Dept. of Labor and Workforce Development, U.S. Bureau of Labor Statistics

Annual Unemployment
Alaska and U.S., 2004-2013
Data Sources: Alaska Dept. of Labor, U.S. Bureau of Labor Statistics



Unemployment by Region*
Alaska, 2013
Data Source: Alaska Dept. of Labor



*See page 2 for regional map.

FINANCIAL LIFE STRESSORS

Financial life stressors can have a serious impact on the life course of both individuals and their children, particularly if the stressors are chronic. People who are experiencing financial stress are less likely to exercise or eat nutritious food.[12] Chronic stress is associated with poor health conditions such as impaired immune, digestive, and reproductive systems. Stress during pregnancy can increase the risk of preterm birth, and respiratory and skin illnesses in infants.[13]

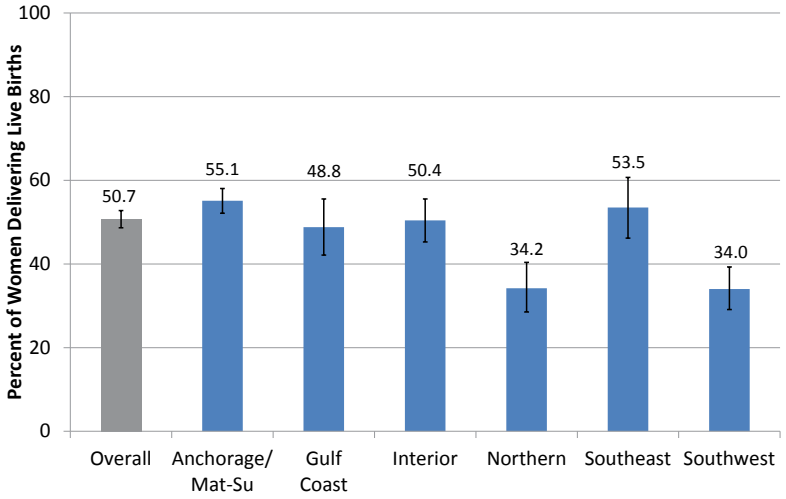
Financial stress is difficult to measure in Alaska due to wide variation in local and regional economies throughout the state. The Alaska PRAMS and Alaska CUBS surveys ask women about potential financial stressors such as whether they or their husband or partner experienced job loss, if they had a lot of bills that they couldn't pay, and if they moved to a new address.

- During 2009-2011, 50.7% of Alaska women who recently delivered a live-born infant experienced at least one financial stressor during the 12 months before their baby was born.
- During 2009-2011, women who were residents of the Anchorage/Mat-Su region had the highest reported prevalence of financial stressors included in PRAMS (55.1%). Women who were residents of the Northern (34.2%) and Southwest (34.0%) regions had the lowest reported prevalence.
- During 2008-2012, 21.7% of mothers of 3-year-olds reported that they or their husband or partner had lost their job since their child was born.
- During 2008-2012, mothers with less than 12 years education (29.7%) were more likely than mothers with 12 or more years of education (20.4%) to report a job loss since their 3-year-old was born.

Data Sources: Alaska PRAMS, Alaska CUBS

Financial Stressors in the 12 Months Before Birth of Baby by Region*, Alaska, 2009-2011

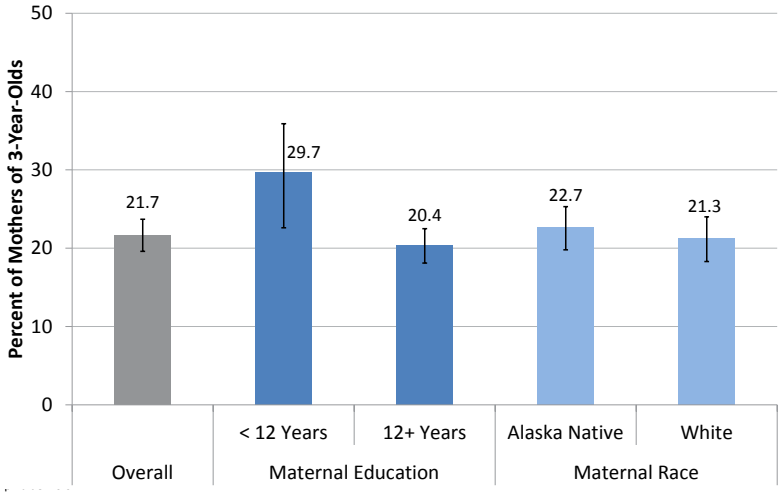
Data Source: PRAMS, Alaska Division of Public Health



*See page 2 for regional map.

Husband/Partner or Mother of 3-Year-Old Child Lost Job Since Child Was Born by Maternal Education and Race, Alaska, 2008-2012

Data Source: CUBS, Alaska Division of Public Health



Theme 4:

Reproductive Life Experiences

HEALTH CONDITIONS AFFECTING REPRODUCTION

Gestational Diabetes

Gestational diabetes is a type of diabetes that develops during pregnancy. Uncontrolled gestational diabetes can lead to negative acute and chronic health outcomes of both the infant and mother. Infants may have increased fetal growth, rapid fluctuations in blood sugar, and increased likelihood of childhood obesity, while maternal risks include maternal preeclampsia and pregnancy complications requiring a cesarean section.[14]

- During 2009-2011, the Alaska PRAMS survey asked women who recently delivered a live birth if a health care worker told them during their pregnancy that they had gestational diabetes. The prevalence of gestational diabetes increased with maternal age (6.5 % of women less than 25 years compared with 14.6% of women greater than 34 years).

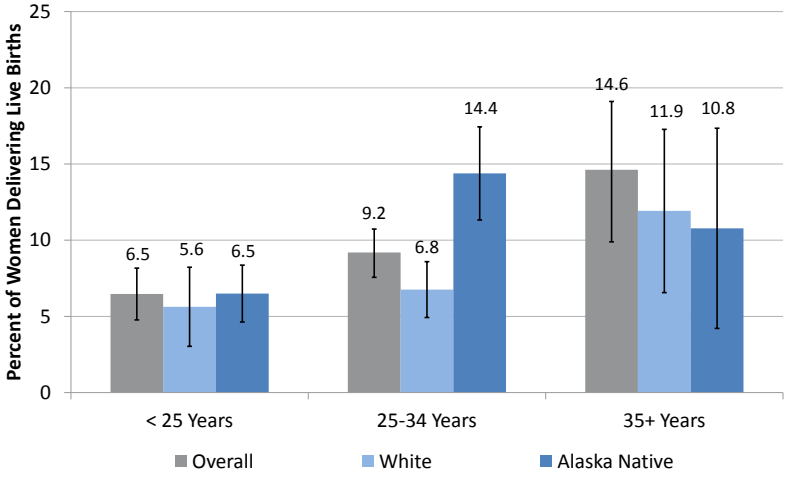
Sexually Transmitted Infections: Chlamydia, Gonorrhea, and HIV

Chlamydia and gonorrhea are the two most commonly reported sexually transmitted infections (STIs) in the United States. Alaska has had the first or second highest Chlamydia trachomatis (CT) infection rate in the U.S. each year since 2000. Untreated chlamydia and gonorrhea have particularly serious health consequences for adolescents and young women, including miscarriage, preterm labor, pelvic inflammatory disease, ectopic pregnancy, and infertility. Both gonorrhea and chlamydia infections facilitate the transmission of Human Immunodeficiency Virus (HIV). The CDC recommends that HIV screening be included in the routine panel of prenatal screening tests for all pregnant women.[15] Women who test positive for HIV and begin treatment early in their pregnancy may reduce the risk of mother-to-child HIV transmission.

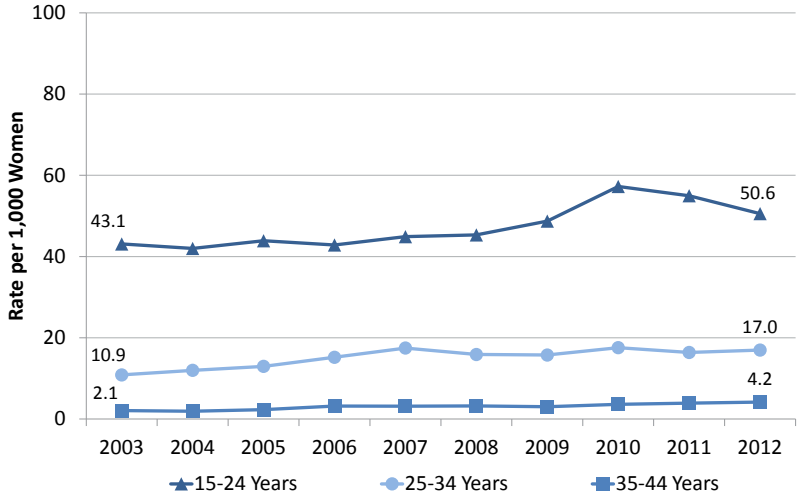
- In 2012, 67% of the reported cases of chlamydia in Alaska were among women, with the highest rates among women aged 15-24 years.
- In 2012, there were 5,057 cases of chlamydia and 383 cases of gonorrhea reported per 100,000 women aged 15-24 years in Alaska.
- Fifty-nine cases of newly diagnosed HIV were reported to the Alaska Section of Epidemiology in 2013; 18 (38%) were diagnosed with AIDS in the same year.
- In 2011, PRAMS data showed that 64.8% of Alaska women who delivered a live birth reported being tested for HIV. This included 74.3% of Alaska Native women and 58.5% of White women.

Data Sources: Alaska PRAMS, Alaska HIV/STD Program

Gestational Diabetes by Maternal Age and Race
Alaska, 2009-2011
Data Source: PRAMS, Alaska Division of Public Health



Chlamydia Among Women of Reproductive Age by Age Group
Alaska, 2003-2012
Data Source: HIV/STD Program, Alaska Division of Public Health



TEEN BIRTHS

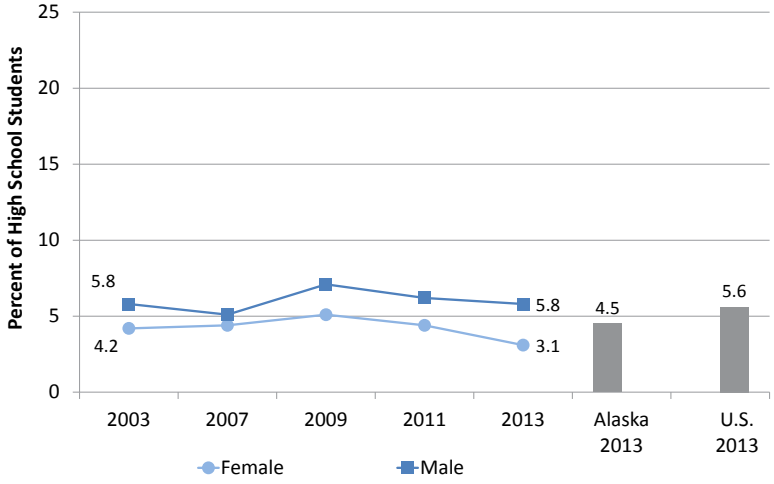
Teens are often less prepared than older women for pregnancy and parenthood, have limited resources, and are more likely than women aged 25-34 years to have preterm births and low birth weight infants.[16] Teen mothers experience a range of poor social and economic outcomes such as inadequate prenatal care, substance abuse, and poor nutrition. Teen mothers are also less likely to obtain higher education and to achieve higher standards of economic success. Children of teen mothers are more likely to experience abuse and neglect.[17]

The Youth Risk Behavior Surveillance System (YRBS) utilizes school-based surveys to monitor self-reported health-risk behaviors among 9th-12th grade high school students, including initiation of sexual intercourse. The survey is biennial, however initiation of sexual behavior was not asked in every survey year.

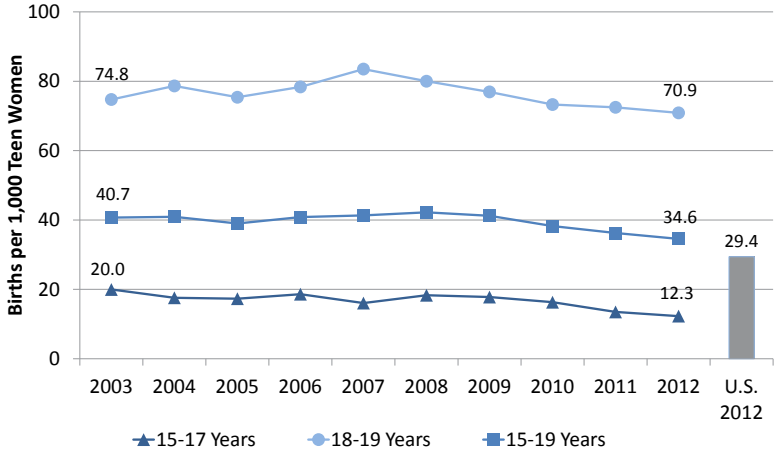
- The percentage of Alaska high school students who reported initiation of sexual intercourse prior to age 13 years dropped significantly between 1995 and 2003 for both males and females. It then remained unchanged for both groups between 2003 and 2013.
- In 2013, the percentage of all Alaska high school students who reported initiating sexual intercourse before age 13 years (4.5%) was similar to all U.S. high school students (5.6%).
- The teen birth rate in Alaska decreased from 40.7 births per 1,000 women aged 15-19 years in 2003 to 34.6 in 2012. This rate is above the national rate of 29.4 births per 1,000 women aged 15-19 years in 2012.
- In Alaska, the repeat teen birth rate, a second live birth to teen mothers, was 16.5 per 1,000 women aged 15-19 years in 2012.

Data Sources: YRBS, Alaska Bureau of Vital Statistics

Initiation of Sexual Intercourse Before Age 13 Years by Sex
Alaska, 2003-2013 and U.S., 2013
Data Sources: YRBS, Alaska Division of Public Health, U.S. CDC



Teen Birth Rates (15-19 Years) by Age Group
Alaska, 2003-2012 and U.S., 2012
Data Sources: Alaska Bureau of Vital Statistics, National Vital Statistics System



CONTRACEPTION

Using effective contraception provides women the opportunity to plan when and how many children they have. Because most women are physiologically able to get pregnant as soon as four to six weeks after giving birth[18], contraception also plays an important role during the postpartum period. Birth-to-pregnancy intervals of less than two years increase the risk of negative health outcomes for mothers and babies, including infant mortality, low birth weight, preterm birth, stillbirth, miscarriage, and maternal mortality.[19]

- In 2011, 81.8% of Alaska women who recently delivered a live birth reported using birth control postpartum. There was no change in the prevalence of postpartum birth control use during 2002-2011.
- During 2009-2011, the most common reason for not using birth control among women who recently delivered a live birth and were not using birth control was because they did not mind getting pregnant again (54.0%).
- During 2009-2011, 19.3% of White women and 35.2% of Alaska Native women who did not use birth control after they delivered a live birth said that they did not know they could get pregnant at that time.

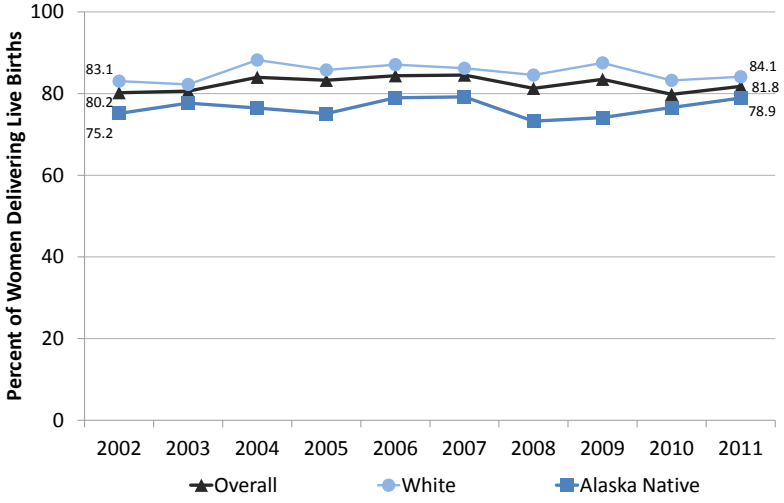
Perinatal Contraceptive Counseling

Health care providers can support new mothers by encouraging them to think about family planning. According to the Association of Reproductive Health Professionals, choice of postpartum contraception should ideally take place in the prenatal period. However, contraceptive counseling should also be included in the 6-week postpartum visit.[52]

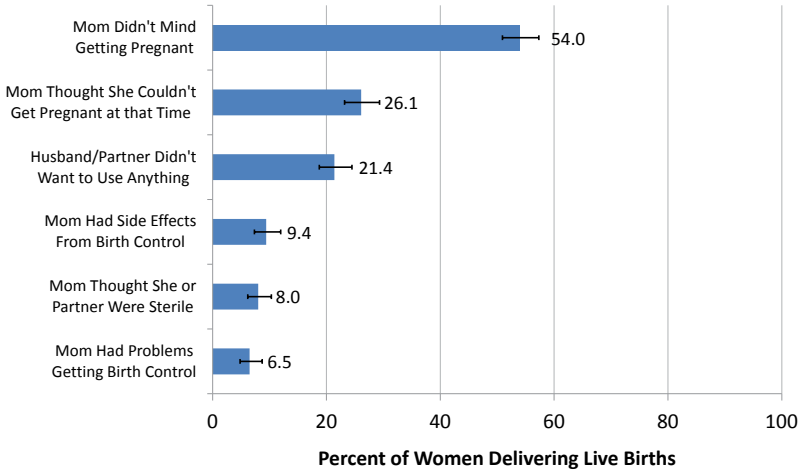
- During 2009-2011, 88.9% of Alaska women who recently delivered a live birth said that a health care worker talked with them during their prenatal visits about birth control methods that can be used after giving birth.
- During 2009-2011, 55.2% of Alaska women who recently delivered a live birth said that a health care worker talked with them about how long to wait before getting pregnant again.

Data Source: Alaska PRAMS

Postpartum Birth Control Use by Maternal Race
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



Reasons for Not Using Contraception
Alaska, 2009-2011
Data Source: PRAMS, Alaska Division of Public Health



PRETERM BIRTH AND STRESSORS DURING PREGNANCY

Nationally, preterm birth (before 37 weeks of gestation) is the leading cause of neonatal deaths not associated with birth defects. Preterm birth can be associated with lifelong health, emotional, economic, and social consequences for the child, mother, family and community.[20] Although the causes of most preterm births are unknown, some studies have indicated that experiencing certain stressful life events is associated with poor health overall as well as birth outcomes such as preterm birth and low birth weight.[21]

- The proportion of all Alaska births that were preterm significantly decreased from 10.4% in 2011 to 9.2% in 2012. During 2003-2012, Alaska maintained a lower percentage of preterm birth than the U.S. overall preterm birth rate of 11.6%.

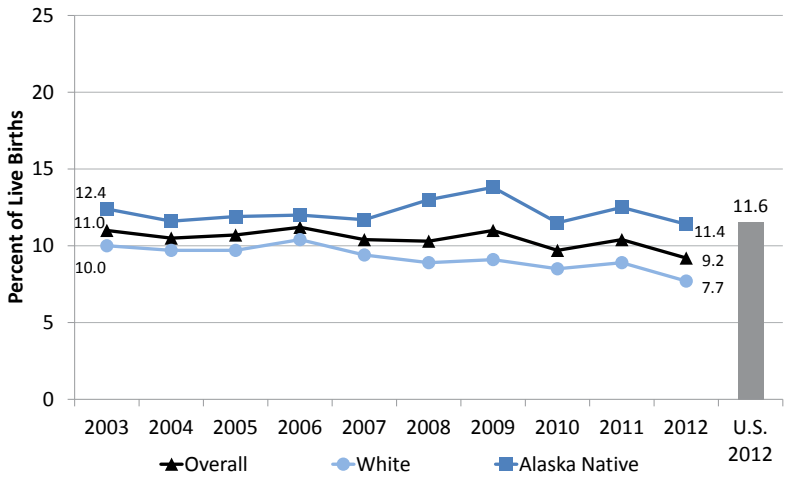
The Alaska PRAMS survey asked women who recently delivered a live birth about 13 different stressful life events that may have happened to them during the 12 months before their new baby was born.

- In Alaska, the prevalence of women experiencing two or more life stressors during the 12 months before her baby was born declined from 50.9% in 2002 to 41.3% in 2011.
- During 2002-2011, Alaska Native women were consistently more likely than White women to indicate experiencing more than one life stressor during the 12 months before their baby was born.
- In 2011, the most common life stressor reported by women who recently delivered a live birth was moving to a new address (37.2%), followed by arguing with their husband or partner more than usual (22.3%) and having a close family member who was very sick and had to go into the hospital (18.4%).

Data Sources: Alaska Bureau of Vital Statistics, National Vital Statistics System, Alaska PRAMS

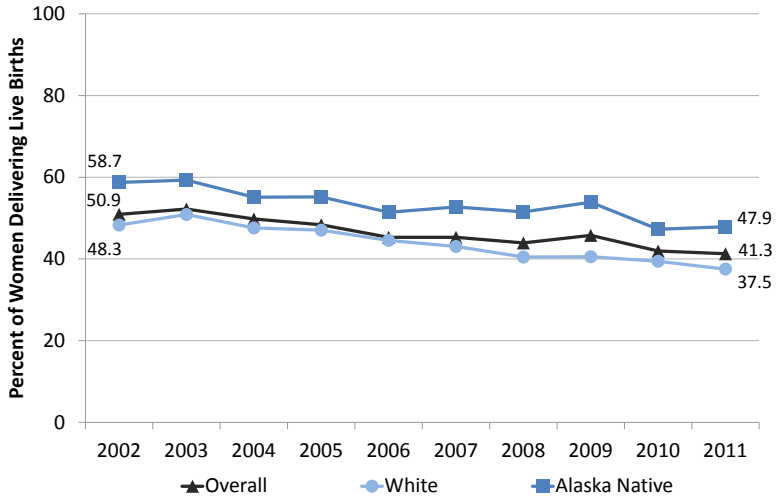
Live Births Before 37 Weeks Gestation by Maternal Race Alaska, 2003-2012 and U.S., 2012

Data Sources: Alaska Bureau of Vital Statistics, National Vital Statistics System



Two or More Life Stressors 12 Months Before Birth of Baby by Maternal Race, Alaska, 2002-2011

Data Source: PRAMS, Alaska Division of Public Health



Theme 5:
Childhood Experiences

ADVERSE CHILDHOOD EXPERIENCES

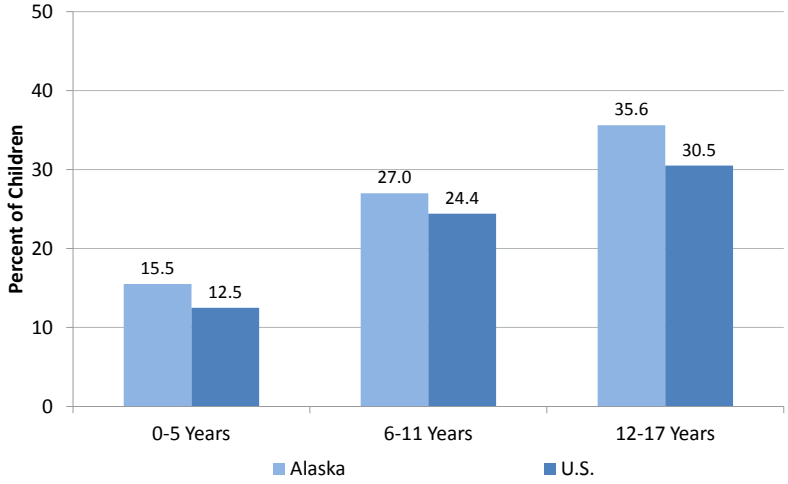
Adverse childhood experiences (ACEs) are negative incidents of emotional, physical, or sexual abuse, and household dysfunction experienced prior to age 18 years. The accumulation of ACEs puts individuals at risk for a wide variety of mental, physical, and emotional health problems in adulthood. Additionally, ACEs have been associated with an increased propensity to engage in health risk behaviors that are associated with chronic disease and injury, including risky sexual behavior, alcohol, drug, and tobacco use, and a greater likelihood of being overweight or obese.[22]

During 2011-2012 the NSCH asked parents of 0-17 year-olds whether their child had experienced the following nine adverse events: socioeconomic hardship, divorce or separation of parent, death of parent, parent served time in jail, witness to domestic violence, victim of neighborhood violence, lived with someone who was mentally ill or suicidal, lived with someone with alcohol or drug problem, and treated or judged unfairly due to race or ethnicity.

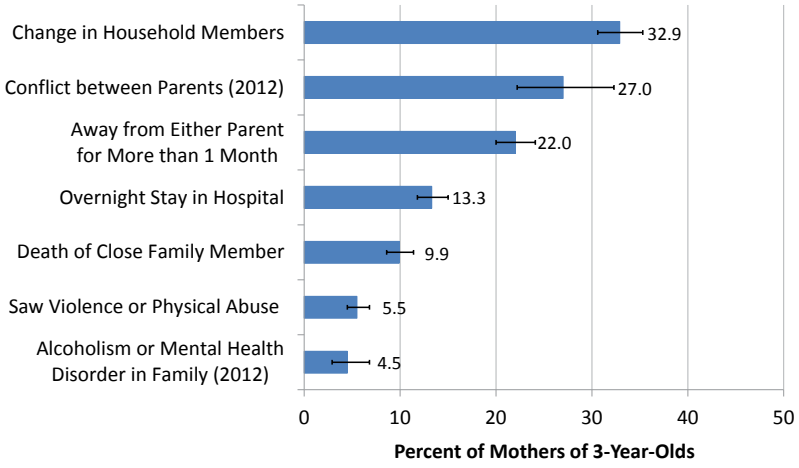
- During 2011-2012, Alaskan children aged 0-17 years were more likely than U.S. children to have experienced two or more ACEs (25.8% vs. 22.6%).
- Among the nine ACEs asked about on the NSCH, the two most common in Alaska were the child lived with a parent or guardian who got divorced or separated (23.8%) and the child lived with anyone who had problems with alcohol or drugs (14.5%).
- Alaska CUBS asks mothers of 3-year-olds questions about their child's health and experiences. During 2008-2012, the most common stressful life event experienced by 3-year-olds was a change in household members (32.9%). This was followed by conflict between parents (27.0%) and time away from either parent for more than one month (22.0%).

Data Sources: NSCH, Alaska CUBS

Children Who Had Two or More Adverse Childhood Experiences by Age Group, Alaska and U.S., 2011-2012
Data Source: National Survey of Children's Health



Stressful Life Events Experienced by 3-Year-Old Children Alaska, 2008-2012
Data Source: CUBS, Alaska Division of Public Health



CHILD MALTREATMENT

Child maltreatment includes neglect, physical abuse, sexual abuse, and emotional abuse perpetrated by a parent or other designated caregiver. Child maltreatment can increase the risk of acute injury, emotional stress, and death as well as long-term chronic behavioral and health conditions. Various child, caregiver, family, community, and societal factors can increase individual risk of maltreatment.

- According to the Alaska Surveillance of Child Abuse and Neglect Program (SCAN), maltreatment-related mortality accounted for 18.9% of all infant deaths during 2004-2012, ranging between 12.3% in 2006 and 29.9% in 2009. More deaths were due to neglect or negligence than physical abuse. Nearly 85% of all maltreatment-related infant deaths occurred during the first 6 months of life.
- During 2004-2012, infants born to mothers with less than 12 years of education had 2.4 times the rate of maltreatment-related mortality compared to infants born to mothers with 12 or more years of education.
- During 2004-2012, the overall infant mortality trend has significantly declined (not shown), while the maltreatment-related trend has remained flat at nearly 1.0 per 1,000 live births.

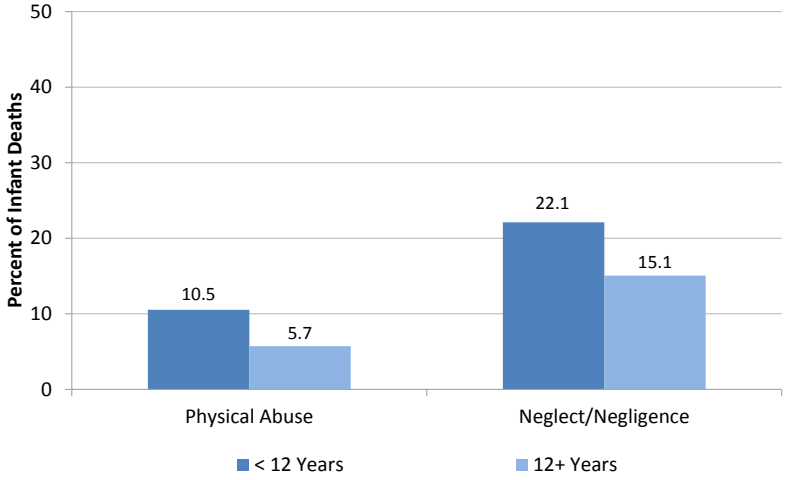
Substantiated Child Maltreatment

The National Child Abuse and Neglect Data System collects case-level data on all allegations of abuse and neglect that receive a response from state Child Protective Services (CPS) agencies (in Alaska this is known as the Office of Children's Services). Substantiated child maltreatment cases are those in which CPS concluded that the allegation of maltreatment or risk of maltreatment was supported or founded by state law or policy.

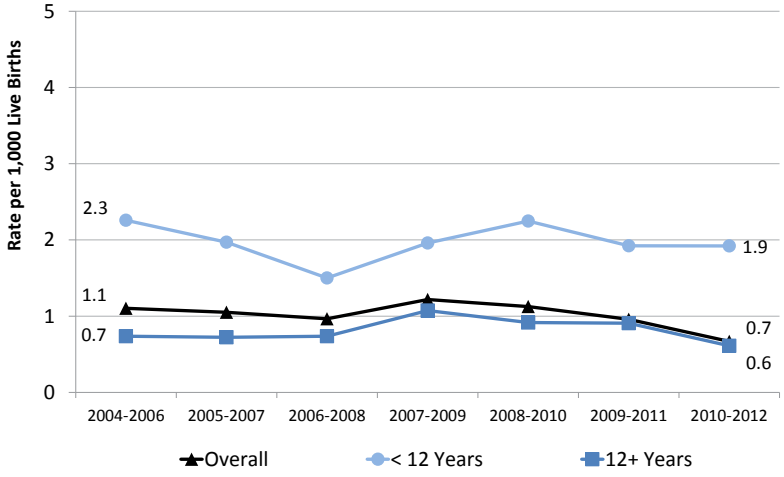
- In 2012, there were 15.6 reports of substantiated maltreatment per 1,000 children aged 0-18 years in Alaska. Nationally there were 9.2 reports of substantiated maltreatment per 1,000 children.

Data Sources: Alaska SCAN, National Child Abuse and Neglect Data System

Infant Deaths Due to Physical Abuse or Neglect/Negligence by Maternal Education, Alaska, 2004-2012
Data Source: SCAN, Alaska Division of Public Health



Maltreatment-Specific Infant Mortality by Maternal Education 3-Year Moving Averages, Alaska, 2004-2012
Data Source: SCAN, Alaska Division of Public Health



BULLYING (DISCRIMINATION AND SEGREGATION)

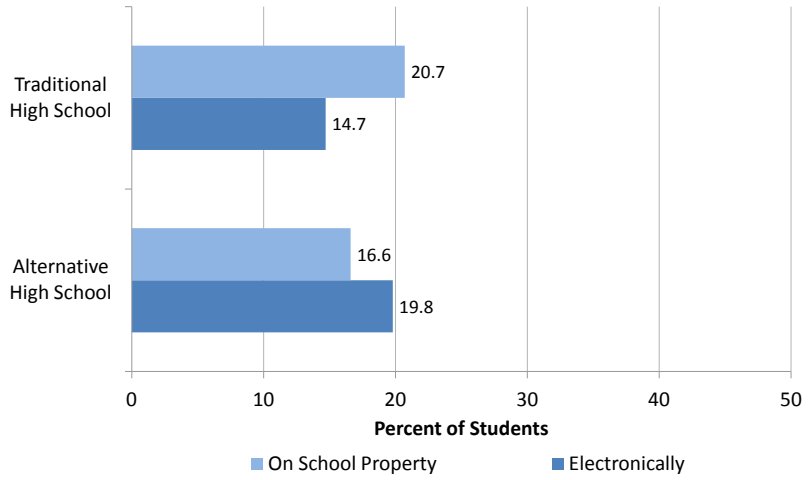
Bullying is any unwanted aggressive behavior by peers that involves an observed or perceived power imbalance and is repeated or likely to be repeated. Bullying can occur in-person and through technology. Electronic aggression or cyber-bullying is bullying that happens through email, chat rooms, instant message, a website, text message, or social media. Experiencing bullying during adolescence, a critical time of mental and physical development, can have significant health implications. As adolescents, both victims and perpetrators of bullying have higher levels of depression, self-harm behavior, engagement in risky behaviors, and suicidal thoughts and attempts. As adults, individuals bullied in their youth are more likely to develop anxiety and panic disorders, depression, and suicidal thoughts.[23]

In 2013, the YRBS surveyed high school students at traditional and alternative (specialized high schools which serve at-risk students) high schools on bullying experienced during the past 12 months.

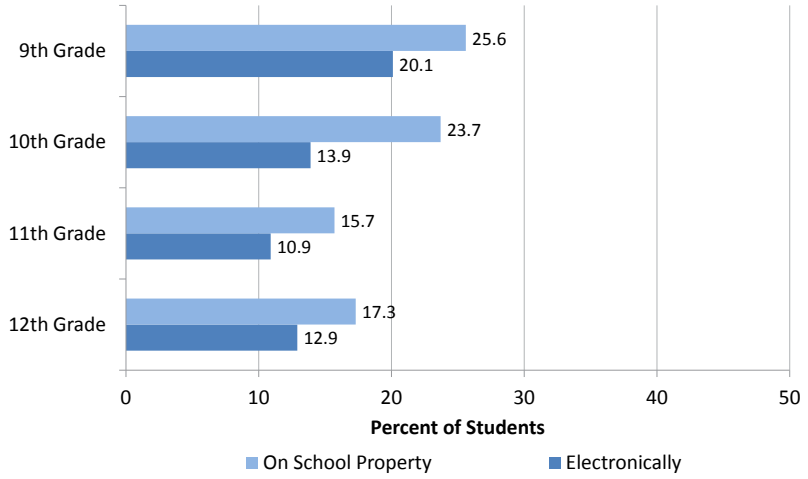
- 20.7% of Alaskan students in traditional high schools and 16.6% of students at alternative high schools reported being bullied on school property within the past 12 months. A similar percentage (19.6%) of U.S. students in traditional high schools reported being bullied on school property.
- 14.7% of Alaskan students in traditional high schools and 19.8% in alternative high schools reported being bullied electronically in the past 12 months. Nationally, 14.8% of students in traditional high schools reported electronic bullying.
- Females are more likely to report being bullied than males. Among traditional high school students in Alaska, 25.5% of females and 16.0% of males reported being bullied on school property, while 19.5% of females and 10.1% of males reported being bullied electronically.

Data Source: YRBS

Bullying During the Past 12 Months at Traditional and Alternative High Schools by Bullying Type, Alaska, 2013
Data Source: YRBS, Alaska Division of Public Health



Bullying During the Past 12 Months at Traditional High Schools by Grade and Bullying Type, Alaska, 2013
Data Source: YRBS, Alaska Division of Public Health



Theme 6:

Family Well-Being

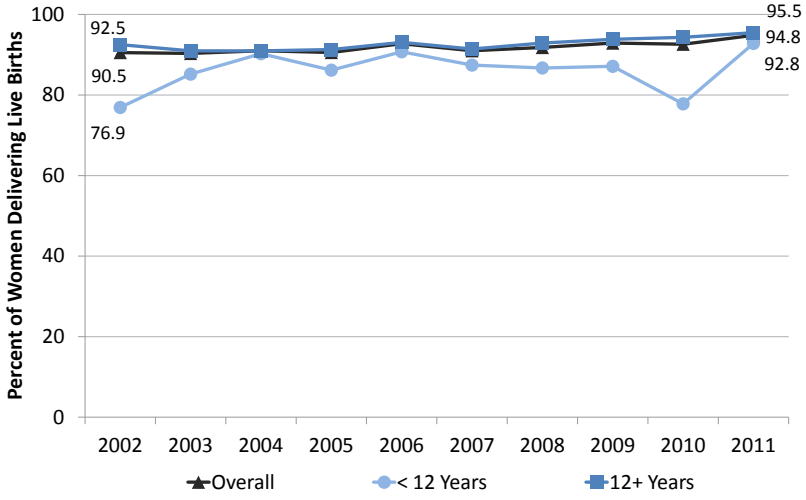
BREASTFEEDING

Breastfeeding is beneficial for both infants and mothers. Breast milk is easier to digest than formula and helps babies fight disease because it contains the mother's antibodies. Colostrum, the breast milk produced in the three to five days after birth, is particularly rich in nutrients and antibodies. For the mother, breastfeeding is convenient, can save money, and increases mother-infant bonding.[24]

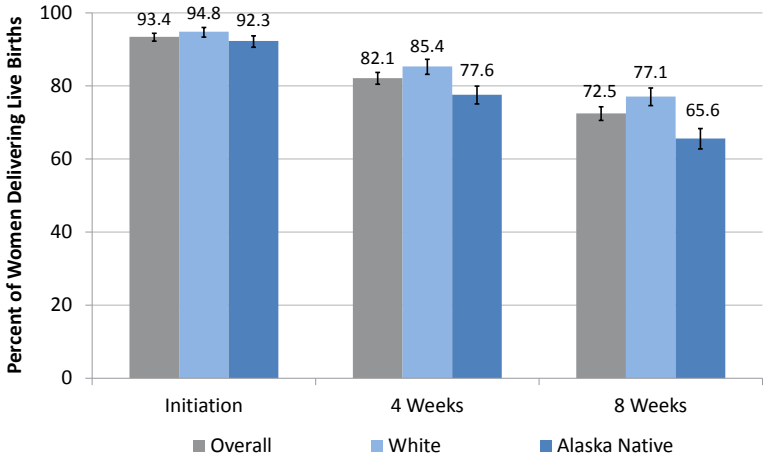
- In 2011, 94.8% of Alaskan women who recently delivered a live birth reported initiating breastfeeding on the PRAMS survey. The aggregate prevalence for breastfeeding initiation among 24 PRAMS programs across the U.S. was 83.9% in 2011.
- Overall, the trend for initiating breastfeeding in Alaska increased during 2002-2011.
- Women with at least 12 years of education showed a higher prevalence of initiating breastfeeding than those with less than 12 years of education.
- Breastfeeding was more common among White women than Alaska Native women at 4 and 8 weeks postpartum. The difference increased with length of breastfeeding duration.
- During 2009-2011, 88.3% of Alaska women said that a health care worker talked with them about breastfeeding during prenatal care visits. 85.1% of Alaska women said that a health care worker talked with them about breastfeeding since their new baby was born.

Data Sources: Alaska PRAMS, CDC PRAMS

Breastfeeding Initiation by Maternal Education Level
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



Breastfeeding Initiation, 4 Weeks, and 8 Weeks Postpartum
by Maternal Race, Alaska, 2009-2011
Data Source: PRAMS, Alaska Division of Public Health



BREASTFEEDING DURATION

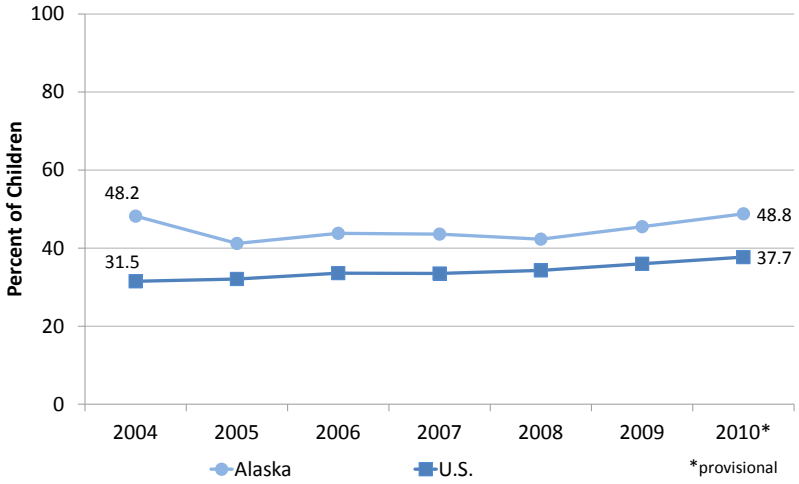
Longer and more exclusive breastfeeding is associated with better health outcomes for both children and mothers. The World Health Organization and the American Academy of Pediatrics recommend exclusive breastfeeding through six months of age. Children who are breastfed have lower rates of asthma, obesity, type 1 and 2 diabetes, childhood leukemia, lower respiratory infections, and Sudden Infant Death Syndrome. Women who breastfeed have a lower risk of type 2 diabetes, breast and ovarian cancer, and postpartum depression.[24]

The National Immunization Survey (NIS) is a random national telephone survey of parents with children between the ages of 19 and 35 months. Starting in 2004, the NIS collected data on exclusive breastfeeding rates at 3 and 6 months (only breast milk, no solids, no water, and no other liquids).

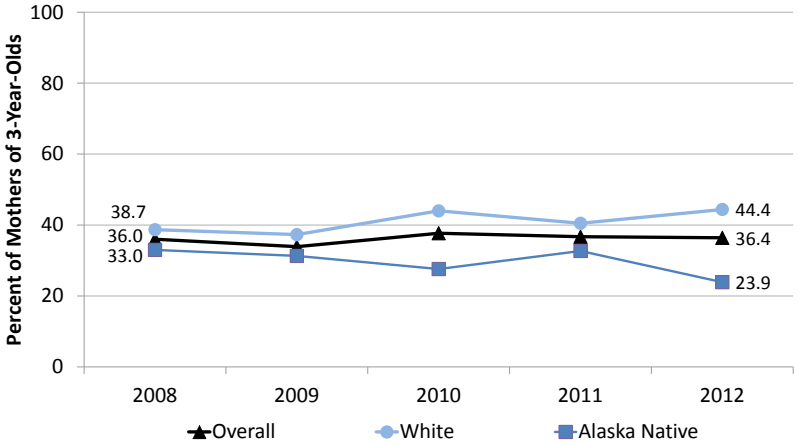
- Almost half (48.8%) of Alaskan children born in 2010 were exclusively breastfed at three months, compared to 37.7% of U.S. children.
- At six months, 26.8% of Alaskan children born in 2010 were still exclusively breastfed, compared to 16.4% of U.S. children.
- The Alaska CUBS survey asked mothers of 3-year-olds about breastfeeding duration. During 2008-2012, the overall prevalence of Alaskan women who breastfed for 12 months or more stayed constant around 36%.
- In 2012, the percent of White women who breastfed their child for 12 months or more (44.4%) was almost twice that of Alaska Native women (23.9%).

Data Sources: NIS, Alaska CUBS

Exclusive Breastfeeding at 3 Months by Child's Birth Year
Alaska and U.S., 2004-2010
Data Source: National Immunization Survey



Breastfeeding at 12 Months or More by Maternal Race
Alaska, 2008-2012
Data Source: CUBS, Alaska Division of Public Health



CHILDREN AND YOUTH WITH SPECIAL HEALTH CARE NEEDS

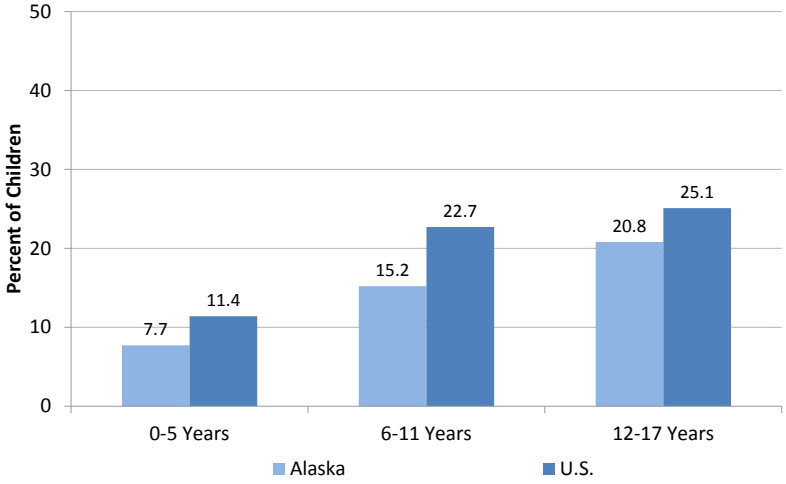
Children and youth with special health care needs (CYSHCN) have one or more chronic physical, developmental, behavioral, or emotional conditions that require specialized health care services. These services are often provided by hearing specialists, speech or language therapists, eye specialists, physical or occupational therapists, or behavioral or mental health specialists. Although many conditions and illnesses faced by CYSHCN are not preventable, developmental screening during childhood is important to identify conditions and help children receive early intervention services and treatment.

The NSCH assesses the prevalence of special health care needs among children by conducting a randomized survey of parents with children aged 0-17 years.

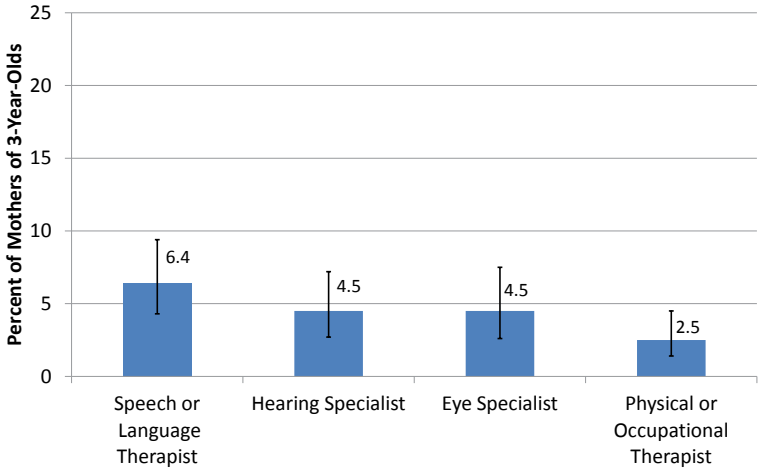
- During 2011-2012, 14.4% of all Alaskan children aged 0-17 years had special health care needs. This was significantly less than the national prevalence of CYSHCN (19.8%).
- During 2011-2012, 40.9% of CYSHCN in Alaska lived in households with incomes below the 200% federal poverty level.
- In 2012, the CUBS survey asked Alaska mothers whether their 3-year-old child received care from a specialist or therapist during the past 12 months. The most common specialized health care services reported was a speech or language therapist (6.4%).
- In 2012, 12.4% of mothers of 3-year-olds reported having concerns about how their child acts, gets along with others, or shows feelings during the past 12 months. Among the mothers who reported concerns, 41.9% reported seeking professional help or advice because of these concerns.

Data Sources: NSCH, Alaska CUBS

Children with Special Health Care Needs by Age Group
Alaska and U.S., 2011-2012
Data Source: National Survey of Children's Health



3-Year-Old Children Who Received Care From Specialists or Therapists During the Past 12 Months, Alaska, 2012
Data Source: CUBS, Alaska Division of Public Health



OVERWEIGHT OR OBESITY

Weight status is often indicated by body mass index, or BMI, which incorporates a person's height and weight. Overweight and obesity are the result of a "caloric imbalance"—too few calories expended for the amount of calories consumed—and are affected by various genetic, behavioral, and environmental factors. For adults, a BMI from 25.0 to 29.9 is considered overweight and a BMI of 30 or higher is considered obese.

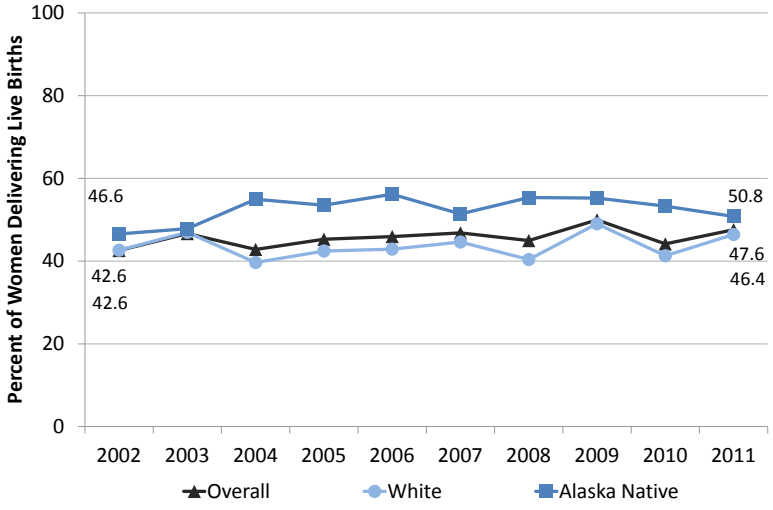
Weight status for children and adolescents is determined by referencing the BMI to age- and sex-specific growth charts. For 2 to 20-year-olds, the resulting percentile is used to identify weight status. For children, a BMI at or above the 85th percentile and lower than the 95th is considered overweight, and a BMI at or above the 95th percentile is considered obese. Childhood obesity has more than doubled in U.S. children and quadrupled in adolescents (12-19 years) in the past 30 years.[25]

Recent studies suggest that greater pre-pregnancy weight increases the risk of pregnancy complications, including preeclampsia, gestational diabetes, stillbirth and cesarean delivery. Obesity during pregnancy is associated with increased use of health care and physician services and longer hospital stays.[26]

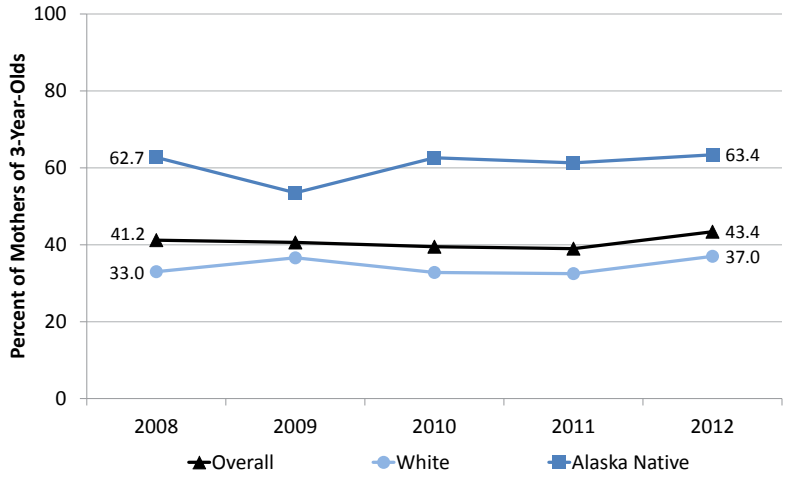
- In 2013, 26.1% of Alaskan high school students in grades 9-12 self-reported as overweight or obese on the YRBS survey.
- In 2012, 65.3% of Alaskan adults self-reported as overweight or obese according to the Behavioral Risk Factor Surveillance System (BRFSS).
- During 2002-2011, Alaska Native women who recently delivered a live birth reported a higher proportion of pre-pregnancy overweight or obesity compared to White women.
- During 2008-2012, 40.7% of Alaska 3-year-olds were overweight or obese, according to height and weight reported by mothers. The trend in overweight or obesity was stable during all five years of the survey.
- In 2012, overweight or obesity was more common among Alaska Native 3-year-olds (63.4%) compared to White 3-year-olds (37.0%).

Data Sources: YRBS, BRFSS, Alaska PRAMS, Alaska CUBS

Pre-Pregnancy Overweight or Obesity by Maternal Race
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



Overweight or Obesity Among 3-Year-Old Children by Maternal Race
Alaska, 2008-2012
Data Source: CUBS, Alaska Division of Public Health



EXPOSURE TO SECONDHAND SMOKE

Secondhand smoke includes smoke that comes from a burning cigarette and smoke breathed out by a person smoking a cigarette. Secondhand smoke contains more than 7,000 chemicals, hundreds of which are toxic (including about 70 carcinogens). Pregnant women who breathe secondhand smoke are more likely to have lower birth weight babies than women who do not breathe secondhand smoke. Secondhand smoke can contribute to numerous health problems in infants and children, including more frequent and severe asthma attacks, respiratory infections, ear infections, and sudden unexpected infant death (SUID). Some of the health conditions closely associated with secondhand smoke in adults include coronary heart disease, stroke, and lung cancer.

- During 2009-2011, 96% of Alaskan women who recently delivered a live birth indicated on the PRAMS survey that no one was allowed to smoke anywhere inside the home during their pregnancy.
- During 2009-2011, 2.8% of Alaskan women with less than 12 years of education who recently delivered a live birth reported that smoking was allowed anywhere in the home during their pregnancy, compared to 0.8% of women with 12 or more years of education.

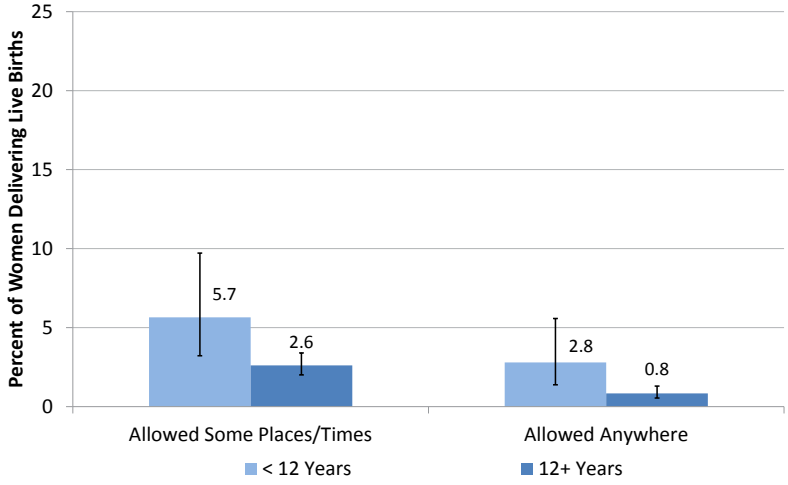
During 2011-2012, the National Survey of Children's Health surveyed parents of children aged 0-17 years about their child's smoke exposure.

- 29.5% of Alaskan children and 24.1% of U.S. children aged 0-17 years lived in a household with someone who used cigarettes, cigars, or pipe tobacco.
- 2.7% of Alaskan children and 4.9% of U.S. children lived with someone who smoked inside the home.

Data Sources: Alaska PRAMS, NSCH

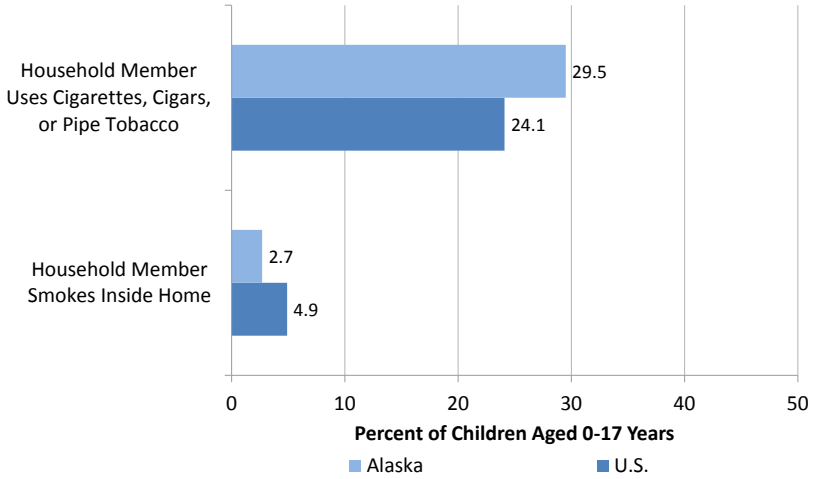
Smoking Rules in the Home During Pregnancy by Maternal Education Alaska, 2009-2011

Data Source: PRAMS, Alaska Division of Public Health



Smoke Exposure in Households with Children Aged 0-17 Years Alaska and U.S., 2011-2012

Data Source: National Survey of Children's Health



TOBACCO USE

Cigarette smoking is the single largest preventable cause of premature death in the United States. Adolescents are uniquely susceptible to social and environmental influences to use tobacco. More than 80% of adult smokers begin smoking by age 18 years, and 99% first use tobacco by age 26 years. In addition, adolescent smokeless tobacco users are more likely than non-users to become adult cigarette smokers.[27]

In 2013, the YRBS surveyed high school students on smoking habits and experiences. Current smokers were those who smoked a cigarette in the past 30 days. Current frequent smokers were those who smoked a cigarette on at least 20 out of the past 30 days.

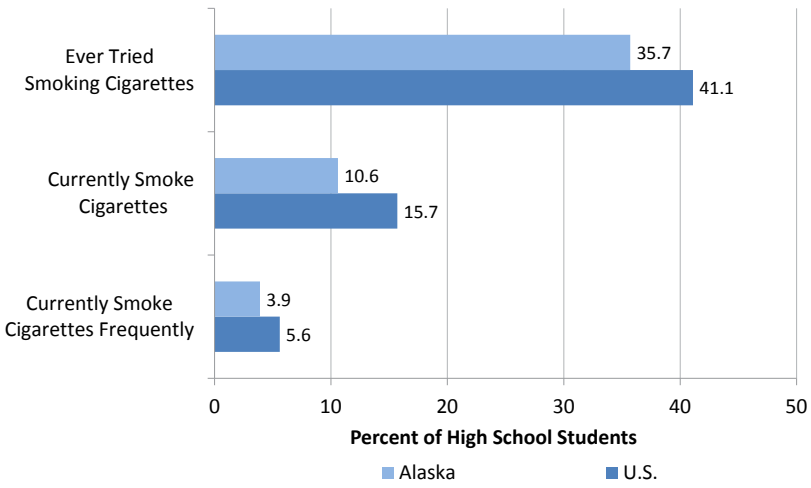
- Alaska high school students were less likely to currently smoke cigarettes than U.S. high school students, but the prevalence of ever smoking and frequent smoking was similar between the two populations.
- Within Alaska, there was no difference by grade in the prevalence of current smoking among high school students.

Smoking during pregnancy exposes the fetus to dangerous chemicals and is the most preventable cause of infant low birth weight and prematurity. Women who smoke are more likely to have ectopic pregnancy, placental abruption, and still birth. Prenatal smoking also increases the risk of birth defects such as cleft lip or palate and postnatal events such as sudden unexpected infant death (SUID).

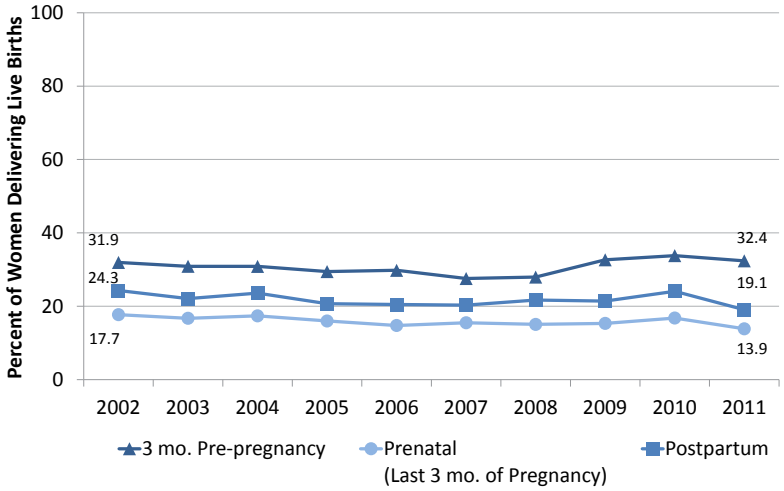
- During 2002-2011, cigarette use during the 3 months before getting pregnant was consistently higher than both prenatal and postpartum cigarette use among Alaska women who recently delivered a live birth. During this study period, cigarette smoking pre-pregnancy stayed consistently around 32%.
- During 2002-2011, cigarette use during the last 3 months of pregnancy showed the only significant decline in cigarette smoking from 17.7% in 2002 to 13.9% in 2011.

Data Sources: YRBS, Alaska PRAMS

Cigarette Smoking Among High School Students
Alaska and U.S., 2013
Data Source: YRBS, Alaska Division of Public Health and U.S. CDC



Pre-Pregnancy, Prenatal, and Postpartum Cigarette Smoking
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



PRE-PREGNANCY AND ADOLESCENT ALCOHOL USE

Prenatal alcohol use is linked to fetal death, low birth weight, growth abnormalities, developmental delays in children and fetal alcohol spectrum disorders. It is also the leading preventable known cause of birth defects and mental retardation. Poor birth outcomes related to prenatal alcohol use are 100% preventable. There is no known safe amount of alcohol or time to drink during pregnancy. Because sexually active women may unintentionally expose a developing fetus to alcohol with an unintended pregnancy, the CDC recommends that women should not drink alcohol if they are planning to become pregnant or are sexually active and do not use effective birth control.[28]

- In Alaska during 2002-2011, White women consistently reported a higher prevalence of alcohol use 3 months before getting pregnant than Alaska Native women on the Alaska PRAMS survey.
- The prevalence of pre-pregnancy alcohol use increased for both White women and Alaska Native women in Alaska during 2002-2011.

The National Survey on Drug Use and Health (NSDUH) is an annual nationwide in-person survey of randomly selected individuals aged 12 years or older.

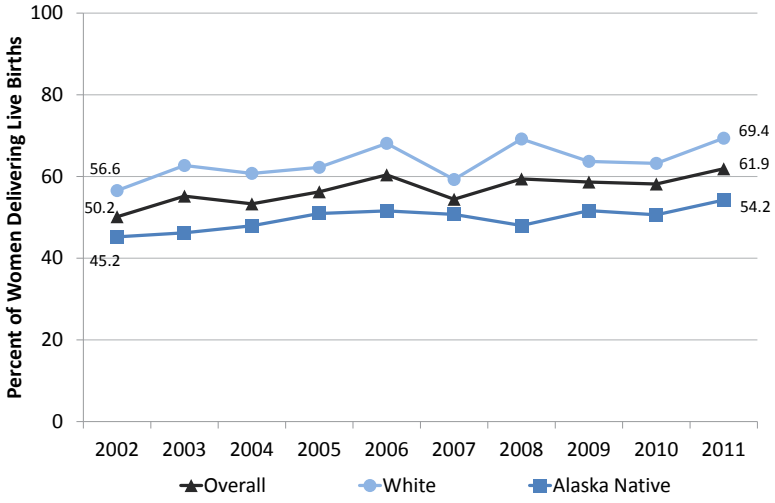
- During 2011–2012, 13.4% of Alaskan and 13.1% of U.S. adolescents aged 12–17 years reported using alcohol in the past month.
- During 2011-2012, 7.1% of Alaskan and 7.3% of U.S. adolescents aged 12-17 years reported binge alcohol use in the past month. In the NSDUH, binge alcohol use is defined as drinking five or more drinks on the same occasion.

In 2013, the YRBS surveyed high school students on drinking behaviors and experiences.

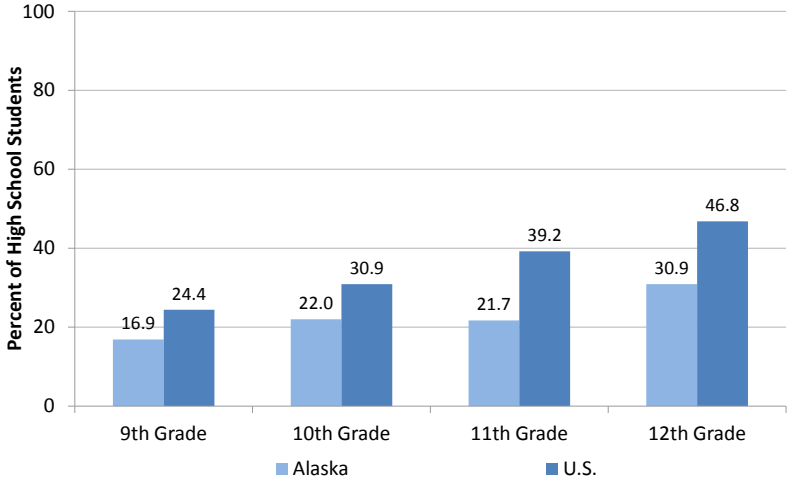
- The prevalence of current drinking among high school students increased with every grade in both Alaska and the U.S. In Alaska, 16.9% of 9th graders stated they had at least one drink during the 30 days prior to the survey, compared with 30.9% of 12th graders.
- 11.4% of Alaskan high school students and 18.6% of U.S. high school students reported having their first drink of alcohol other than a few sips before age 13 years.

Sources: Alaska PRAMS, NSDUH, YRBS

Alcohol Use (3 Months Pre-Pregnancy) by Maternal Race
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



Current Drinking Among High School Students by Grade
Alaska and U.S., 2013
Data Sources: YRBS, Alaska Division of Public Health; U.S. CDC



ADULT ALCOHOL USE

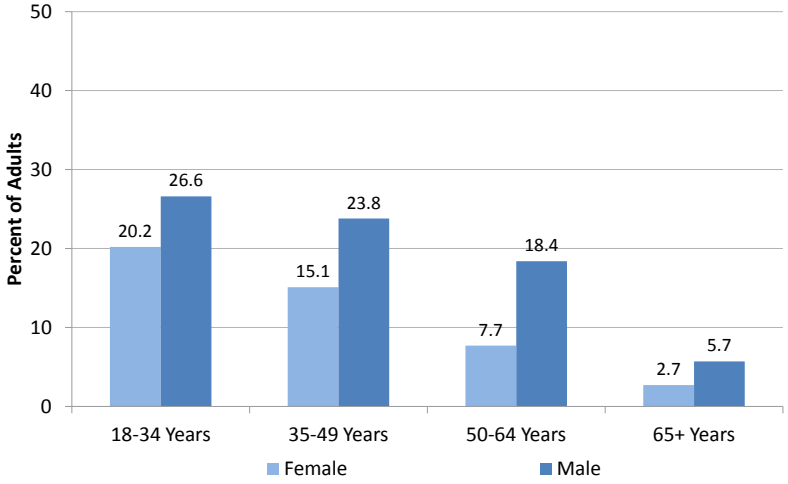
Excessive or heavy alcohol use and binge drinking can lead to increased risk of health problems such as injuries, violence, liver diseases, and cancer. In addition to negative health effects, alcohol abuse results in losses to Alaska's economy through reduced employment earnings, lost productivity due to premature death and disability, incarceration for criminal offenses, and the cost of treatment or hospitalization.[29]

In BRFSS, heavy drinking is defined as more than 1 drink per day in the past 30 days for women and more than 2 drinks per day in the past 30 days for men. Binge drinking is defined as drinking 5 or more alcoholic drinks on an occasion for men during the past 30 days or 4 or more drinks on an occasion for women during the past 30 days.

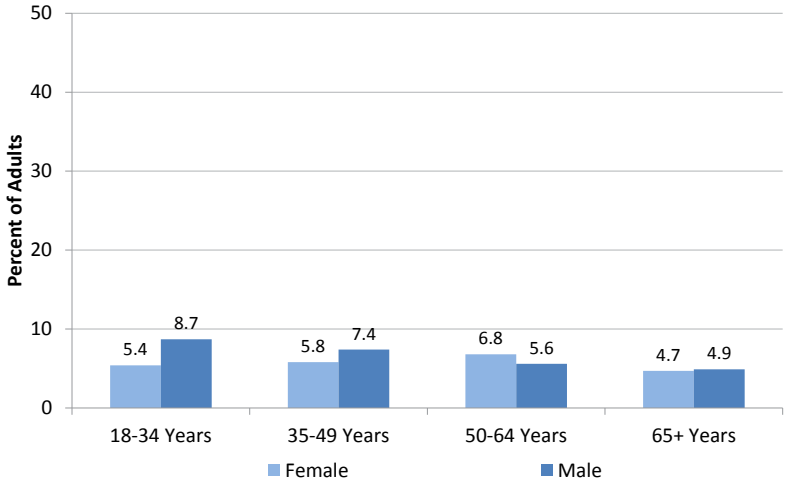
- In 2012, the prevalence of self-reported binge drinking in the past 30 days among adults was similar in Alaska (17.3%) and the U.S. (16.9%).
- Binge drinking was more common than chronic drinking in both Alaska and the U.S. in 2012. 6.6% of Alaska adults and 6.1% of U.S. adults reported chronic drinking in the past 30 days. Chronic drinking was also similar in Alaska (6.6%) and the U.S. (6.1%)
- In 2012, adults aged 18-34 years reported the highest prevalence of binge drinking for both males (26.6%) and females (20.2%). Self-reported binge drinking decreased with age. Males reported binge drinking more frequently than females in all age groups.
- In 2012, heavy drinking was most common among males aged 18-34 years (8.7%) and females aged 50-64 years (6.8%).

Data Source: BRFSS

Binge Drinking Among Adults by Age Group and Sex
Alaska, 2012
Data Source: BRFSS, Alaska Division of Public Health



Heavy Drinking Among Adults by Age Group and Sex
Alaska, 2012
Data Source: BRFSS, Alaska Division of Public Health



ILLICIT DRUG AND MARIJUANA USE

Illicit drug use includes the use of illegal drugs or the misuse of prescription medications and other household substances. Illicit drug use is associated with a number of negative health outcomes that affect the individual (for example abnormal cardiovascular functioning and STD transmission), children (child abuse), and society (homicide and assault). Early experimentation with illicit drugs during adolescence can lead to lifelong addiction. Illicit drug use during pregnancy can have damaging effects on a developing fetus leading to birth defects, pregnancy complications, and neonatal abstinence syndrome.

During 2010-2011, the NSDUH surveyed randomly selected individuals aged 12 years or older about their experiences using illicit drugs and marijuana.

- 3.6% of Alaska residents aged 12 years or older and 3.3% of U.S. residents aged 12 years or older reported using illicit drugs other than marijuana in the past month. Illicit drugs included cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.
- 11.4% of Alaska residents aged 12 years or older and 6.9% of U.S. residents aged 12 years or older reported using marijuana in the past month.

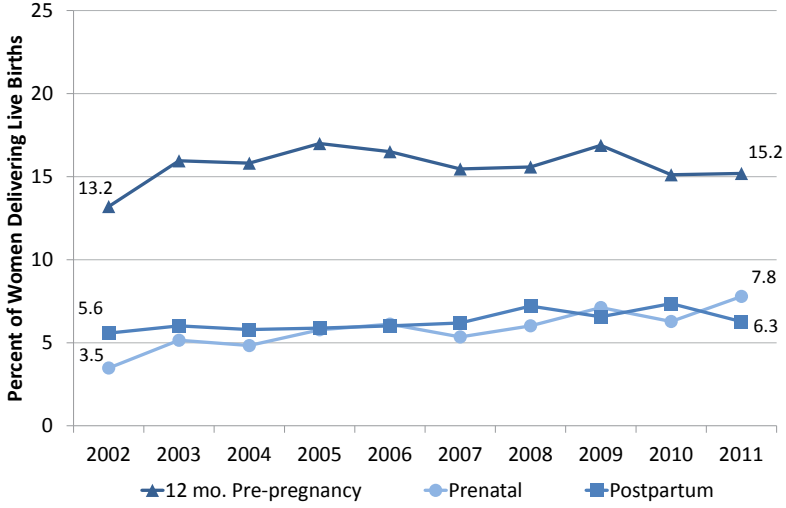
The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) asked women who recently delivered a live birth about their marijuana use before, during, and after pregnancy.

- During 2002-2011, marijuana use 12 months before pregnancy was consistently close to double that of prenatal or postpartum use and was 15.2% in 2011.The prevalence of maternal marijuana use increased for all periods relating to pregnancy.
- During 2004-2011, women with less than 12 years of education were twice as likely to use marijuana during pregnancy than women with 12 years of education and four times as likely than women with more than 12 years of education.
- During 2004-2011, teenage women (< 20 years) who recently delivered a live birth were significantly more likely to use marijuana prenatally (12.5%), compared to women in other age groups.

Data Sources: NSDUH, Alaska PRAMS

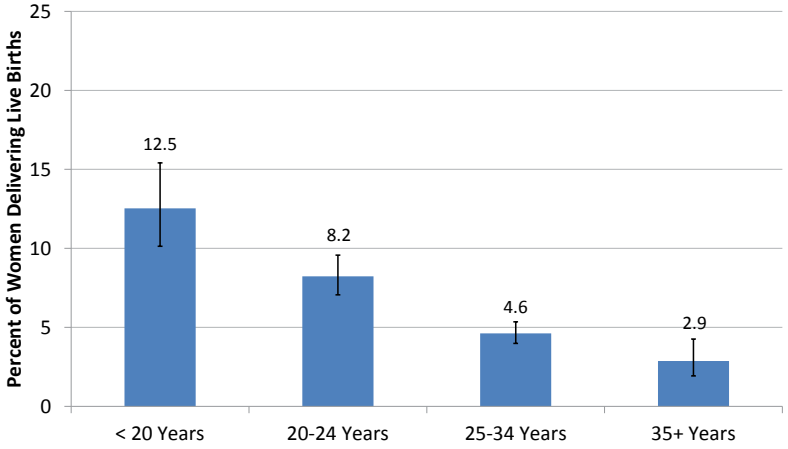
Pre-Pregnancy, Prenatal, and Postpartum Marijuana Use Alaska, 2002-2011

Data Source: PRAMS, Alaska Division of Public Health



Prenatal Marijuana Use by Maternal Age Group Alaska, 2004-2011

Data Source: PRAMS, Alaska Division of Public Health



INTIMATE PARTNER VIOLENCE

Intimate partner violence (IPV) is a serious, preventable public health problem that affects 24.9% of Alaskan adults according to BRFSS. IPV includes physical, sexual, or psychological harm by a current or former partner or spouse. This type of violence can occur among heterosexual or same-sex couples and does not require sexual intimacy.

Alaska PRAMS surveys women who recently delivered a live birth, and CUBS follows up with those same women when their child is 3-years-old.

- In 2011, 3.5% of women who recently delivered a live birth indicated they were physically abused (pushed, hit, slapped, kicked, or choked) by a husband or partner 12 months pre-pregnancy, and 2.7% reported physical abuse during pregnancy.
- During 2008 -2012, the percentage of mothers of 3-year-olds who reported physical abuse by a husband or partner during the last 3 months showed no significant trend, and was 3.0% in 2012.
- During 2002-2011, the proportion of women who recently delivered a live birth who indicated that they had a controlling husband or partner remained steady at about 3% for all periods surrounding the pregnancy. A controlling partner was defined as one who threatened her, limited her activities against her will, or made her feel unsafe in any other way.

Domestic Calls to Police

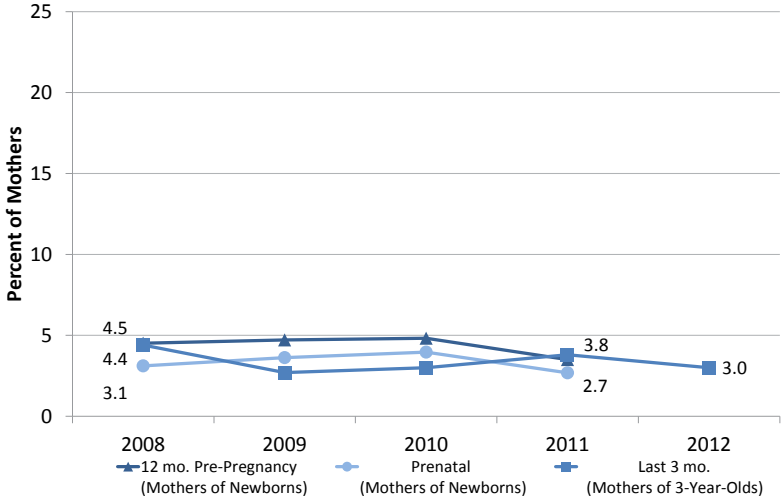
PRAMS asked Alaska women whether they had ever called the police because they felt threated by their husband or partner during the 12 months before they got pregnant with their new baby. This included calls to 911, Alaska State Troopers, and Village Public Safety Officers.

- During 2009-2011, 1.5% of White women and 4.0% of Alaska Native women called the police in the 12 months before they got pregnant.

Data Sources: BRFSS, Alaska PRAMS, Alaska CUBS

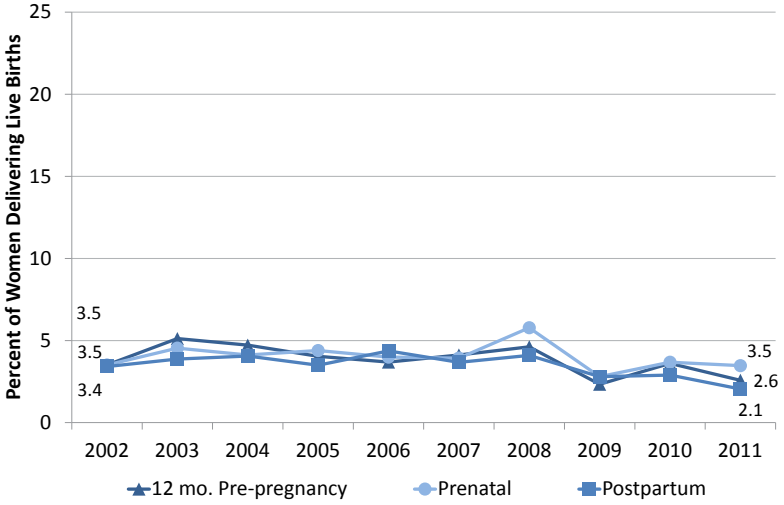
Physical Abuse by Husband/Partner Among Mothers of Newborns and Mothers of 3-Year-Old Children, Alaska, 2008-2012

Data Sources: PRAMS, CUBS, Alaska Division of Public Health



Pre-Pregnancy, Prenatal, and Postpartum Controlling Partner Alaska, 2002-2011

Data Source: PRAMS, Alaska Division of Public Health



CHRONIC DISEASE: DIABETES AND HYPERTENSION

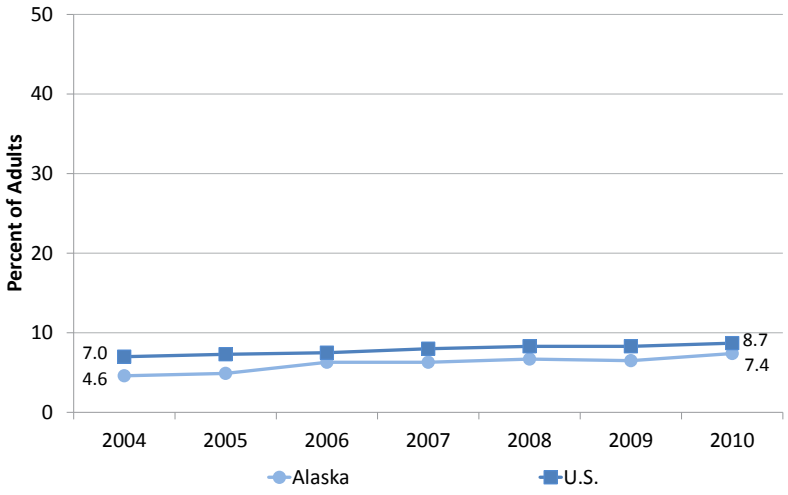
Two of the most common chronic diseases associated with poor health outcomes are hypertension (high blood pressure) and diabetes. These two conditions directly affect both women and their offspring and can lead to complications during and after pregnancy such as preeclampsia, preterm delivery, and infant death. In addition, women with type 1 or type 2 diabetes before pregnancy may also have an increased risk for birth defects.[30]

BRFSS monitors health status indicators among adults 18 years or older in all 50 states, as well as participating U.S. territories and protectorates. Alaska supplements BRFSS information on diabetes and hypertension through an additional state-funded survey.

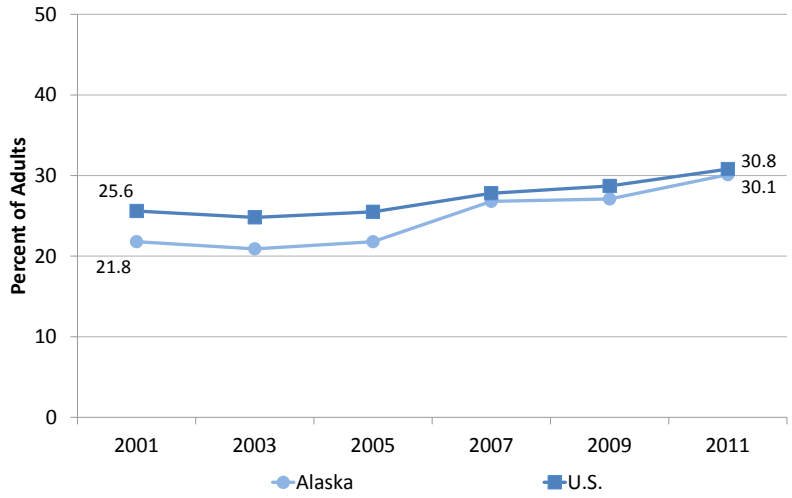
- During 2004-2010, diabetes diagnosis increased steadily in both Alaska and the U.S.
- In Alaska in 2010, a similar percentage of White adults (6.3%) and Alaska Native adults (5.0%), as well as a similar percentage of males (7.1%) and females (7.7%), reported a diabetes diagnosis.
- In Alaska during 2009-2011, a similar percentage of Alaska Native women (1.3%) and White women (1.6%) who recently delivered a live birth reported on the PRAMS survey that they had a pre-pregnancy diagnosis of type 1 or type 2 diabetes.
- During 2005-2011, hypertension increased at a similar rate in both Alaska and the U.S.
- In Alaska in 2011, more males (32.2%) than females (27.8%) reported a diagnosis of hypertension.

Data Sources: BRFSS, Alaska PRAMS

Diagnosed Diabetes Among Adults
Alaska and U.S., 2004-2010
Data Sources: BRFSS, Alaska Division of Public Health, U.S. CDC



Diagnosed Hypertension Among Adults
Alaska and U.S., 2001-2011
Data Sources: BRFSS, Alaska Division of Public Health, U.S. CDC



Theme 7:
Mental Health

MENTAL HEALTH AMONG MOTHERS

Perinatal depression occurs among women during pregnancy or within a year after delivery. Perinatal depression can exacerbate underlying depression or be triggered by stressful events, such as losing a baby, premature labor and delivery, having twins or triplets, having a baby who has a disability, or having a baby as a teenager. The negative health effects associated with perinatal depression include chronic disease, substance abuse, suicide, and negative impacts on child development.[31]

Consistent and standardized screening and referral for maternal depression during the postpartum period, newborn, and pediatric periods can improve maternal and child health and developmental outcomes. Treatments may include individual and group psychotherapy, supportive counseling, and antidepressant medications.[32]

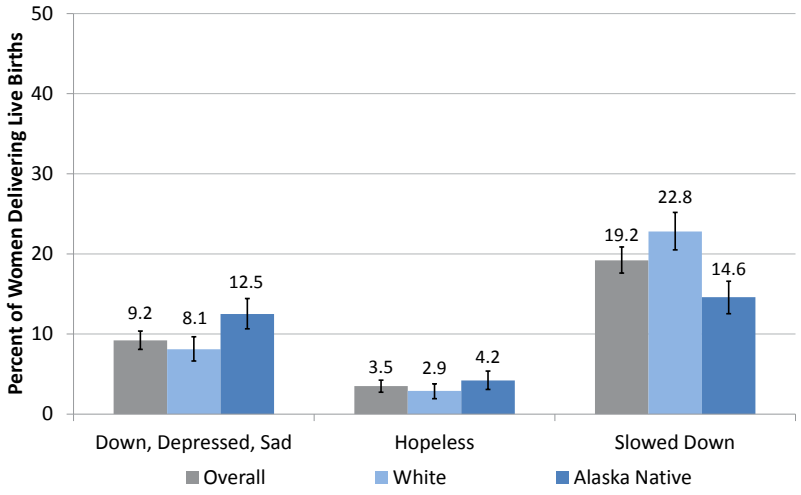
During 2009-2011, Alaska PRAMS surveyed women who recently delivered a live birth on their experience of depressive feelings after pregnancy (frequency of feeling "down, depressed, or sad," "hopeless," or "slowed down"). Women were also asked whether or not a provider talked to them about depression during and after pregnancy.

- The most frequent postpartum feeling reported by all women who recently delivered a live birth was often or always feeling slowed down (19.2%). Compared to Alaska Native women (14.6%), White women (22.8%) were more likely to report that they often or always felt slowed down after giving birth.
- Compared to White women (8.1%), Alaska Native women (12.5%) were more likely to report that they often or always felt down, depressed, or sad after giving birth.
- The majority of women who recently delivered a live birth reported that a health care provider talked with them about depression during pregnancy (75.4%) and after giving birth (81.4%).

Data Source: Alaska PRAMS

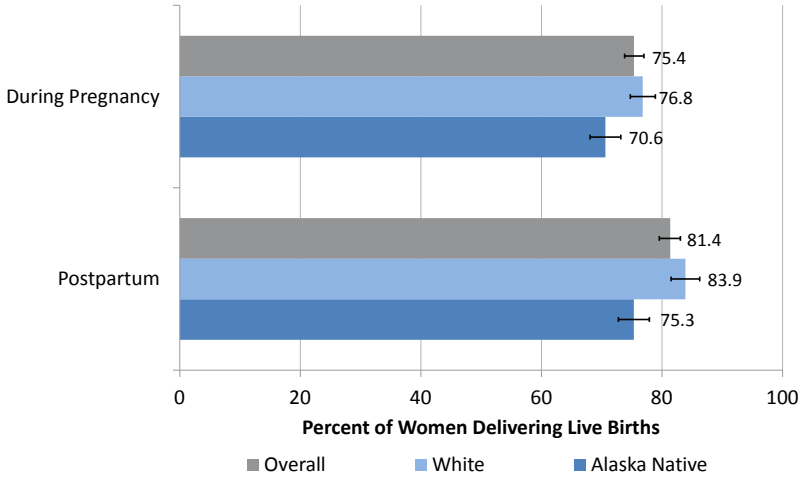
Postpartum Depressive Feelings (Often or Always) by Maternal Race Alaska, 2009-2011

Data Source: PRAMS, Alaska Division of Public Health



Talked with a Provider About Depression During Pregnancy and Postpartum by Maternal Race, Alaska, 2009-2011

Data Source: PRAMS, Alaska Division of Public Health



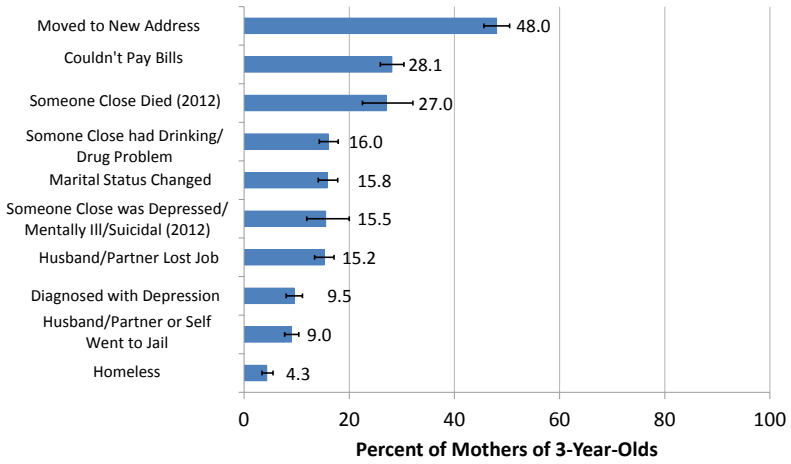
FAMILY STRESSORS

A woman's historical and current life experiences can directly impact the health and well-being of her children and family. The impacts of life experiences can also be transmitted to subsequent generations. Reducing the frequency of stressful life events experienced by women and their families could potentially result in improved overall health and development of children and families in the United States.

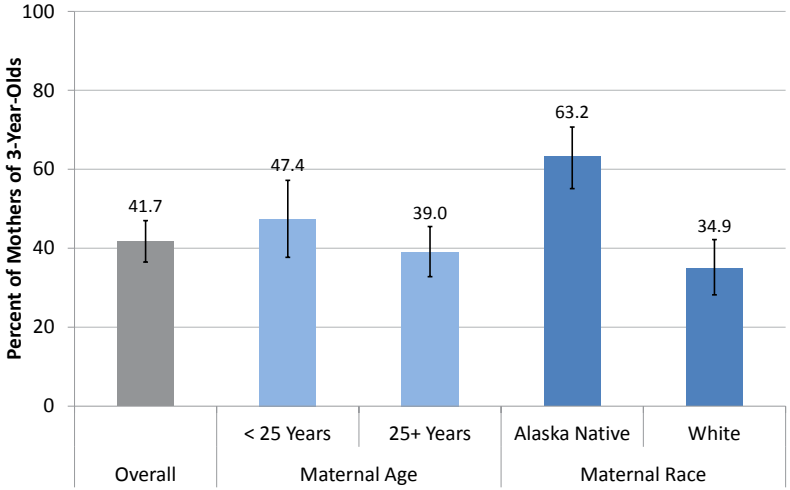
- During 2008-2012, among mothers of 3-year-olds, the most prevalent stressful life event experienced since their child was born was moving to a new address (48.0%). The next two most commonly reported events were having bills that she couldn't pay (28.1%) and the death of someone close to her (27.0%, question only asked in 2012).
- Overall in 2012, 41.7% of Alaskan mothers of 3-year-olds reported some form of emotional trauma since their child was born. Emotional trauma was defined as any report of the following: being diagnosed with depression, someone close had a problem with drinking or drugs, someone close was depressed, mentally ill or suicidal, or someone close died.
- More Alaska Native mothers (63.2%) than White mothers (34.9%) reported experiencing emotional trauma since their 3-year-old child was born. There was no statistically significant difference in the prevalence of experiencing emotional trauma by maternal age group.

Data Source: Alaska CUBS

Stressful Life Events Experienced by Mothers Since Birth of their 3-Year-Old Child, Alaska, 2008-2012
Data Source: CUBS, Alaska Division of Public Health



Emotional Trauma Experienced by Mothers Since Birth of their 3-Year-Old Child by Maternal Age and Race, Alaska, 2012
Data Source: CUBS, Alaska Division of Public Health



POPULATION MENTAL HEALTH

Mental health is "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community."[33] There is emerging evidence that positive mental health is associated with improved health outcomes. Mental illness includes "all diagnosable mental disorders", including depression. Research suggests that mental disorders, especially depressive disorders, are strongly related to the incidence and outcomes of many chronic diseases (e.g. diabetes, cancer, and cardiovascular disease). Poor mental health has also been linked to many negative health behaviors related to the development of chronic disease such as lack of physical activity, smoking, excessive drinking, and insufficient sleep.[34]

In 2013, the YRBS surveyed high school students about depressive feelings that they experienced during the past 12 months.

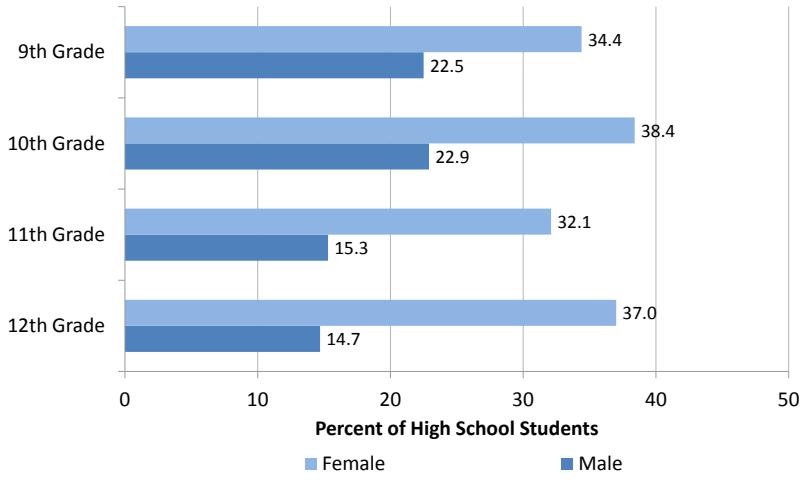
- 35.7% of Alaska high school females and 19.0% of high school males indicated that they "felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months."
- Female students were more likely to report depressive feelings than males. The difference between males and females was present in all grades 9-12, but widened in the upper grades.

In 2012, the BRFSS surveyed adults aged 18 years or older on their perceived mental health (including stress, depression, and problems with emotions) status during the past 30 days.

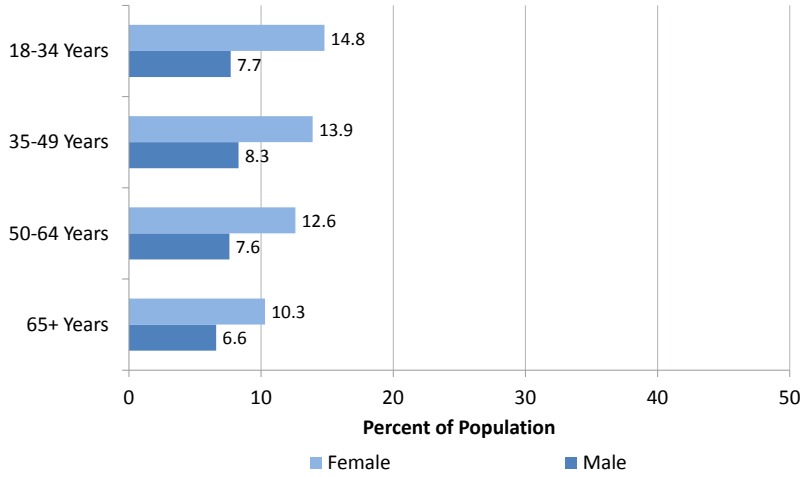
- Among all Alaska adults, 13.4% of females and 7.7% of males had poor mental health (i.e. reported that their mental health was not good for 14 or more days out of the past 30). The prevalence of poor mental health was higher among females (13.4%) than males (7.7%).
- The prevalence of poor mental health among females and males did not significantly differ by age group.

Data Sources: YRBS, BRFSS

High School Students Who Felt Sad or Hopeless for More than 2 Weeks During the Previous 12 Months, by Grade and Sex, Alaska, 2013
Data Source: YRBS, Alaska Division of Public Health



Adults with Poor Mental Health for 14 Days or More out of Prior 30 by Age and Sex, Alaska, 2012
Data Source: BRFSS, Alaska Division of Public Health



SUICIDE

Suicide is a complex social phenomenon that causes immeasurable pain, suffering, and loss to individuals, families, and communities. Suicide risk is impacted by a combination of unique historical, personal, social, and other situational circumstances. Risk factors for suicide include a family history of suicide or child maltreatment, substance abuse, mental health disorders including depression, and physical illness.[35] Suicide affects individuals at all stages of the life course, but the overall impact varies by age distribution and sex. In 2010, suicide rates for females in the U.S. were highest among those aged 45-54 years (9 per 100,000), and for males among those aged 75 years or older (36 per 100,000). Suicide rates among males are four times higher than among females and represent 79% of all U.S. suicides.[36]

- In 2010, Alaska had the second highest suicide rate in the U.S., with 23.1 deaths per 100,000 persons. The U.S. suicide rate in 2010 was 12.4 per 100,000.
- During the 3-year period 2010-2012, there were 23.6 suicides per 100,000 Alaskan adolescents aged 15-19 years reported by the Alaska Bureau of Vital Statistics (BVS). The rate for males aged 15-19 years was 38.9 per 100,000. The rate for females aged 15-19 years was based on fewer than 20 occurrences and cannot be reported.
- Alaska YRBS surveyed high school students on suicidal thoughts and behavior. In 2013, 21.7% of female and 10.9% of male students indicated that they had seriously considered attempting suicide over the past 12 months. There was no statistically significant difference between males and females in planning or attempting suicide.

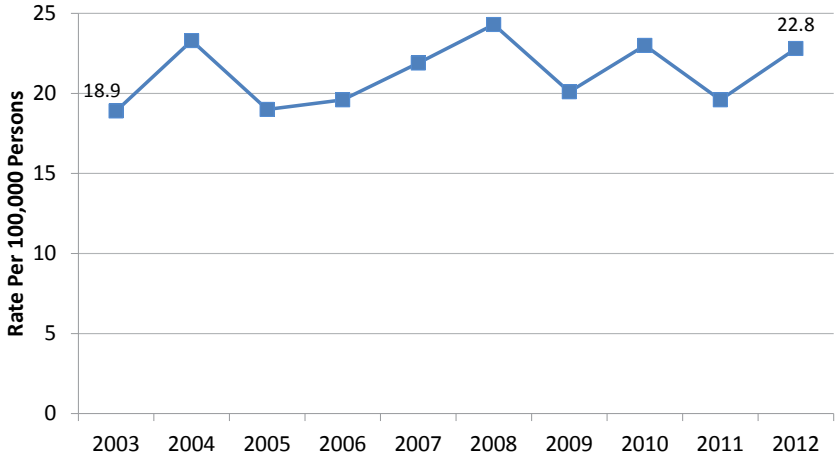
Pregnancy-Associated Suicide

Suicides by women who are pregnant or within one year of pregnancy are tracked as part of pregnancy-associated mortality surveillance. Pregnancy-associated deaths are rare, sentinel events that often underscore socioeconomic and medical problems in communities. During pregnancy and while caring for young infants, women often have more interaction with the health care system than they do at other times in their lives, and there are more opportunities for providers to screen and refer women for mental health problems and appropriate treatment.

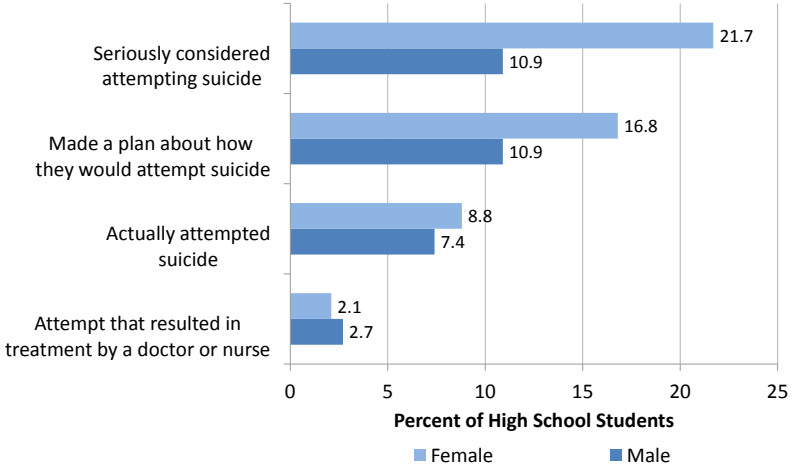
- During 2000-2011, 13 of 72 Alaska pregnancy-associated deaths were due to suicide (18%).

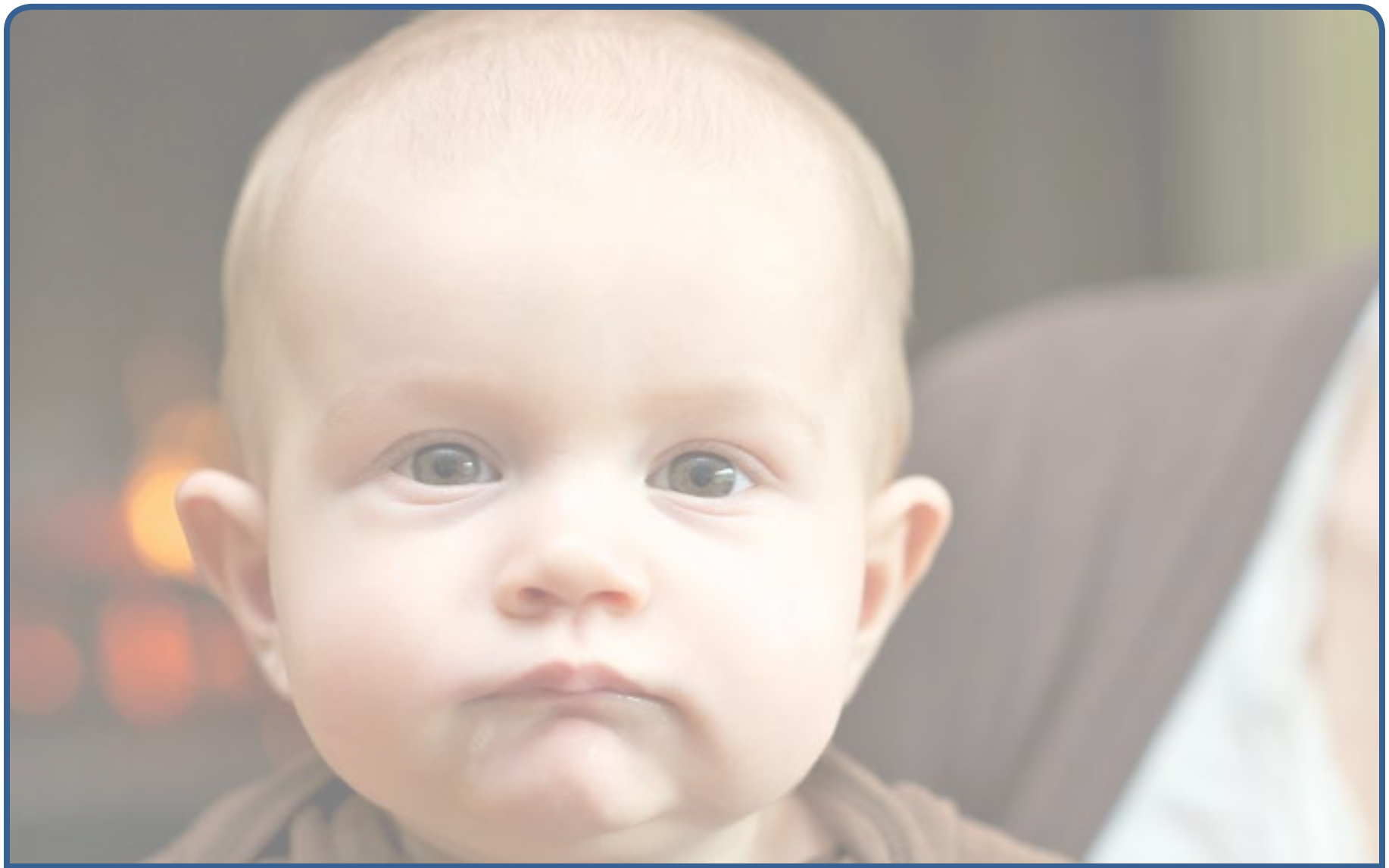
Data Sources: BVS, NVSS, YRBS, Alaska Maternal-Infant Mortality Review (MIMR)

Suicide in the Total Population
Alaska, 2003-2012
Data Sources: Alaska Bureau of Vital Statistics



Adolescent Contemplation of Suicide in the Past 12 Months by Sex
Alaska, 2013
Data Source: YRBS, Alaska Division of Public Health





Theme 8:
Early Life Services

Photo Credit: Hale Images

NEWBORN SERVICES

According to recommendations published by the American Academy of Pediatrics in 2010, the hospital stay of mothers and healthy term newborn infants should be long enough to allow identification of early problems and to ensure that the family is able and prepared to care for the infant at home. A set of minimum criteria should be met before discharge, in order to reduce the risk of readmission; these include stable vitals, the completion of recommended tests and screenings, and identification of a medical home for continued care.[37]

Recent studies show that hospital discharge before 48 hours significantly increases the risk for readmission.[38, 39] Alaska mandates insurance coverage for a 48-hour stay, through Alaska Statute 21.42.347, which began in 1996. If infants are discharged before 48 hours, it is vital that a structured follow-up program, in addition to the recommended one-week infant check-up, is implemented in order to decrease the risk for readmission, morbidity, and neonatal mortality.

- During 2009, 93.3% of Alaska births occurred in a hospital, 3.4% in birthing centers, 1.5% at home, 0.6% in another facility, and 1.1% outside of Alaska.

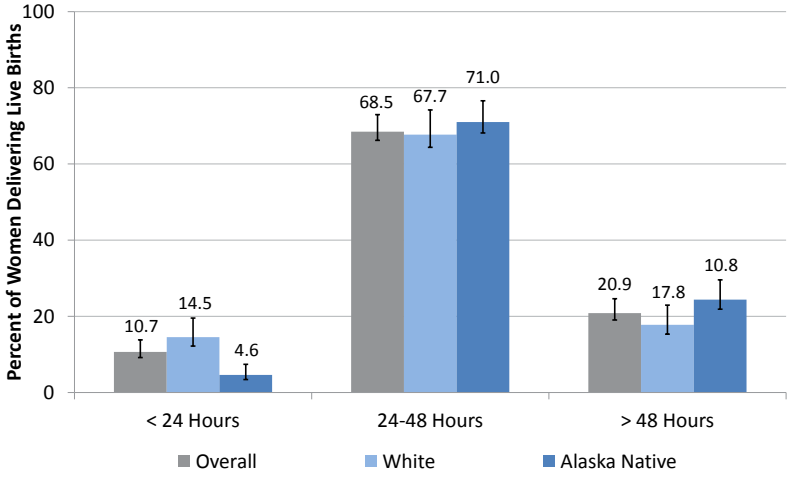
During 2002-2011, Alaska PRAMS asked women who recently delivered a live birth in a hospital about the duration of their infants' hospital stay and if their infant had a one-week checkup.

- Overall, the majority (68.5%) of Alaskan women with in-hospital vaginal deliveries during 2009-2011 reported that their newborn stayed in the hospital for 24-48 hours after delivery. 10.7% reported stays of less than 24 hours and 20.9% reported hospital stays of more than 48 hours.
- Among Alaskan infants discharged within 48 hours of delivery, 83.5% received an infant checkup within one week of hospital discharge in 2008, an increase from 77.5% in 2002. During 2009-2011, the survey question changed to specify a checkup within one week of delivery. In 2011, 91.1% of infants received an infant checkup within one week of delivery.
- In 2011, 95.8% of White women self-reported their infant had a one week post-delivery checkup, compared with 75.0% of Alaska Native women.

Data Source: Alaska PRAMS

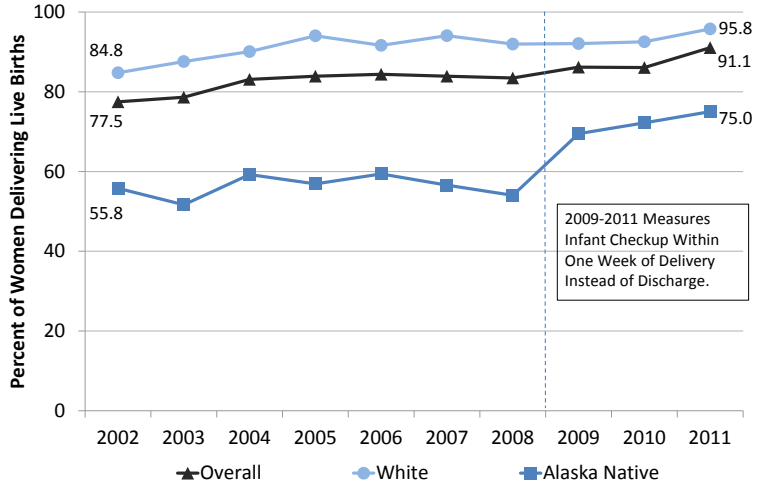
Duration of Infant Hospital Stay (Limited to Vaginal Deliveries) by Maternal Race, Alaska, 2009-2011

Data Source: PRAMS, Alaska Division of Public Health



Infant Checkup within One Week of Discharge by Race (Among Infants Discharged Within 48 Hours), Alaska, 2002-2011

Data Source: PRAMS, Alaska Division of Public Health



WIC PARTICIPATION

Proper nutrition promotes the optimal growth and development of children and continues to be important throughout the life course. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), is a 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. 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. Income eligibility is set by states, but cannot be more than 185% of the Federal Poverty Level (FPL). In Alaska, Denali KidCare recipients are automatically eligible for WIC.

The U.S. Department of Agriculture provides information on the number of children on WIC and the number at or below 185% of FPL for the nation and individual states.

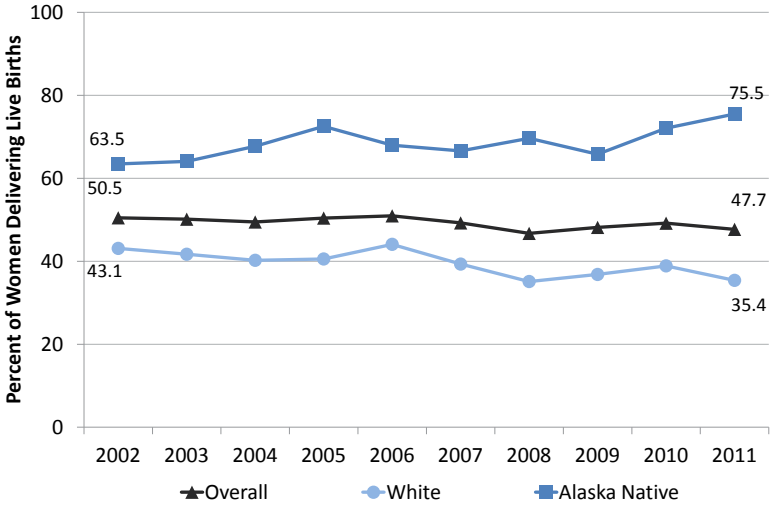
- In 2010, a similar proportion of children aged 1-4 years lived at or below 185% of the FPL in Alaska (47.8%) and the U.S. (47.5%).
- In 2010, an average of 33.4% of Alaska children and 29.9% of all U.S. children aged 1-4 years received WIC services each month.

The Alaska PRAMS and Alaska CUBS surveys collected self-reported information on WIC usage from women who recently delivered a live birth and mothers of 3-year-olds.

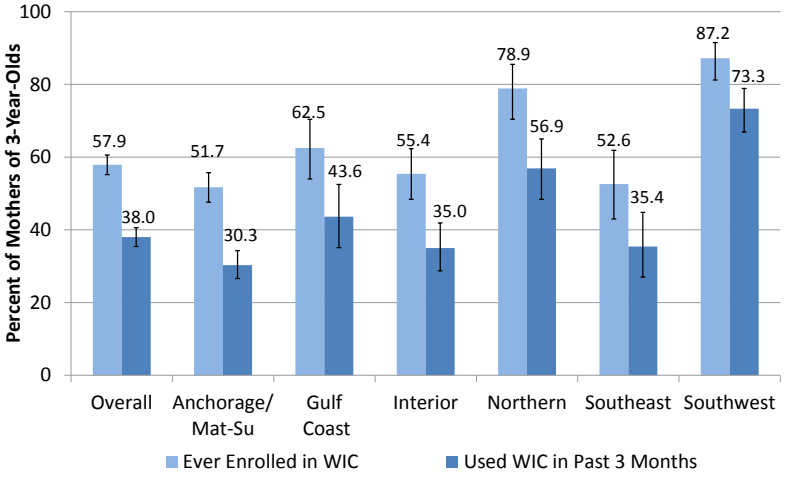
- According to PRAMS, 75.5% of Alaska Native women who delivered a live birth participated in WIC prenatally in 2011, a significant increase from 63.5% participating prenatally in 2002. White women experienced a decline in prenatal WIC participation from 43.1% in 2002 to 35.4% in 2011.
- According to CUBS, during 2009-2012, 57.9% of Alaska 3-year-olds were ever enrolled in WIC and 38.0% of mothers reported using WIC in the past 3 months to feed their family. WIC usage among 3-year-olds and their families varied by region.

Data Sources: U.S. Dept. of Agriculture, U.S. Census Bureau, Alaska Dept. of Labor and Workforce Development, Alaska CUBS, Alaska PRAMS

Prenatal WIC Participation by Maternal Race
Alaska, 2002-2011
Data Source: PRAMS, Alaska Division of Public Health



Recent or Ever WIC Usage Reported by Mothers of 3-Year-Olds by Region*, Alaska, 2009-2012
Data Source: CUBS, Alaska Division of Public Health



*See page 2 for regional map.

WELL-CHILD VISITS

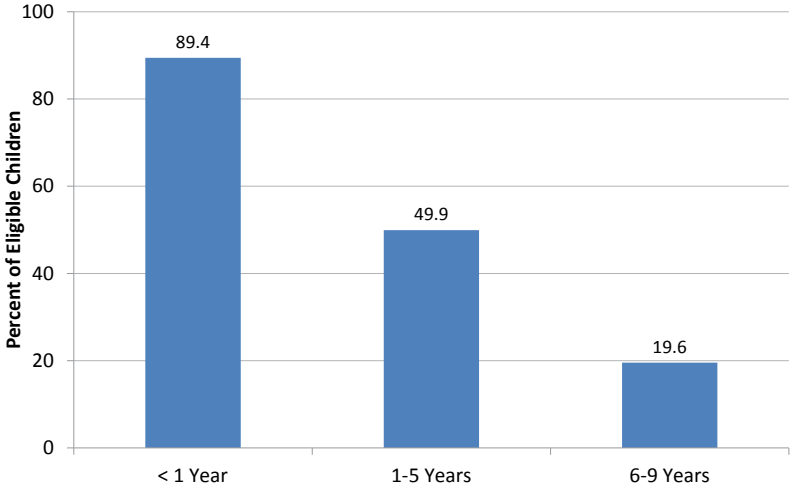
Childhood is a time of rapid growth and change, and children need more pediatric well-child visits when they are developing the fastest. The American Academy of Pediatrics recommends that children be seen by a health care provider for routine well-child care visits at the following ages: 3-5 days, 1, 2, 4, 6, 9, 12, 15, 18, 24, and 30 months and annual visits from age 3 years until age 21 years. Each visit includes a complete physical examination where the health care provider checks the child's growth and development in order to detect and prevent or treat behavioral and health problems. Immunizations are often included in these visits.

The Early Periodic Screening, Diagnosis and Treatment (EPSDT) Program, a component of Medicaid, is designed to improve the health of low-income children by assessing children's health status and ensuring they receive continuous and comprehensive medical care. "EPSDT-eligible" is defined as children who were eligible for EPSDT for 90 consecutive days.

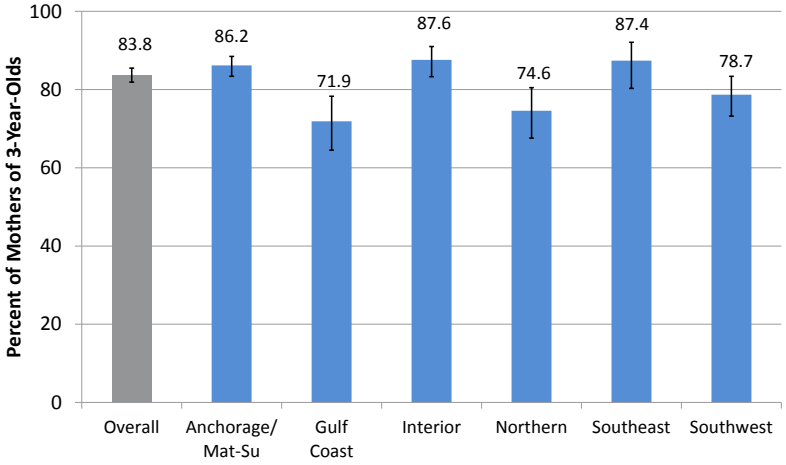
- Of the children who were eligible for EPSDT well-child care in Federal Fiscal Year (FFY) 2013, which ran from October 2012 – September 2013, 89.4% of infants less than 1 year, 49.9% of children aged 1-5 years, and 19.6% of children aged 6-9 years received at least one well-child medical screening.
- During 2008-2012, most Alaskan mothers of 3-year-olds (83.8%) reported that their child had seen a health care provider for routine medical care during the past 12 months.
- The prevalence of receiving routine medical care varied by region of Alaska. During 2008-2012, less than 80% of mothers of 3-year-olds in the Gulf Coast, Northern, and Southwest regions reported that their child saw a health care provider for routine care during the past 12 months, compared to more than 85% of mothers in the Anchorage/Mat-Su, Interior, and Southeast regions.

Data Sources: Alaska Medicaid, Alaska CUBS

EPDST-Eligible Children Who Received at Least One Well-Child Medical Screening, by Age Group, Alaska, FFY 2013
Data Source: Medicaid, Alaska Division of Public Assistance



Child Saw Health Care Provider for Routine Medical Care During Previous 12 Months, by Region*, Alaska, 2008-2012
Data Source: CUBS, Alaska Division of Public Health



*See page 2 for regional map.

EARLY INTERVENTION

The Alaska Early Intervention/Infant Learning Program (EI/ILP) assures that services are available for infants and toddlers (birth to age 3 years) with special needs, including screening and evaluation, individualized family service plans, and physical, speech, and occupational therapy. The mission of early intervention programs is to strengthen and support families to promote healthy development of infants and toddlers. In Alaska, EI/ILP is administered by the Department of Health & Social Services, Office of Children's Services.

Early intervention may reduce costs associated with serious or life threatening medical conditions associated with untreated dental caries, delayed vaccination, and delayed identification of autism spectrum disorders or fetal alcohol spectrum disorders. These services are more effective the earlier they are received.

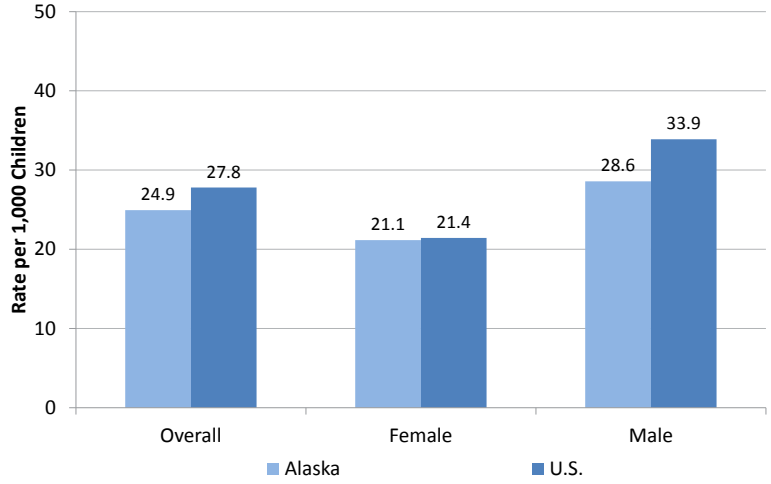
Section 618 of the Individuals with Disabilities Education Act (IDEA) requires that each state submit data about the children they serve. This data is collected by the IDEA Data Center in the annual IDEA 618 Child Count.

- In 2012, 24.9 per 1,000 Alaskan children aged 0 to 3 years received early intervention services compared to 27.8 per 1,000 U.S. children. In both Alaska and the U.S., more male children received early intervention services than females.
- During 2009-2012, 8.2% of Alaskan mothers of 3-year-olds reported that their child had ever received services from Early Intervention or Infant Learning Program (EI/ILP). The two regions of Alaska with the highest proportional reported use of EI/ILP were the Northern (17.7%) and Southeast (17.1%) regions. The regions where reported use of EI/ILP was proportionally less common were Anchorage/Mat-Su (5.8%) and the Interior (4.7%).
- The annual prevalence of reported use of EI/ILP among mothers of 3-year-olds remained stable during 2009-2012.

Data Sources: IDEA 618 Child Count, Alaska Dept. of Labor and Workforce Development, U.S. Census Bureau, Alaska CUBS

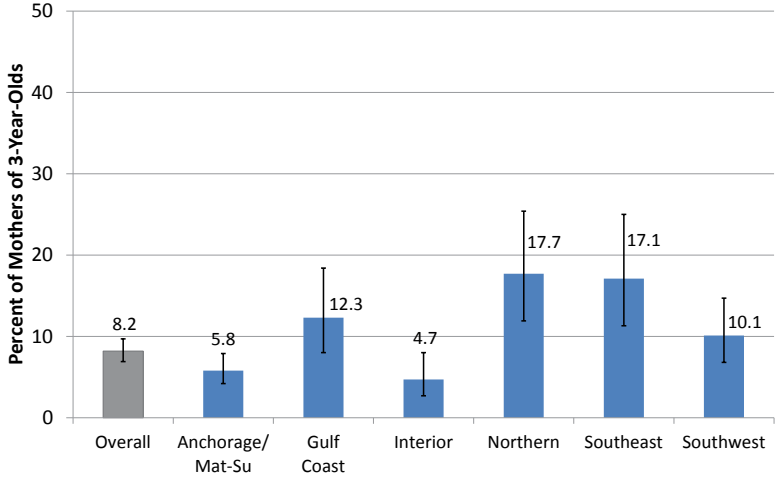
Children Aged 0-3 Years Who Received Early Intervention Services by Sex, Alaska and U.S., 2012

Data Sources: IDEA 618 Child Count, Alaska Department of Labor, U.S. Census



3-Year-Old Children Who Ever Utilized Early Intervention or Infant Learning Program (EI/ILP) Services by Region*, Alaska, 2009-2012

Data Source: CUBS, Alaska Division of Public Health



*See page 2 for regional map.

Theme 9:

Health Care Access and Quality

HEALTH INSURANCE

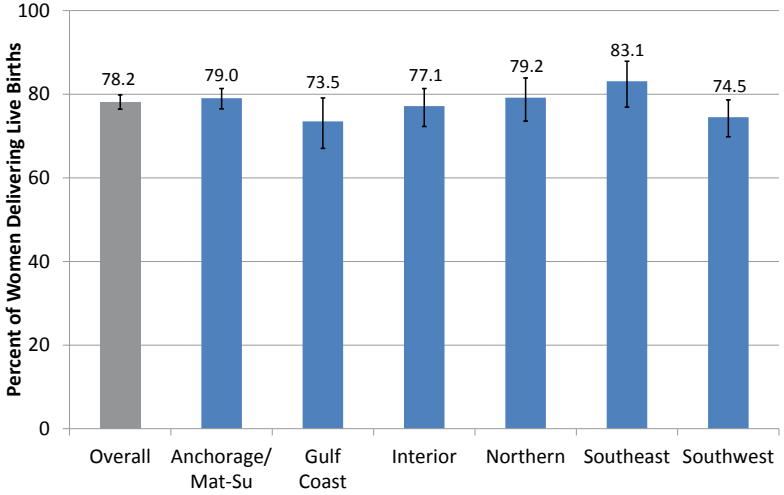
Health insurance helps people get timely medical care and improves their health outcomes. Individuals without health insurance may have limited access to needed clinical care, including preventative services. They may also avoid seeking medical care because of financial concerns. Missing or delaying health care can lead to poorer health and potentially to greater long-term medical expenditure.[40]

- The Kaiser Family Foundation analyzes the Census Bureau's March Supplement to the Current Population Survey to estimate health care coverage in the United States. In 2012, 62% of Alaskan adults and 65% of U.S. adults aged 19-64 years were covered by employer or other private health insurance. In both Alaska and the U.S., 14% of adults were covered by Medicaid or other public insurance.
- The overall prevalence of self-reported health insurance coverage (including Medicaid) during the month before pregnancy among Alaskan women who delivered their infants during 2009-2011 was 78.2%. The Southeast region had the highest prevalence at 83.1%, whereas the Gulf Coast region had the lowest at 73.5%.
- During 2008-2012, there was a significant decline in the overall proportion of Alaskan mothers who reported that their 3-year-old was ever not covered by any type of health plan, from 16.2% in 2008 to 7.9% in 2012.

Data Sources: Kaiser Family Foundation, Alaska PRAMS, Alaska CUBS

Health Insurance Including Medicaid, One Month Pre-Pregnancy by Region*, Alaska, 2009-2011

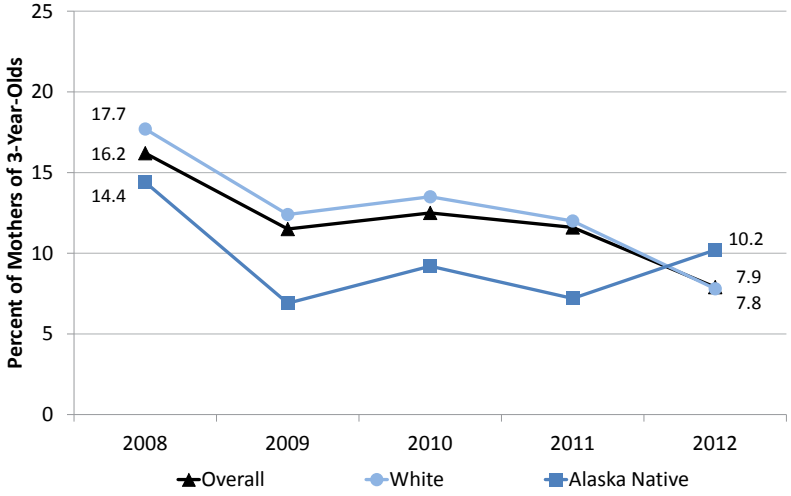
Data Source: PRAMS, Alaska Division of Public Health



*See page 2 for regional map.

3-Year-Old Children Who Were Ever Not Covered by Any Type of Health Plan by Maternal Race, Alaska, 2008-2012

Data Source: CUBS, Alaska Division of Public Health



MEDICAL HOME

A "medical home" as defined by the American Academy of Pediatrics, is a home base for any child's medical care; this includes preventative, acute and chronic care from birth to adulthood. Today's medical home is a cultivated partnership between the patient, family, and primary provider in cooperation with specialists and support from the community. Essential components of the medical home model stress that care must be accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally effective.[41]

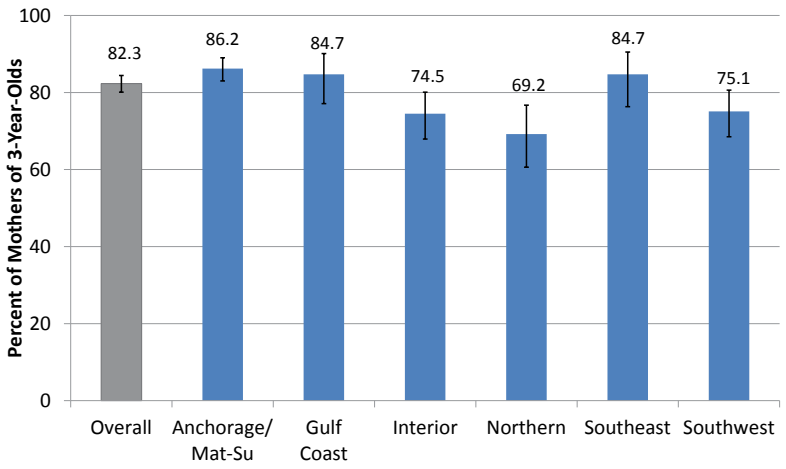
- During 2009-2012, 82.3% of Alaskan mothers of 3-year-olds reported that they had a doctor, nurse, or other health care worker who knew their child well and was familiar with their child's health history. This percent differed by region of the state, and was most common among residents of Anchorage/Mat-Su (86.2%) region and least common among residents of the Northern (69.2%) region.

In 2011-2012, the National Survey of Children's Health asked parents of children aged 0-17 years about their child's insurance status and whether they had received care within a medical home.

- Receiving coordinated, comprehensive care within a medical home was more common among children with private health insurance compared to children on public insurance, or those with no insurance. However, even among children with private insurance, only 64.0% of U.S. and 59.5% of Alaskan children reportedly received coordinated comprehensive care within a medical home during 2011-2012.

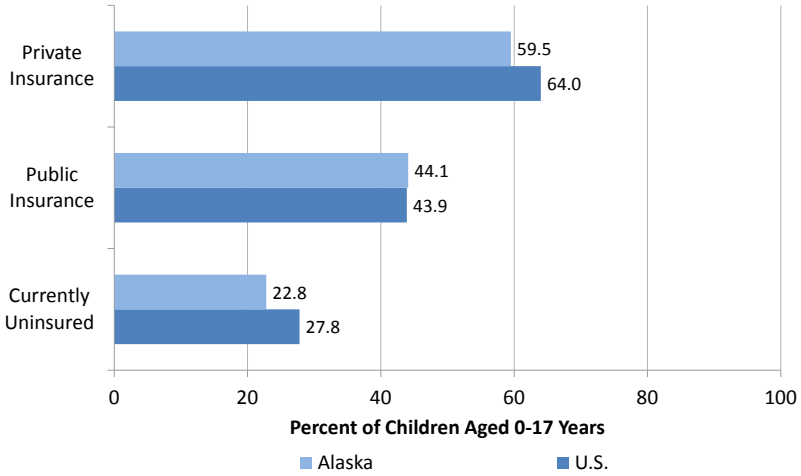
Sources: Alaska CUBS, NSCH

Health Care Worker is Familiar with 3-Year-Old Child's Health History by Region*, Alaska, 2009-2012
Data Source: CUBS, Alaska Division of Public Health



*See page 2 for regional map.

Children Who Received Coordinated Comprehensive Care within a Medical Home, by Insurance Type, Alaska and U.S., 2011-2012
Data Source: National Survey of Children's Health



INABILITY OR DELAY IN GETTING CARE – WOMEN/MOTHERS

Delays or inability in obtaining necessary health care is associated with poor health outcomes for both children and adults. In particular, early and adequate prenatal care is important for ensuring a healthy pregnancy. The American Congress of Obstetricians and Gynecologists (ACOG) recommends that women have their first prenatal visit at 8-10 weeks of pregnancy.[42]

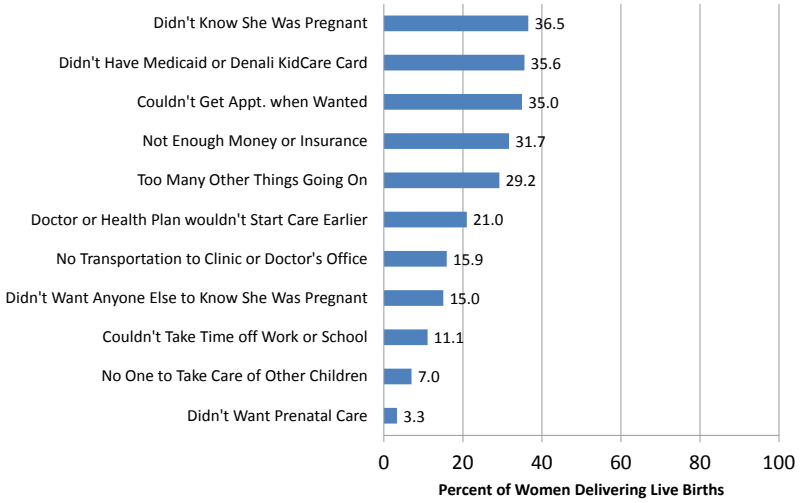
Alaska PRAMS surveyed women who recently delivered a live birth about their ability to obtain prenatal care and birth control when they wanted it, and asked them to list the corresponding reasons if they were unable to.

- During 2002-2011, the prevalence of Alaskan women who received prenatal care as early as they wanted increased from 80.4% to 85.0%.
- During 2009-2011, the most common reason that Alaskan women gave for not getting prenatal care as early in their pregnancy as they wanted was because they didn't know they were pregnant (36.5%). Not having a Medicaid or Denali KidCare card (35.6%) or not being able to get an appointment when they wanted one (35.0%) were also common reasons given.
- During 2009-2011, Alaskan women who recently delivered a live birth, and who had problems obtaining birth control when they wanted or needed it during the 12 months before getting pregnant, indicated two major barriers to obtaining birth control. 54.1% did not have enough money or insurance to pay for birth control and 51.0% did not have enough money or insurance to pay for the visit.

Data Source: Alaska PRAMS

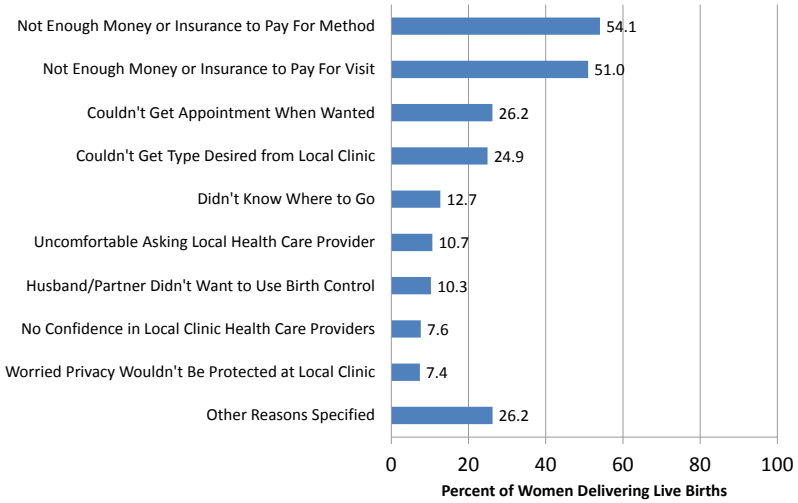
Reasons Women Report for Not Getting Prenatal Care as Early as Wanted, Alaska, 2009-2011

Data Source: PRAMS, Alaska Division of Public Health



Reasons Women Report for Not Getting Birth Control when they Wanted or Needed it, Alaska, 2009-2011

Data Source: PRAMS, Alaska Division of Public Health



INABILITY OR DELAY IN GETTING CARE - CHILDREN

Exposure to unmet health care needs during critical or sensitive periods of development (i.e. early childhood and adolescence) is known to impact health later in life. Inability or delay in getting care for children is associated with household income level, race or ethnicity, and health insurance status. Access to health care services for children may also be related to transportation issues, limited facility hours, and the inability of the parent to take time off of work. Eliminating significant health risks of children through timely health care access can have a positive impact on that individual's health and well-being as they proceed through their life course.[43]

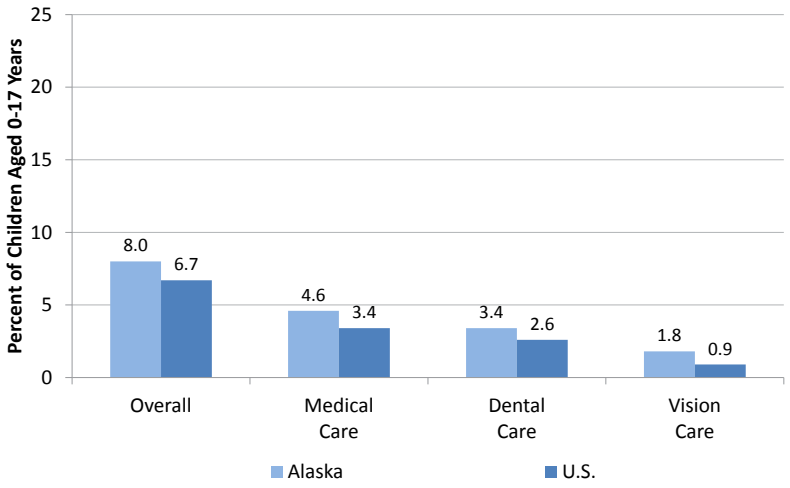
During 2011-2012, the NSCH asked parents of 0-17 year-olds whether there were times in the past 12 months when their child experienced delays or did not receive needed health care.

- 8.0% of children aged 0-17 years in Alaska and 6.7% of children in the U.S. had times when they needed health care in the past 12 months, but it was delayed or not received. There was no significant difference between Alaska and the U.S. in the percentage of children who experienced delays or unmet need for any specific type of health care.
- The CUBS survey asked Alaska mothers of 3-year-olds if any problems listed kept them from getting health care for their child when he or she was sick during the past year. During 2008-2012, the overall top three reasons reported were that they "didn't have enough money or insurance to pay for it" (7.3%), "couldn't get an appointment when I wanted one" (7.1%), and "couldn't take time off from work" (5.1%).
- During 2008-2012, Alaska mothers of 3-year-olds reported barriers to accessing care when a child was sick. Relative to White mothers, Alaska Native mothers were less likely to indicate money or insurance as a barrier (3.3% vs 8.6%), but more likely to indicate they couldn't get an appointment when they wanted (9.9% vs 6.2%) or the service needed wasn't available (5.0% vs 2.6%).

Data Sources: NSCH, Alaska CUBS

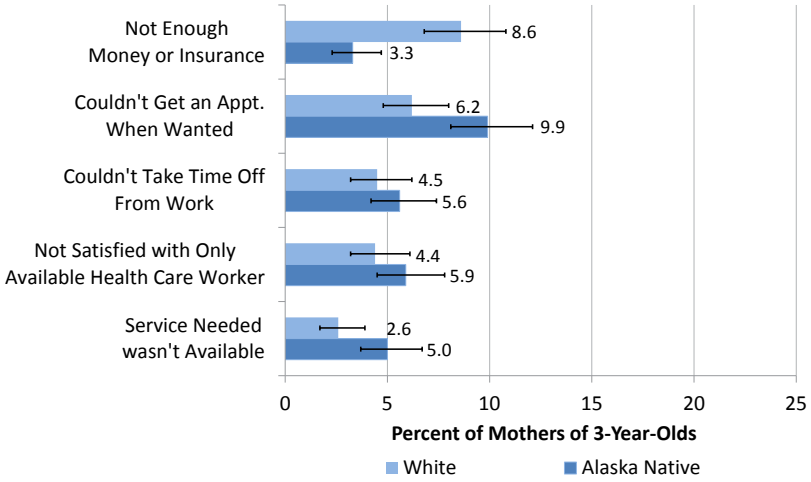
Delayed Health Care or Unmet Need Among Children Aged 0-17 Years Alaska and U.S., 2011-2012

Data Source: National Survey of Children's Health



Problems Getting Health Care When 3-Year-Old Child Was Sick by Maternal Race, Alaska, 2008-2012

Data Source: CUBS, Alaska Division of Public Health



AGE-APPROPRIATE IMMUNIZATIONS

Appropriate immunization of young children attending schools and child care facilities has nearly eliminated vaccine-preventable diseases that historically caused significant illness and death. Properly immunizing infants and children against infectious diseases helps both the individual child and the health of the community, especially those who cannot be immunized for medical reasons or because they are too young.

NIS monitors immunization coverage among children aged 19-35 months for the combined series of vaccines 4+DTaP, 3+Polio, 1+MMR, 3+HepB, 3+Hib*, 1+Varicella, and 4+PCV13. This combined series is referred to as the 4:3:1:3:3:1:4 series.

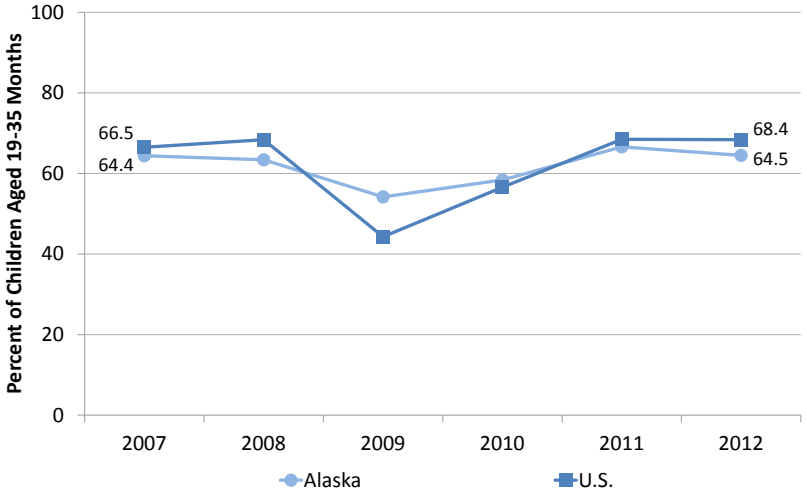
*Hib immunization may require 3 or 4 doses depending on the vaccine used. After 2008, 3+ Hib data were no longer reported out in the NIS. Rates displayed in the chart were provided to Alaska by CDC's National Center for Immunization and Respiratory Disease (NCIRD). National data include a "strict" Hib criterion requiring 4 doses of Hib vaccine unless explicitly specified as a 3 dose vaccine type. Alaska data for 2009-2012 were imputed to assume a 3 dose vaccine if unspecified.

- During 2007-2012, there was no significant trend in the proportion of children aged 19-35 months that completed the 4:3:1:3:3:1:4 series in either Alaska or the U.S. In 2012, 64.5% of Alaskan children and 68.4% of U.S. children had completed the vaccination series. This difference was not significant.
- National vaccine coverage rates in 2009-2010 were lower than in Alaska due to a Hib vaccine shortage that affected the rest of the country but preferentially spared Alaska.
- Alaska's immunization coverage rates for individual vaccines did not differ significantly from the U.S. average during 2012.

Data Sources: Alaska Immunization Program, NIS

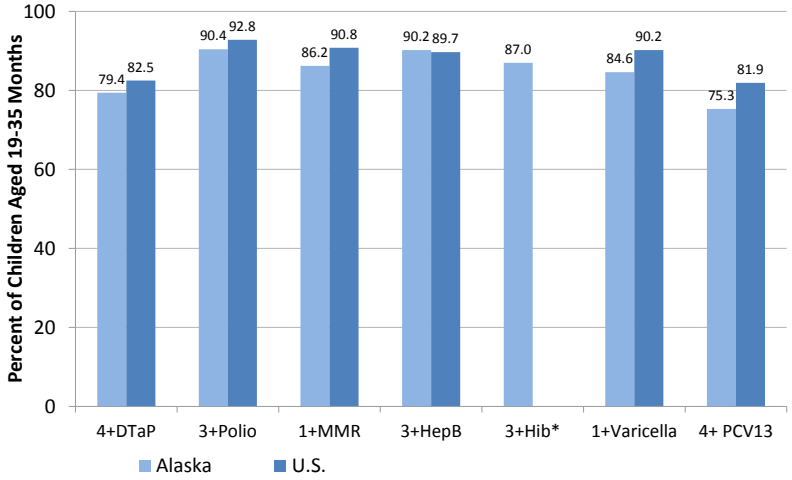
Completed Immunization Series Among Children Aged 19-35 Months Alaska and U.S., 2007-2012

Data Source: National Immunization Survey



Immunization Coverage by Vaccine Among Children Aged 19-35 Months Alaska and U.S., 2012

Data Source: National Immunization Survey



*U.S. used 4+Hib series in 2012, not comparable to Alaska.

INCOMPLETE VACCINATION COVERAGE

Health care providers play a critically important role in providing personalized, *evidence-based* information to parents regarding the safety of vaccines and the importance of vaccinating children on-time with all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP).[44] A recent comprehensive review of the medical literature regarding the ACIP childhood immunization schedule found no evidence that the schedule was unsafe, and underscored that delaying or declining vaccination has led to outbreaks of vaccine-preventable diseases that put the public's health at risk.[45]

In 2013-2014, the Alaska Section of Epidemiology aggregated vaccination data for children enrolled in four Alaska School Districts (Anchorage, Kenai, Fairbanks, and Mat-Su) to analyze on-time DTaP vaccination by socioeconomic status (SES). The DTaP series, which immunizes against diphtheria, tetanus, and pertussis, requires four successive vaccinations at 2, 4, 6, and 12-18 months of age. SES was defined by school lunch eligibility; children were classified as lower SES if they were eligible for free or reduced school lunch during the 2013-2014 school year, and higher SES if they were not eligible.

- As measured one month after the vaccine was due, at all major milestones Alaska children from lower SES families were less likely to be up-to-date with the DTaP series.
- For the commonly used 19-35 month toddler coverage period, 67.1% of lower SES children were up-to-date with DTaP, compared with 76.1% of higher SES children.

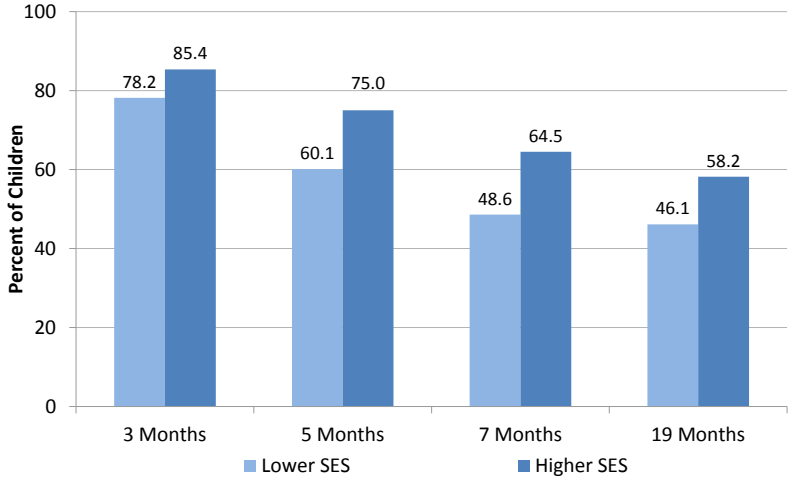
Alaska CUBS asked mothers of 3-year-olds about reasons for delaying of not getting vaccinations for their child.

- In 2012, 27.2% of mothers indicated that they had ever declined or delayed vaccines for their child.
- During 2009-2012, the two primary reasons among Alaska mothers who reported delaying or declining immunizations for their 3-year-old child were beliefs that "too many shots are given at once" (56.2%) and "some shots are given too early" (42.5%).

Data Sources: Alaska Section of Epidemiology, Alaska CUBS

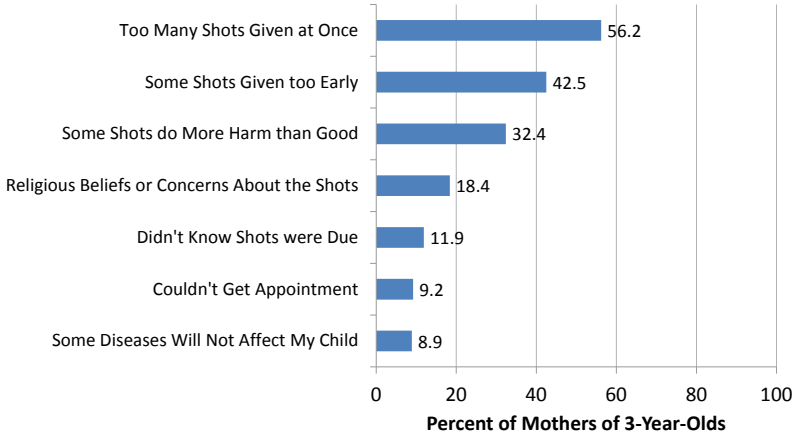
Up-To-Date DTaP Vaccine Coverage by Child's Age and Socioeconomic Status (SES), 4 Alaska School Districts, 2013-2014

Data Source: Alaska Section of Epidemiology



Reasons Given for Delaying or Not Getting Vaccines for their 3-Year-Old Child (Among Mothers who Ever Delayed), Alaska, 2009-2012

Data Source: CUBS, Alaska Division of Public Health



PREVENTATIVE ORAL HEALTH

Oral health is an important component of a healthy lifestyle that should be maintained throughout pregnancy. Some studies have indicated a possible association between periodontal infection and preterm birth. There is no evidence that dental services such as routine dental care, non-surgical periodontal care and the use of topical or local anesthesia for dental procedures are unsafe during pregnancy.[46]

- During 2004-2011, the percentage of Alaskan women who had their teeth cleaned during pregnancy increased from 29.2% to 47.0%.

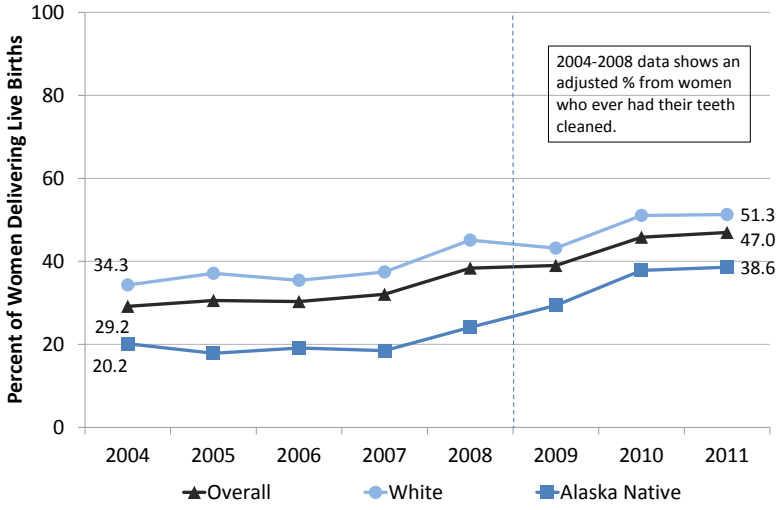
Tooth decay is the most common chronic childhood disease. Persistent disparities exist in access to and use of oral health preventative visits across age, racial and ethnic groups, insurance status, insurance type, language and geographic location. Forgoing preventative and routine dental care means children can be faced with more extensive and expensive restorative dental care in the future. The current recommendation by the American Dental Association for the first dental visit is within six months of eruption of the first tooth or no later than age one year. The tribal Dental Health Aide Program has increased access to some dental services in rural areas of Alaska in recent years.

- During 2009-2012, 21.7% of Alaskan mothers of 3-year-olds reported their child was first seen by a dentist or dental care provider before the age of two years. The statewide prevalence of visiting a dental care provider before age two increased from 19.7% in 2009 to 26.8% in 2012.
- The prevalence of visiting a dental care provider prior to age 2 varied by region. In the Northern region, 51.4% of 3-year-olds had seen a dentist or dental care provider by age 2, compared to 11.3% in the Interior Region.

Data Sources: Alaska PRAMS, Alaska CUBS

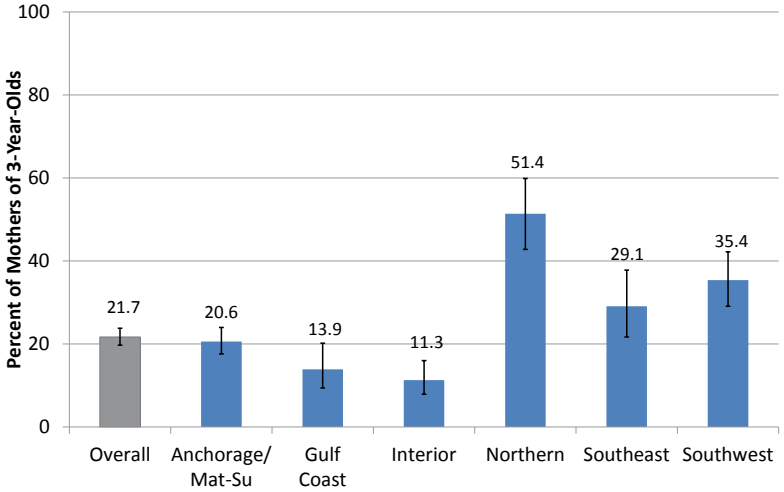
Women Who Had Teeth Cleaned by a Dentist or Dental Hygienist During Pregnancy by Maternal Race, Alaska, 2004-2011

Data Source: PRAMS, Alaska Division of Public Health



Child First Seen by a Dentist or Dental Care Provider Before Age 2 Years by Region*, Alaska, 2009-2012

Data Source: CUBS, Alaska Division of Public Health.



*See page 2 for regional map.

ORAL HEALTH

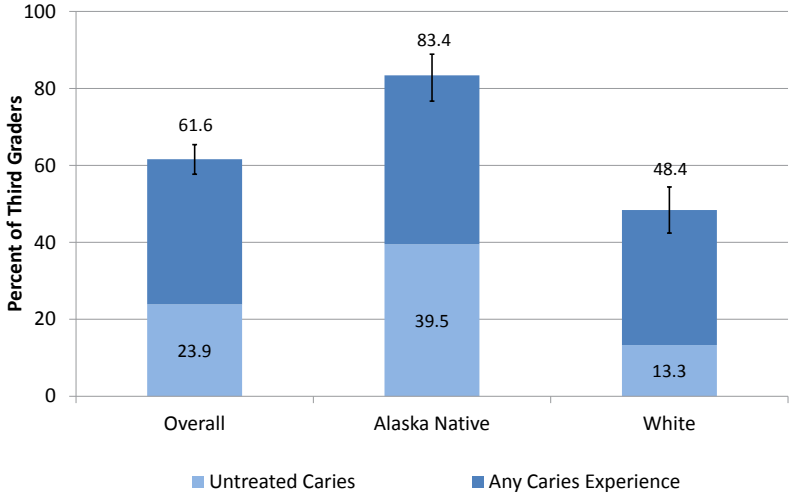
Evidence links poor oral health, especially gum disease, to several chronic diseases, including diabetes, heart disease and stroke. Among children, oral disease and oral pain have been associated with speech problems, difficulty eating, sleep problems, poor school performance and reduced self-esteem.

The Basic Screening Survey, conducted by the State of Alaska Oral Health Program, utilizes a random selection of elementary schools to collect information on the oral health of third graders every school year. The screening consists of questions about oral health and open mouth assessments conducted by dental professionals.

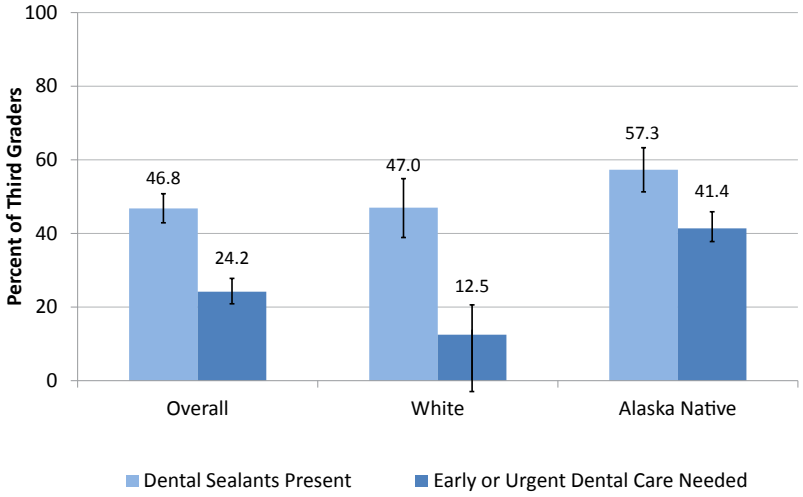
- During the 2010-2011 school year, 61.6% of Alaskan third graders who participated in the Basic Screening Survey had dental caries, including 23.9% with untreated caries. 83.4% of Alaska Native third graders had dental caries, while 48.4% of White third graders had dental caries.
- Overall, 46.8% of Alaskan third graders had dental sealants present and 24.2% needed early or urgent dental care during the 2010-2011 school year.
- Alaska Native third graders (41.4%) were more likely than White third graders (12.5%) to have early or urgent dental care needs such as swelling or soft tissue ulceration of more than two weeks duration.
- In 2012, 16.2% of Alaskan mothers of 3-year-olds reported that a health care worker had ever told them their child had tooth decay or cavities, according to Alaska CUBS.

Data Sources: Alaska Oral Health Program, Alaska CUBS

Dental Caries Among Third Graders, by Race
Alaska, 2010-2011 School Year
Data Source: Oral Health Program, Alaska Division of Public Health



Presence of Dental Sealants and Early or Urgent Dental Care Needs Among Third Graders, by Race, Alaska, 2010-2011 School Year
Data Source: Oral Health Program, Alaska Division of Public Health



CANCER SCREENING AND ASTHMA

Cervical Cancer Screening

Screening, through the Pap test and the human papillomavirus (HPV) test, significantly reduces mortality from cervical cancer through early detection and treatment. The Pap test detects pre-cancers, cell changes that may become cervical cancer if not treated appropriately. The HPV test looks for the virus that can cause these cell changes. In 2012, the U.S. Preventive Services Task Force recommended that women aged 21 years or older should get a Pap test at least once every three years to detect cervical cancer. Women aged 30 years or older should get a HPV test every 5 years.[47] This reflects a change from the 2003 guidelines which recommended that women get a Pap test within three years of sexual activity, but no later than 21 years and at least every three years.[48]

- During 2000-2012, the percentage of Alaskan women aged 18 years or older who reported on the BRFSS that they received a Pap test within the last 3 years decreased from 91.5% in 2000 to 87.0% in 2012.

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 aged 18-64 years with limited incomes who have little or no health insurance.

- 7,788 Alaskan women received screening through BCHC in 2012.

Asthma

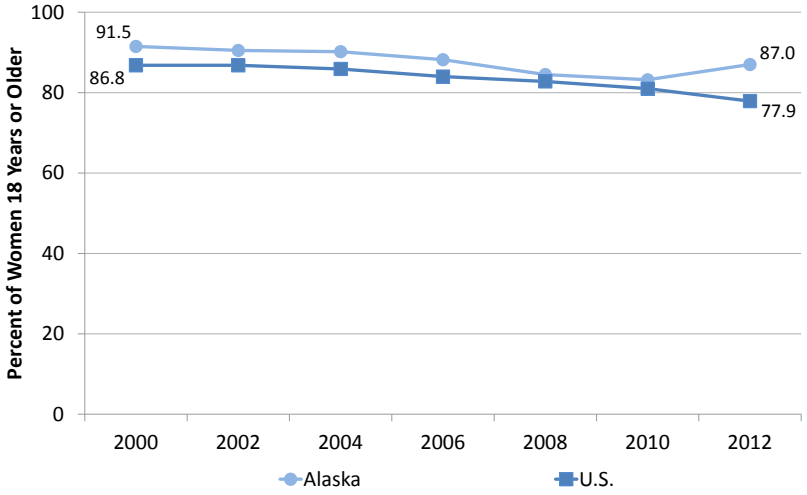
Asthma is a common health condition that can be managed through physician guided plans, appropriate medications, and control of exposure to common triggers. Emergency department visits for asthma are most often a result of uncontrolled asthma. Uncontrolled asthma is associated with increased mortality rates, long term health effects, and reduced performance in school and work due to absences and illness.

- During the State of Alaska Fiscal Year (SFY) 2012, which ran from July 2011 – June 2012, among children less than 5 years of age on Medicaid, 29 per 10,000 were hospitalized for asthma.
- During SFYs 2003-2012 the rate of asthma hospitalizations per 10,000 children less than 5 years of age on Medicaid declined from 48.2 in 2003 to 29.0 in 2012.

Data Sources: BRFSS, Alaska BCHC, Alaska Medicaid

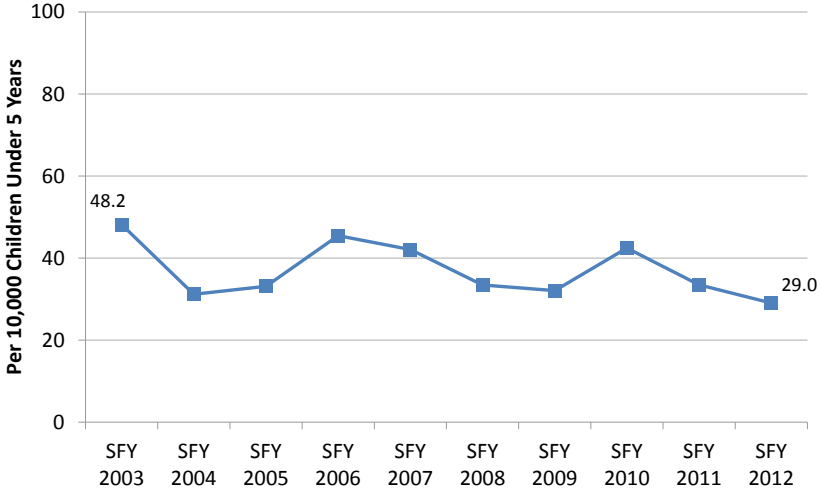
Cervical Cancer Screening Among Women 18 Years or Older
Alaska and U.S., 2000-2012

Data Sources: BRFSS, Alaska Division of Public Health, U.S. CDC



Asthma Hospitalizations Among Children Under 5 Years
Alaska, State Fiscal Years (SFY) 2003-2012

Data Source: Medicaid, Alaska Division of Public Assistance



Appendices:

Data Sources • Glossary • Technical Notes • Works Cited

SELECTED DATA SOURCE DESCRIPTIONS

Behavioral Risk Factor Surveillance System (BRFSS)
The BRFSS is an anonymous telephone survey of adults aged 18 years or older conducted by the Alaska Division of Public Health in cooperation with the Centers for Disease Control and Prevention (CDC). It aims to estimate the prevalence of behavioral risk factors in the general population that are known to be associated with the leading causes of morbidity and mortality in adults. The BRFSS has operated continuously in Alaska since 1991. Alaska has operated a "supplemental" BRFSS survey since 2004, which has allowed for a larger sample size on some questions.

Alaska Website: http://dhss.alaska.gov/dph/Chronic/Pages/brfss/

U.S. Website: http://www.cdc.gov/brfss/

Childhood Understanding Behaviors Survey (CUBS)
The Childhood Understanding Behaviors Survey (CUBS) is a mail and phone survey conducted by the Alaska Division of Public Health. CUBS attempts to follow-up three years later with all mothers living in Alaska who completed the PRAMS survey after their child was born and whose infant was living with them at that time. The CUBS program began sending out surveys in 2006. Phone interviews are attempted with women who do not respond by mail. Topics covered on CUBS include child development, nutrition and eating habits, general and specialized health care utilization and access, and child care, as well as items specific to maternal experiences.

Website: http://dhss.alaska.gov/dph/wcfh/Pages/mchepi/cubs/

Maternity Practices in Infant Nutrition and Care (mPINC)
The Maternity Practices in Infant Nutrition and Care (mPINC) is conducted by the Centers for Disease Control and Prevention and is a national survey of maternity care practices related to breastfeeding. The survey is administered to all hospitals and birth centers with registered maternity beds in the United States and Territories.

Website: http://www.cdc.gov/breastfeeding/data/mpinc/index.htm

National Immunization Survey (NIS)
The National Immunization Survey (NIS) is sponsored by the National Center for Immunizations and Respiratory Diseases (NCIRD) and conducted jointly by NCIRD and the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. The NIS is a list-assisted random-digit-dialing telephone survey of parents, followed by a mailed survey to children's immunization providers. The NIS began data collection in April 1994 to monitor childhood immunization coverage. The target population for the NIS is children between the ages of 19 and 35 months living in the United States at the time of the interview.

Website: http://www.cdc.gov/nchs/nis/about_nis.htm

National Survey of Children's Health (NSCH)
The National Survey of Children's Health (NSCH) is a random telephone survey of parents of children aged 0-17 years and is sponsored by the Maternal and Child Health Bureau of the Health Resources and Services Administration. Questions focus on the physical and emotional health of children, with special emphasis placed on factors that may relate to well-being of children, including medical homes, family interactions, parental health, school and after-school experiences, and safe neighborhoods.

Website: http://www.childhealthdata.org/learn/NSCH

National Survey on Drug Use and Health (NSDUH)
The National Survey on Drug Use and Health (NSDUH) is an annual nationwide survey involving in-person interviews with approximately 70,000 randomly selected individuals aged 12 years or older. Data from the NSDUH provide national and state-level estimates on the use of tobacco products, alcohol, illicit drugs (including non-medical use of prescription drugs) and mental health in the United States.

Website: https://nsduhweb.rti.org/respweb/homepage.cfm

Pregnancy Risk Assessment Monitoring System (PRAMS)
The Pregnancy Risk Assessment Monitoring System (PRAMS) is a survey of women (regardless of age) who recently delivered a live birth developed by the Centers for Disease Control and Prevention and conducted by the Alaska Division of Public Health on an on-going basis in Alaska since 1990. It collects information about behaviors and circumstances of Alaskan mothers and their infants surrounding the pregnancy and postpartum period. Sampled mothers are asked to participate by mail. Phone interviews are attempted with women who do not respond by mail. Outside of what Vital Records can provide, PRAMS is the premier source of population-based data on maternal and infant issues for Alaska. Unintended births, breastfeeding, domestic violence, prenatal substance use, and depression are some of the topics covered in PRAMS.

Alaska Website: http://dhss.alaska.gov/dph/wcfh/Pages/mchepi/prams/

U.S. Website: http://www.cdc.gov/prams/

Youth Risk Behavior Survey (YRBS)
The Youth Risk Behavior Survey (YRBS) is part of an epidemiological surveillance system that was established in 1990 by the Centers for Disease Control and Prevention (CDC); Alaska has participated since 1995. The purpose of the Youth Risk Behavior Survey (YRBS) is to help monitor the prevalence of behaviors that put Alaskan youth at risk for the most significant health and social problems that can occur during adolescence and adulthood, in order to assist in prevention and intervention planning and evaluation. The YRBS survey is an anonymous, school-based survey of high school students administered in class on paper every other year by the Alaska Division of Public Health, in cooperation with the Department of Education & Early Development.

Alaska Website: http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/

U.S. Website: http://www.cdc.gov/HealthyYouth/yrbs/

GLOSSARY

(ACEs) Adverse Childhood Experiences: Negative incidents of emotional, physical, or sexual abuse, and household dysfunction experienced prior to age 18 years.

(AIDS) Acquired Immunodeficiency Syndrome: A chronic disease caused by the human immunodeficiency virus (HIV) in which there is a severe loss of the body's cellular immunity.

Alaska Native: For the purposes of this data book, "Alaska Native" refers to Alaska Native and American Indian people who reside in Alaska. The categorization of Alaska Native race may differ depending on the data source.

Association: State in which two attributes occur together either more or less often than expected by chance. Association does not necessarily indicate causation.

Baby-Friendly: A designation for hospital accreditation which aims to improve maternity care procedures in birth facilities to support breastfeeding. Recommendations are given by the World Health Organization and the United Nations Children's Fund.

Binge Drinking: Five or more alcoholic drinks in a 2 hour time period for men or four or more drinks in a 2 hour time period for women, as defined by the National Institute on Alcohol Abuse and Alcoholism. The specific definition of binge drinking may differ by data source; see accompanying text for the appropriate definition.

(BMI) Body Mass Index: 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 BMI classifications for adults 20 years or older are given below.

Underweight	BMI < 19.8 kg/m^2
Normal weight	19.8 ≤ BMI < 25 kg/m^2
Overweight	25 ≤ BMI < 30 kg/m^2
Obese	BMI ≥ 30 kg/m^2

Weight status for children and teens aged 2-19 years is determined by referencing the BMI to age- and sex-specific growth charts, the resulting percentile is used to identify weight status. Specific classifications for children are given below:

Underweight	BMI < 5th percentile
Normal weight	5th percentile ≤ BMI < 85th percentile
Overweight	85th percentile ≤ BMI < 95th percentile
Obese	BMI ≥ 95th percentile

BVS: The Alaska Bureau of Vital Statistics

Cesarean Section (C-Section): A surgical procedure in which an incision is made through a mother's abdomen and uterus to deliver one or more babies.

CDC: The national Centers for Disease Control and Prevention

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

Confidence Interval: A range of values for a variable of interest constructed so that if the procedure is used over and over, a certain percentage of the intervals will contain the true parameter value. For purposes of this data book, 95% confidence intervals are used and shown on select bar charts.

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

(CPS) Child Protective Services: State agencies that support child welfare and safety. In Alaska, it is known as the Office of Children's Services (OCS). OCS has three core programs for supporting children, youth and families: the infant learning program, early childhood comprehensive systems planning, and child protection and permanency.

(CYSHCN) Children and Youth with Special Health Care Needs: Children from birth to 21 years old 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.

Demographic/Epidemiological Characteristic: An exposure or other characteristic being observed or measured that is hypothesized to influence a health outcome. Also "Risk Factor."

Denali KidCare: An expansion of the Medicaid Program in Alaska, designed to ensure that children and teens (through age 18 years) of both working and non-working families, and pregnant women who meet income guidelines, can have the health insurance they need.

Dental Caries: Also known as tooth decay or cavities; a bacterial infection that causes demineralization and destruction of the hard tissues of the teeth.

Depression: A state of low or sad mood and loss of interest in activity that can affect a person's thoughts, behavior, feelings and sense of well-being. Depressed people can feel anxious, hopeless, worried, guilty, or worthless. Major or clinical depression is when these symptoms occur together and last for more than a week or two at a time.

DTaP: A combination vaccine that protects against the bacterial diseases diphtheria, pertussis (whooping cough), and tetanus.

Ectopic Pregnancy: A complication of pregnancy in which the embryo implants outside the uterine cavity.

(EI/ILP) Early Intervention/ Infant Learning Program: Program providing services to infants and toddlers (birth to age 3 years) with developmental delays. EI/ILP helps families understand their child's development and find the services they need.

(EPSDT) Early & Periodic Screening, Diagnosis, and Treatment Program: The child health component of Medicaid that is designed to improve the health of low-income children by financing appropriate and necessary pediatric services.

Exposure: A risk factor or characteristic that can affect a specified health outcome.

(FASD) Fetal Alcohol Spectrum Disorders: A continuum of various permanent birth defects caused by the mother's consumption of alcohol during pregnancy. FASD includes fetal alcohol syndrome (FAS). Effects can include physical problems, difficulty learning and behavioral problems.

(FFY) Federal Fiscal Year: The United States federal fiscal year runs from October 1 through September 30 of the following year. The FFY 2014 budget funds government operations for the fiscal year (FY) 2014, which began on October 1, 2013 and ends on September 30, 2014.

(FPL) Federal Poverty Level: Also referred to as the federal poverty guidelines, they are a measure of income level issued annually by the Department of Health and Human Services. Federal levels are used to determine eligibility for certain programs and benefits. A separate, higher level is used for Alaska and Hawaii than the one used for the 48 contiguous states.

Frequency: A term to describe the cumulative number of events in a population without distinguishing between incidence and prevalence.

Gestational Diabetes: A condition in which women without previously diagnosed diabetes exhibit high blood glucose levels during pregnancy (especially during their third trimester).

Health Outcome: A change in the health status of an individual, group, or population which is associated with an exposure or intervention (or lack-thereof).

Hib: *Haemophilus influenza* type b; a serious disease caused by bacteria that usually strikes children under 5 years old.

(HIV) Human Immunodeficiency Virus: A disease of the human immune system caused by infection with human immunodeficiency virus. HIV is transmitted primarily via unprotected sexual intercourse, contaminated blood transfusions, hypodermic needles, and from mother to child during pregnancy, delivery, or breastfeeding.

(HPV) Human papillomavirus: The most common sexually transmitted infection in the United States. There are many different types of HPV, some of which can cause health problems including genital warts and cancers.

(IDEA) Individuals with Disabilities Education Act: A law ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education and related services to more than 6.5 million eligible infants, toddlers, children and youth with disabilities.

Infant: Age from birth up to one year.

(IPV) Intimate Partner Violence: Physical, sexual, or psychological harm by a current or former partner or spouse.

(LBW) Low Birth Weight: Less than 2500 grams or 5.5 pounds.

Maltreatment: Child maltreatment includes all types of abuse and neglect of a child under the age of 18 years by a parent, caregiver, or another person in a custodial role (e.g. clergy, coach, teacher). The four common types of abuse are physical, sexual, emotional, and neglect.

MCH: Maternal and Child Health

Medical Home: Also known as patient-centered medical home (PCMH). A home base for any child's medical care which includes preventative, acute and chronic care from birth to adulthood. PCMH is a team based health care delivery model led by a physician that provides comprehensive and continuous medical care to patients with the goal of obtaining maximized health outcomes.

Miscarriage: The natural death of an embryo or fetus in the womb.

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

(NBW) Normal Birth Weight: Between 2500 and 4500 grams.

Obese: BMI of 30.0 or higher for adults. BMI in the 95th percentile or above for children aged 0-19 years.

Overweight: BMI from 25.0 to 29.9 for adults, BMI in the 85th percentile or above and below the 95th percentile for children aged 0-19 years.

Pap Test: A test also known as a Pap smear which looks for cancers and pre-cancers in the cervix (the lower part of the uterus that opens into the vagina).

Perinatal: The period of time (usually a few weeks) immediately before and after birth.

Physical Abuse: Pushing, hitting, slapping, kicking, choking or any other way of physically hurting someone.

Placental Abruption: A complication of pregnancy, wherein the placental lining has separated from the uterus of the mother. It is the most common pathological cause of late pregnancy bleeding.

Point Prevalence: A measure of the proportiojn of people in a population who have a disease or condition at a particular time, such as a particular date. Provides a "snap shot" of the condition in time.

Postpartum: The period of time immediately after the birth of a child and extending for about six weeks. When used in this data book for PRAMS data references, postpartum refers to the period of time from birth up to when the woman responded to the PRAMS survey. This is four months, on average.

Pre-eclampsia: A disorder during pregnancy characterized by high blood pressure and large amounts of protein in the urine. If left untreated, pre-eclampsia can develop into eclampsia, the life threatening occurrence of seizures during pregnancy.

Prenatal: The entire period of pregnancy.

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

Preterm Birth (Delivery): Birth occurring at less than 37 weeks gestation.

Prevalence: The number of affected persons present in the population at a specific time divided by the number of persons in the population at that time (i.e., the proportion of the population that is affected by a health outcome for a specified period of time).

(PTSD) Posttraumatic Stress Disorder: An anxiety disorder that develops after a person is exposed to one or more traumatic events.

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.

Region: The six labor market regions designated by the Alaska Department of Labor and Workforce Development include the Anchorage/Matanuska-Susitna, Gulf Coast, Interior, Northern, Southeast, and Southwest regions of Alaska.

Risk Factor: An exposure or other characteristic being observed or measured that is hypothesized to influence a health outcome. Also "Demographic/ Epidemiological Characteristic."

Secondhand Smoke: Includes smoke that comes from a burning cigarette and smoke breathed out by a person smoking a cigarette.

(SES) Socioeconomic Status: An economic and sociological combined total measure of a person's work experience and an individual's or family's economic and social position in relation to others, based on income, education, and occupation.

(SFY) State Fiscal Year: The Alaska state fiscal year runs from July 1 through June 30 of the following year. The SFY 2014 budget is the budget to fund government operations for the fiscal year (FY) 2014, which began on July 1, 2013 and ends on June 30, 2014.

Stillbirth: The natural death of a fetus in the womb after at least 20 weeks gestation.

(STI) Sexually Transmitted Infection: Also referred to as sexually transmitted disease (STD); an infection that can be passed through vaginal, anal or oral sex or contact with bodily fluids. Some examples include chlamydia, gonorrhea, HPV, and HIV/AIDS.

(SUID) Sudden Unexpected Infant Death: Deaths in infants less than 1 year of age that occur suddenly and unexpectedly, and where cause of death is not immediately obvious prior to investigation. Infants are at the highest risk for SUID during sleep.

Teen Birth Rate: The number of live births to women aged 15-19 years per the total population of women aged 15-19 years (expressed as a rate per 1,000 women aged 15-19 years).

Trend: Pattern or occurrence over a period of time, generally years or decades.

U.S.: United States

USDA: United States Department of Agriculture

Well-child Visit: A regular health visit for children from birth until age 21 years which includes a physical exam, growth and development check, and if needed, immunizations.

(WIC) The Special Supplemental Nutrition Program for Women, Infants, and Children: A national nutrition program that helps pregnant and breastfeeding women, mothers of newborns and children less than 5 years old who have a nutritional need and meet income eligibility guidelines.

TECHNICAL NOTES

Statistical Significance

Statistical significance was calculated by the MCH Epidemiology Unit for data collected by the unit (PRAMS, CUBS, SCAN). All statistical analyses were performed at a significance level of alpha=.05. Any mention of an increasing or decreasing trend or difference between two groups implies that it is statistically significant at alpha=.05. Confidence intervals depicted on bar charts are all at 95% confidence. For survey data (PRAMS and CUBS), confidence intervals are logarithmic intervals and therefore are not symmetric.

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

Trend Analyses

Trend analyses were completed using either Poisson or logistic regression to test for trend at the 95% confidence level. P values < .05 were considered significant.

Software

The following software programs were used for data analyses conducted by the MCH Epidemiology Unit: SPSS versions 16.0 and 22.0, R version 3.1.0, SUDAAN version 11.0.1, and SAS versions 9.3 and 9.4.

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