

Methods & Data Sources

Confidentiality

In order to protect individuals from potentially being identified, data from populations with small sample size are either: 1) aggregated over a region or a larger area; 2) aggregated over time periods; or 3) both. For some indicators, data is not shown if the number of cases or the sample size is not large enough. Maps, tables, and regional profiles display an indicator if data is being suppressed.

Statistical Significance

Throughout the document, differences are considered statistically significant at the 95% confidence level ($p < 0.05$). Differences between rates or between percentages are considered significantly different if the 95% confidence intervals do not overlap. Rate ratios are considered statistically significant if the 95% confidence interval of the rate ratio did not contain 1. Differences that are statistically significant are noted as such in the summary text for each health topic. If it is not indicated that a difference is significant then it does not meet the threshold to be considered statistically significant. It is difficult to find statistically significant differences when analyzing small sample sizes and populations, and caution is advised when attempting to draw conclusions from data with wide confidence intervals and/or high relative standard error. Sample sizes (n) and confidence intervals are included with these data where possible.

Historic Data

In addition to reporting the most recently available data, this document shows data that were previously accessed, analyzed and detailed in prior years. This report did not reanalyze data from prior time periods or editions of this report; thus data for preceding years may not reflect more recent analyses that have occurred between then and now.

Small Numbers

The effect of small numbers should be kept in mind when looking at rates based on a small number of occurrences of a disease or health related event. Rates calculated based on small numbers due to events being rare, or because the population is small, are often unstable. When comparing rates over time, the rates may fluctuate up and down more compared to larger populations.

Rounding

Calculations for percentages are rounded to one decimal place, where the data source allowed. As a result, total percentages may not add up to 100.0%.

Race/Ethnicity

Throughout the document “Alaska Native” generally refers to Alaska Native or American Indian people residing in Alaska. Depending on the data source, this may include those who identify as Alaska Native/ American Indian alone, or in combination with one or more other race groups. Details on race definitions are provided under the specific data sources below, where applicable.

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Alaska Department of Labor and Workforce Development

The Alaska Department of Labor and Workforce Development (ADOLWD), Research and Analysis Section produces statistics about a range of economic data including population and Census, housing, occupations, industries, and workforce. The ADOLWD produced the population estimates used in this report. These population estimates use the 2010 decennial census data as a baseline and adjusts the numbers yearly based upon administrative records including Permanent Fund applications, military and group quarters data, and U.S. Census Bureau data. Alaska Native people are classified as those reporting Alaska Native alone or in combination with one or more race.

Alaska Division of Public Health, Alaska Birth Defects Registry

The Alaska Birth Defects Registry (ABDR) collects information on the occurrence and distribution of congenital birth defects that are listed as reportable conditions to public health in Alaska. The ABDR conducts a modified passive surveillance system and relies on reporting by major hospitals, specialty clinics, and medical records aggregators. Data was provided and analyzed by the ABDR. Reports that could not be matched to an Alaskan birth certificate were excluded from analysis. The analysis includes children who have at least one of the 45 congenital anomalies that are collected by the National Birth Defects Prevention Network as well as unconfirmed birth defects detected through the passive report system. Alcohol-related birth defects are not included. Year is determined by the year of birth. ABDR's inclusion criteria, classifications of race, and methods of data collection and analysis have changed over time, so caution is advised when comparing data over periods of time.

Alaska Division of Public Health, Alaska Childhood Understanding Behaviors Survey (CUBS)

The Alaska Childhood Understanding Behaviors Survey (CUBS) is designed to find out about the health, behaviors, and early childhood experiences of young children in Alaska before they enter school. CUBS is a three-year follow-up survey to the Alaska Pregnancy Risk Assessment Monitoring System

(PRAMS). CUBS data are representative of mothers of 3-year-old children born in Alaska. The Alaska CUBS Program conducted data analysis and provided aggregated data to the Alaska Native Epidemiology Center. CUBS estimates are statistically weighted to represent the total population of 3-year-old children who were born in Alaska. "Alaska Native" refers to Alaska Native and American Indian people who reside in Alaska. Race classifications are based on the maternal race listed on the child's birth certificate and includes any mention of Alaska Native, including individuals who list multiple races. "White" refers to children with a maternal race listed as White only on the birth certificate.

Alaska Division of Public Health, Alaska Health Analytics and Vital Records Section

The Alaska Health Analytics and Vital Records Section (formerly the Alaska Bureau of Vital Statistics) provided data from birth and death events that occurred in Alaska. The Alaska Native Epidemiology Center analyzed the data.

The mortality data for Alaska range from 1984 to 2019, depending on the health indicator. Number of deaths and rates are provided for Alaska Native/American Indian people and non-Native Alaskan residents. Alaska Native people are classified as those identified on the death certificate as being Alaska Native and/or American Indian (alone or in combination with another race). Data were aggregated into 4 year periods due to small numbers. Bridged race population estimates from the National Center for Health Statistics were used as the denominator to calculate the mortality rates. Bridged estimates are necessary to adjust for the introduction of multiple race selection in the Census starting in 2000. Rates were age-adjusted to the 2000 U.S. standard population.

The birth data are based upon data reported on birth certificates to the State of Alaska. Race is based on the race of the infant. Infants are considered Alaska Native if they are born to either an Alaska Native mother or father. Alaska Native mothers are mothers of Alaska Native infants. Alaska Whites includes infants born to either a White mother or father. The exception to this is for birth rates, where only births to mothers whose own race was Alaska Native were counted, because the denominator for birth rates is

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specific to the race of the mother.

Rates were calculated for tribal health regions and causes that had at least five events (births or deaths) during the designated time period. Data are suppressed if there were less than 5 cases. Rates based on fewer than 20 cases are not statistically reliable and should be used with caution. Events were assigned to the region in which the person was resident, regardless of place of occurrence. All analyses were restricted to births and deaths of Alaska residents.

Alaska Division of Public Health, Alaska Oral Health Assessment

The Alaska Oral Health Assessment is undertaken with kindergarten, Head Start, and third grade children from a sample of Alaska sites for oral health disease surveillance. The assessment evaluates dental decay, untreated decay, caries experience, and dental sealants. The assessment consists of two parts: a questionnaire/consent for parents/guardians; and a school-based clinical assessment conducted by dentists. Included in this report are assessment data from the 2004-2005, 2007, and 2010-2011 school years. The 2010-2011 data is the most recently available at the time of this report.

Alaska Division of Public Health, Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age and older) living in households. Alaska began participating in the BRFSS in 1991.

The BRFSS is a standardized telephone interview designed to collect uniform state-specific data on health status and perceptions, preventive health practices, and risky behaviors that are linked to chronic diseases, injuries, and preventable infectious diseases. The core questions are asked every year and rotating core questions are asked in alternating years by all states. Additionally, there are optional CDC modules that states may or may not choose to include, and states may add questions of their own. In addition to the Standard Alaska BRFSS, a

Supplemental Alaska BRFSS survey was conducted from 2007-2020. This Supplemental BRFSS survey is conducted using identical methodology as the Standard BRFSS but with a greater emphasis on tobacco-related questions. Some questions are on both surveys which allows for a much larger sample size. Data from both the Standard and Supplemental Alaska BRFSS surveys are used for select measures in this report.

The health characteristics estimated from the BRFSS pertain to the adult population, aged 18 years or older, who live in households. Individuals living in military barracks, dormitories, nursing homes, and other group-living situations are excluded. Apart from that exclusion, each state's sample is designed to be representative of the state's population. In order to achieve a representative sample, the State of Alaska oversamples rural regions. Oversampling of rural regions helps to get a more representative sample of Alaska Native people, since there are more Alaska Native people living in rural Alaska.

Since 2011, BRFSS conducts both landline telephone and cellular telephone based surveys. In conducting the BRFSS landline telephone survey, data are collected from a randomly selected adult in a household. In conducting the cellular telephone version of the BRFSS survey, data are collected from an adult who participates by using a cellular telephone.

The analyses of Behavioral Risk Factor Surveillance System accounts for the fact that not every adult resident of the state has an equal chance of being contacted for an interview. A probability is assigned to each respondent which reflects their likelihood of being contacted. In addition, each person interviewed is treated as a representative for other, similar persons. The probability factor and assumption of representation are used to calculate a statistical weighting factor to be used in analyses to draw inferences about the overall population.

Alaska Native people are classified as those having any mention of Alaska Native and/or American Indian in their survey. Readers should use these estimates with caution since the number of respondents who are Alaska Native from each region is relatively small. In order for data to be presented, a minimum of 5 people must report the particular behavior of interest and there must be at least 50 people included in

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the sample size for a given question. Within the regional and statewide data, multiple years are combined to achieve a meaningful sample size where possible. Caution is advised when attempting to draw conclusions from data with wide confidence intervals. All BRFSS data was obtained via AK-IBIS, an online tool for accessing data from the Alaska Division of Public Health. AK-IBIS has been unavailable since May 2021 due to a cyber-attack.

Alaska Division of Public Health, HIV/STD Program

The HIV/STD Program addresses public health issues and activities with the goal of preventing sexually transmitted diseases including HIV infection and their impact on health in Alaska. The data presented in this report on chlamydia and gonorrhea were provided by the HIV/STD Program and analyzed by the HIV/STD Program and the Alaska Native Epidemiology Center. Alaska Native people are classified as those having any mention of Alaska Native and/or American Indian in their records. Cases of chlamydia and gonorrhea with unknown or multi-race were excluded from analysis.

Alaska Division of Public Health, Pregnancy Risk Assessment Monitoring System

The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) is a survey of mothers of newborn infants developed by the Centers for Disease Control and Prevention Division of Reproductive Health to collect information on the health risk behaviors and circumstances of pregnant and postpartum women. PRAMS is a population-based complex sample survey. Percentages noted are weighted to reflect the population of women who delivered a live born infant in Alaska during the year specified. It was initiated in the state of Alaska in 1990 by the State of Alaska Division of Public Health's Section of Maternal, Child, and Family Health. The survey is administered by mail with a telephone follow-up. PRAMS has a core set of questions that each participating state asks, and a limited number of state-specific questions. Topics covered include family planning, prenatal care, use of tobacco, alcohol, and drugs, participation in the Women, Infants, and Children's (WIC) nutrition program and Medicaid, payment for care, family income, breast-feeding, physical abuse, and life stressors such as illness, job loss, debt, divorce, plus

other topics.

Sampled participants must be Alaska residents who have delivered a live birth in state. The surveys are administered two to six months after the date of birth. Mothers of infants that die are included and grief letters are mailed out to the mothers in these situations. If births are multiple, only one infant is randomly selected. Pending adoptions are also included as long as the biological mother is included on the birth record.

Since PRAMS data are self-reported, reporting bias is possible. Data are not routinely collected on abortions or still births thus data do not represent all women who become pregnant during a given time period, only those who delivered a live, viable infant. Recall bias may be possible since women are asked to remember events or behaviors up to 12 months before they got pregnant. Alaska's survey response rates are favorable.

Alaska PRAMS data was provided and analyzed by the Alaska Division of Public Health, Section of Women's, Children's & Family Health, Maternal & Child Health Epidemiology Unit.

Alaska Division of Public Health, Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) was developed in 1990 by the Centers for Disease Control and Prevention, and first implemented in Alaska in 1995. The YRBSS monitors the prevalence of behaviors that put youth at risk for the most significant health and social problems in order to assist in prevention and intervention planning and evaluation. This is a school-based survey of high school students in grades 9-12, administered in cooperation with the Department of Education and Early Development and the Department of Health and Social Services. Alaska Native youth are classified as those having any mention of Alaska Native and/or American Indian in their survey.

Due to methodological limitations, YRBS data is not shown for Tribal health regions in this report. In order for data to be presented, to protect participants' privacy, and to ensure high data quality, a minimum of 5 people must report the particular behavior of interest and there must be at least 100 people included in the sample size for a given question. The statewide estimates are based on a statewide sample

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of completed surveys and can only be generalized to traditional high school students in grades 9 through 12. Students who were enrolled in English as a Second Language classes, special education classes, alternative schools, correspondence schools, group home schools, and correctional schools are not represented. Also, youth who dropped out of school are not included. YRBS is based on self-report of behaviors, so self-report or recall bias may exist. All YRBS data was obtained in aggregate via AK-IBIS and Alaska YRBS data-dashboards, which are online tools for accessing data from the Alaska Division of Public Health. AK-IBIS has been unavailable since May 2021 due to a cyber-attack.

Finally, the YRBS survey answers the what, where, and when about self-reported behaviors, but cannot answer the why and how of the behaviors.

Alaska Native Medical Center Diabetes Registry

The Alaska Native Medical Center's Diabetes Registry provided the diabetes data aggregated by Indian Health Service Units. The Alaska Area Diabetes Registry is a clinical and epidemiologic resource for tribal health care facilities throughout Alaska. The registry tracks patients diagnosed with diabetes and works to ensure that their care meets national standards. Patients include Alaska Native and/or American Indian people who use Indian Health Services or tribal health facilities.

Alaska Native Tribal Health Consortium, Alaska Native Tumor Registry

The Alaska Native Tumor Registry (ANTR) is a collection of complete cancer incidence data since 1969 for all cancers diagnosed among Alaska Native/American Indian people living in Alaska at the time of death. The ANTR is a participant in the National Cancer Institute's, Surveillance Epidemiology and End Results (SEER) Program. The registry includes Alaska Native/American Indian people living in Alaska at the time of diagnosis who met eligibility requirements for Indian Health Service benefits

Centers for Disease Control and Prevention, National Immunization Surveys

The National Immunization Surveys (NIS) are a group of telephone surveys conducted by the CDC's National Center for Immunization and Respiratory

Diseases. The data used in this report comes from three surveys: the National Immunization Survey among children age 19-35 months, the National Immunization Survey-Teen (NIS-Teen) for adolescents age 13-17 years, and the National Immunization Survey-Child Influenza Module for children 6-18 months and 3-12 years who were not included in the NIS or NIS-Teen. The National Immunization Survey-Flu combines the flu vaccination data from the three surveys to assess annual flu vaccination coverage among children 6 months-17 years. Estimates are based on parent or guardian reported data and data from vaccination providers. Parents or guardians reported the race and ethnicity of the children.

Centers for Disease Control and Prevention, Water Fluoridation Reporting System

The Water Fluoridation Reporting System (WFRS) compiles data for monitoring access to and evaluating the quality of water fluoridation programs at the state and water system levels. WFRS data have been summarized every two years since 2000. Each state drinking water program has its own methodology for estimating water system service populations. A community water system is designated by the state drinking water administrator in accordance with the regulatory requirements of the U.S. Environmental Protection Agency. The data presented in the report show the population served by community water systems with any level of fluoridated water, but not necessarily at the optimal level.

Indian Health Service, National Immunization Reporting System

The National Immunization Reporting System is a web-based reporting tool to collect quarterly immunization data from each tribal health facility. Reports are collected each quarter for 3-27 month old children, 2 year olds, adolescents and adults. In addition, data is reported for influenza and healthcare personnel. Data are for Alaska Native/American Indian beneficiaries only. Immunization data used in the report are for the end of each fiscal year's quarter 1 ending December 31. The exception to this is for seasonal influenza, where the end of each fiscal year's quarter 2, ending March 31, is used.

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Indian Health Service, Sanitation Tracking and Reporting System (STARS)

The Indian Health Service's (IHS) Sanitation Tracking and Reporting System (STARS) is a comprehensive online tracking and reporting system for the IHS Division of Sanitation Facilities Construction (DSFC). DSFC administers the program responsible for the delivery of environmental engineering services and sanitation facilities to American Indian and Alaska Native people. STARS includes basic information about existing and needed sanitation facilities related to homes in American Indian and Alaska Native communities, as well as water, wastewater, and solid waste systems and the organizations that operate systems, among other information.

National Cancer Institute, Surveillance Epidemiology and End Results Program

The Surveillance Epidemiology and End Results Program (SEER) is part of the National Cancer Institute. The SEER Program collects information on the incidence, survival, and prevalence of cancer, as well as the survival of persons with cancer. In addition, the SEER Program collects standard population data, U.S. mortality data, and U.S. population data.

U.S. Census Bureau

The U.S. Census Bureau is responsible for providing data about the nation's people and economy. The U.S. Decennial Census counts every resident in the United States and takes place every ten years. The American Community Survey (ACS) provides information about the population including jobs, occupations, education, housing, and other topics. The ACS is conducted on a sample of U.S. residents each month. The data in this report use the ACS 5-Year estimates due to small sample size. The Current Population Survey is used to collect data on employment, labor force, earnings, and education. The data used in this report were obtained from data.census.gov, an online tool for accessing data from the U.S. Census Bureau.