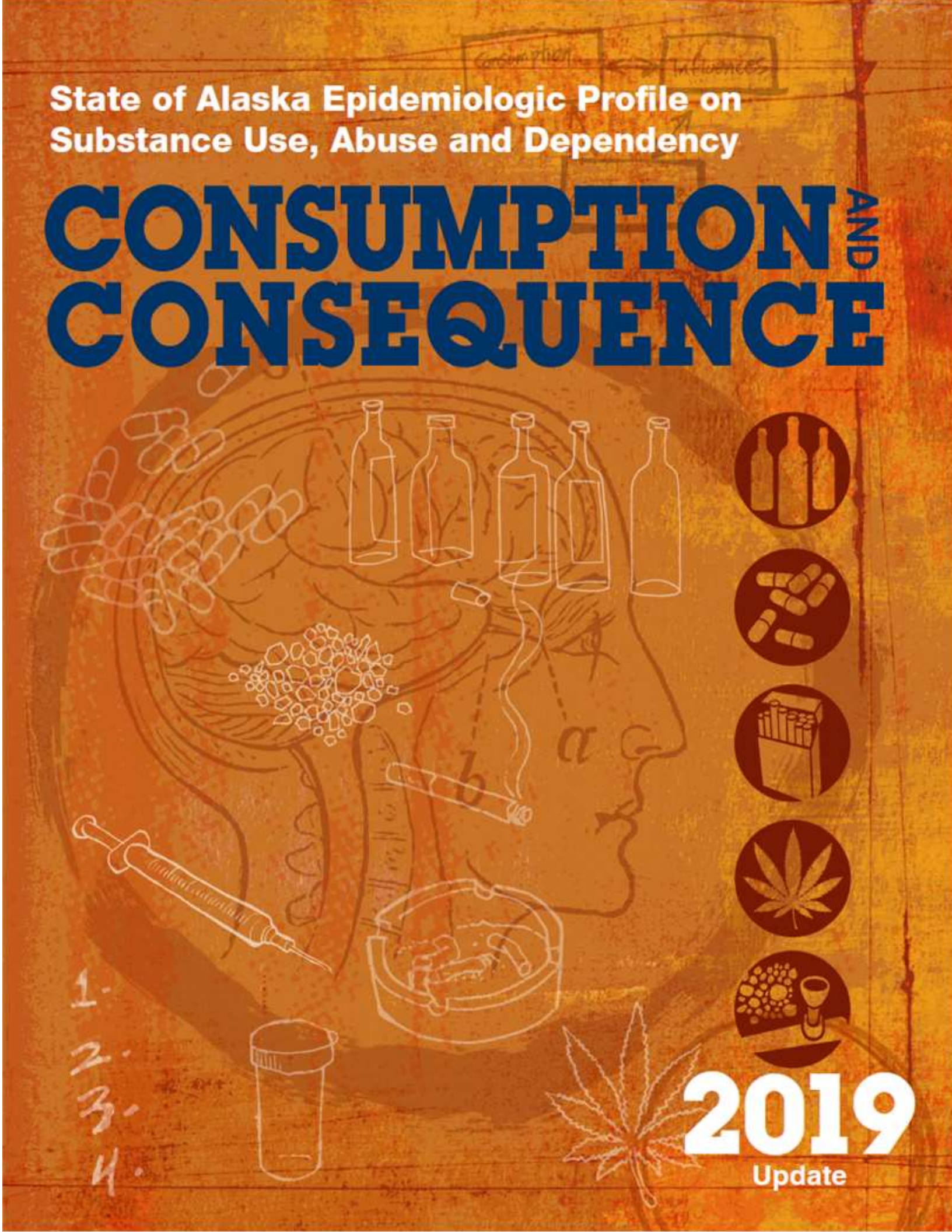
State of Alaska Epidemiologic Profile on Substance Use, Abuse and Dependency

CONSUMPTION AND CONSEQUENCE



2019 Update

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State of Alaska Epidemiologic Profile on Substance Use, Abuse, and Dependency

In Support of the Alaska Strategic Prevention Framework and the Alaska Department of Health and Social Services

July 2019
Section of Prevention and Early Intervention Services
Division of Behavioral Health
Department of Health and Social Services
State of Alaska

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Acknowledgements

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Additional information pertaining to the Alaska Strategic Prevention Framework, the Alaska Partnerships for Success Initiative, and the Centers for Substance Abuse Prevention is available at the Alaska Division of Behavioral Health website;

http://dhss.alaska.gov/dbh/Pages/Prevention/programs/spfsig/publications.aspx

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Table of Contents

List of Tables and Charts

NOTE: Table and chart numbering in this update is not consistent with numbering in past updates due to the addition of new tables/charts and the removal of existing tables/charts for which new data were unavailable. Please see the Renumbering Matrix in Appendix I for details.

Consumption

Problem Statement: Alcohol Sales and Consumption

Problem Statement: Illicit Drug Use

Problem Statement: Tobacco Use

Consequence

Problem Statement: Mortality

Problem Statement: Alcohol-Related Consequences

Problem Statement: Illicit Drug-Related Consequences

Note: Beginning January 1, 2011, the Alaska Trauma Registry (ATR) discontinued data collection on adult poisonings, with the exception of work-related and non-intentional inhalation poisonings. As a result, drug-related ATR data (i.e. hospitalized injuries associated with drug use) are not reported here and Health Facilities Data Reporting (HFDR) Program data from 2015-2016 are being reviewed to fill this gap.

Problem Statement: Tobacco Use Related Consequences

Problem Statement: Alcohol- and Drug-Related Transportation Crashes

Problem Statement: Other Consequences Related to Substance Abuse and Dependency

Influences

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Executive Summary

The Alaska Epidemiologic Profile on Substance Use, Abuse and Dependency (AK-EPSUAD) was developed to support the efforts related to the Substance Abuse and Mental Health Services Administration (SAMHSA) – Strategic Prevention Framework State Incentive Grants. The document is a tool for substance abuse prevention for use by public health and behavioral health planners, program managers, policy makers, and others working to address the substance use and misuse challenges currently facing Alaskans. To truly show the impact of alcohol, tobacco and other drug use and abuse on the overall health of Alaska, comprehensive information composed of accurate and relevant information is key. The purpose of this profile is to provide a state-level overview that summarizes data from new and established surveillance sources to provide insight into prevalence, morbidity, mortality and societal consequences associated with substance abuse. These insights will inform prevention/intervention planning, monitoring, and evaluation and provide recommendations to ensure comparable variable definitions and to improve data collection for future surveillance.

Since 1990, the Alaska Department of Health and Social Services has conducted and participated in the surveillance of mortality, morbidity and behavioral health risk factors associated with substance use. Many of these surveillance activities are federally funded, and the findings are combined with other state-based data to assess trends in behavior and lifestyle choices and critical elements of health education and prevention practices.

Using the Strategic Prevention Framework developed by the Substance Abuse and Mental Health Services Administration, an epidemiologic workgroup was established to:

- identify, collect and consolidate data pertaining to substance consumption, consequence and influences
- analyze and evaluate data systems for long-term use and statistically significant findings
- assist in prioritizing outcome measures used by health promotion specialists, prevention program managers, health planners, policymakers and community advocates; and
- identify constructs needing improved or expanded surveillance.

The AK-EPSUAD reports information from on-going statewide surveillance programs, such as the Behavioral Risk Factor Surveillance System, the Youth Risk Behavior Survey and the National Survey on Drug Use and Health, that are melded with state-based mortality, morbidity, and justice data. The resulting descriptive study provides baseline and trend information on substance use, abuse, and dependence in Alaska and select consequences thereof. This information will allow agencies and organizations involved in prevention activities to monitor and evaluate interventions associated with substance use and abuse and related consequences including but not limited to dependency and treatment.

The resulting descriptive study provided a baseline epidemiological profile of substance use, abuse, dependence and consequences thereof.

In addition, a data directory was initiated for managers and planners to identify potential data sources. This will allow select agencies to monitor the prevalence of behaviors associated with consumption of substances, as well as consequences following substance use, abuse and dependence. This data directory will allow agencies to describe their on-going data collection activities and database structures and communicate current projects related to substance use.

Highlights of the profile:

Morbidity and Mortality

- Nine of the 10 leading causes of death in Alaska can be associated with substance abuse as a potential contributing cause of death. Leading causes of premature death and years of potential life lost, such as chronic liver disease, cirrhosis, homicide, suicide, and unintentional injury, were strongly associated with substance abuse.

- Unintentional injury was the third leading cause of death in Alaska; Alaska's unintentional injury death rate was 30% higher than the U.S. rate (56.1 vs. 44.1 per 100,000 persons), with accidental poisoning accounting for an increasingly large percentage of these deaths.

- During 2012–2016, males were 2 times more likely than females to die from unintentional injury in Alaska; and American Indian/Alaska Native people were 2 to 6 times more likely to die from an unintentional injury in Alaska than people of other races.

Alcohol

- Ethanol consumption in Alaska was consistently greater than the national averages for all alcohol containing beverages. During 2010–2015, spirits were consumed at a higher rate than beer and wine in Alaska, at a rate 1.5 times higher than the national average in 2015.

- In 2015, the Youth Risk Behavior Survey (YRBS) results indicated that all grades had lower percentage of students reporting current or binge (episodic) alcohol use, indicating a sustained long-term decline of alcohol use by students.

- In the 2015–2016 National Survey on Drug Use and Health (NSDUH), Alaskans aged 18–25 reported significantly higher prevalence of alcohol dependency, binge (episodic) alcohol use, and unmet need for alcohol abuse treatment than other age groups.

- During 2007–2013, an estimated 133 children had a diagnosis of Fetal Alcohol Syndrome (FAS) in Alaska. Birth prevalence of FAS was higher among American Indian/Alaska Native people than among White and Asian/Pacific Island people.

- During 2012–2016, nearly 1 in 5 hospitalized injury patients had suspected or proven alcohol use; of which, the leading cause of alcohol-associated injury was a fall, followed by assault and motor vehicle accident.

- Overall, hospitalized injury associated with alcohol use increased 16% over 2012–2016 (from 651 hospitalizations in 2012 to 757 hospitalizations in 2016). However, hospitalized injury associated with alcohol use among persons aged 10 years or less decreased 34% over 2012–2016 (from 71 in 2012 to 47 hospitalizations in 2016).

- During 2012–2016, 102 recreational boating accidents occurred in Alaska resulting in 61 fatalities; of these fatalities, approximately one-third (34%) were associated with known alcohol use.

- The number of high school suspensions declined 36% from 949 suspensions during the school years 2006–2011 to 603 suspensions during school years 2011–2016. The number of alcohol-related school expulsions declined 69% from 26 expulsions during the school years 2006–2011 to 8 expulsions during school years 2011–2016.

- The percentage of male high school students in Alaska who reported riding as a passenger in a vehicle with a driver who had been drinking decreased significantly from 2011 to 2015. Male high school students in Alaska were significantly less likely to report driving after drinking and riding as a passenger with a drinking driver than male high school students nationwide.

- Approximately 1 in 3 motor vehicle crash fatalities in Alaska during 2012–2016 was due to an alcohol-related crash.

Illicit Drugs

- In 2015, approximately 13% of female high school students and 16% of male high school students in Alaska reported taking prescription drugs without a doctor's prescription, similar to percentages reported by students nationwide.
- Regions with the highest rates of drug-induced death were found in Anchorage, Mat-Su, Juneau, and Kenai Peninsula.
- The rate of drug-induced death was 5 times greater for Alaskans aged 25–64 years than Alaskans of other age groups; of which, American Indian/Alaska Native females aged 25–64 years experienced the highest rate of drug-induced mortality of any group.

Tobacco

- The number of cigarettes sold in Alaska decreased 9% during 2012–2016.
- During 2012–2015, the percentage of Alaska high school students who reported ever trying a cigarette decreased significantly among both male and female students; however, in 2015 approximately one-third of students still reported having tried a cigarette during their lifetime.
- From 2012–2016, the tobacco attributable death rate in Alaska was 19–32 times the death rates due to alcohol, drugs, and chronic liver disease/cirrhosis.
- Alaska Native people experienced highest rates of death attributed to smoking during 2012–2016. The highest prevalence was among Alaska Native males aged 65 years and older, who were nearly twice as likely to die of smoking-related causes as females of the same age and race.

Data Improvement Recommendations include:

- The State Epidemiology Workgroup (SEW) on Substance Abuse should continue to meet to ensure the collection and analysis of information pertaining to substance abuse and related factors and to ensure that this information is broadly distributed to healthcare providers, public health officials, policymakers, and community advocates.
- For quality assurance purposes, state indicators should be evaluated annually and data quality and relevance of indicators should be accessed on a routine basis, not to exceed 5-year intervals, to assure that the most comprehensive information available is used for decision-making.
- Public health agencies and other stakeholders should continue to leverage data from the Alaska Prescription Drug Monitoring Program (PDMP) to assess trends in prescribing and evaluate the effectiveness of provider education efforts regarding pain management, opioid use, and addiction.
- Public health agencies and other stakeholders should continue to identify, assess, and resolve data gaps, particularly for prescription drug abuse, polysubstance use, and the use of synthetic opioids and novel psychotropic stimulants.
- As initiated in 2015, the State Medical Examiner Office (SMEO) should continue to perform toxicology screening on all suicide decedents to improve understanding of the role of substance use in suicide. The SMEO should also perform toxicology screening on all intentional and unintentional injury cases to better understand how drug and alcohol use contributes to these deaths. Toxicology screening should include the most commonly abused drugs and emerging drugs of greatest public health concern.
- The SMEO should routinely analyze information in their database that includes demographic and quantitative results for all toxicology tests for use by public and mental health specialists to help evaluate prevention programs and intervention services.
- Toxicology data from the Alaska State Troopers, municipal police departments, the Alaska Department of Corrections, the SMEO and Poison Control should be combined in a comprehensive database to provide the most complete picture of drug abuse information.

How to Use This Document

The following information summarizes select descriptive analyses of individual datasets. Each section of the AK-EPSUAD begins with a problem statement followed by applicable definitions of data elements, a brief description of the data presented and website address. These data and/or their summary reports also can be accessed using the Data Resource information listed at the front of this report or link for URL address for data available in the Alaska Indicator-Based Information System (AK-IBIS).

Data in this document should not be viewed as all inclusive, but as a summary of information from various sources to help guide researchers, program managers, policymakers, and other interested person(s) to identify data sources for further exploration and in-depth assessment. As the 2019 revision of the AK-EPSUAD was completed, additional datasets were reviewed and added. The document is organized to match the structure of the 2013 profile. Where changes were made, notations are proved in both the Table of Contents and in Appendix I: Overview of Changes to Table/Chart Numbering.

Methodology

Data were analyzed by age, gender, race/ethnicity, and high school grade level to produce statistical tables and charts. The analysis results were reported as numbers of incidents and events, rates of total population, and rates of specific populations. Due to the impact of small numbers, data providers were requested to submit the most recent 5-year period (e.g., 2012–2016) available. A combined 5-year period was used whenever possible for rate calculations. Some data were only available to 2015; tables and charts will be amended as 2016 data become available.

Data Resources – National

- Alaska Epidemiologic Data System. National Institute on Alcohol Abuse and Alcoholism, Division of Epidemiology and Prevention Research, National Institutes of Health. Https://www.niaaa.nih.gov/research/guidelines-and-resources/epidemiologic-data

- Behavioral Risk Factor Surveillance System (BRFSS). Centers for Disease Control and Prevention (CDC). Http://www.cdc.gov/brfss

- United States Census
Http://www.census.gov/quickfacts/fact/map/US/INC110217

- Fatality Analysis Reporting System (FARS). National Highway Traffic Safety Administration. Http://www.nhtsa.gov/FARS

- National Vital Statistics System Public Use Data Files – Mortality, Multiple Cause-of-Death. National Center for Health Statistics (NCHS), CDC.
Https://www/cdc/gov/nchs/nvss/mortality_public_use_data.htm

- National Survey on Drug Use and Health (NSDUH). Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (U.S. DHHS). Https://datafiles.samhsa.gov/

- Substance Abuse and Mental Health Data Archive (SAMHDA). SAMHSA, U.S. DHHS. Https://datafiles.samhsa.gov/

- Youth Risk Behavior Surveillance System (YRBSS). CDC. Https://cdc.gov/HealthyYouth/yrbs/index/htm

Resources Added Since Last Profile Update

- National Opioid Misuse Community Assessment Tool. USDA Rural Development and NORC at the University of Chicago's Walsh Center for Rural Health Analysis. Https://opioidmisusetool.norc.org/

Data Resources – State

- Alaska BFRSS. Section of Chronic Disease Prevention and Health Promotion (SCDPHP), Division of Public Health (DPH), Alaska Department of Health and Social Services (AK-DHSS). Http://dhss.alaska.gov/dph/Chronic/Pages/brfss/default.aspx

- Alaska Health Analytics and Vital Records. DPH, AK-DHSS. Https://dhss.alaska.gov.dph/VitalStats/Pages/default.aspx

- Alaska Populations Estimates and Overview. Research and Analysis Section, Alaska Department of Labor and Workforce Development. Http://live.laborstats.alaska.gov/pop/

- Alaska Pregnancy Risk Assessment Monitoring System (PRAMS). Maternal and Child Health Epidemiology Unit, Section of Women's, Children's and Family Health, DPH, AK-DHSS. Http://dhss.alaska.gov/dph/wcfh/Pages/mchepi/prams/default.aspx

- Alaska Tobacco Prevention and Control Program. SCDPHP, DPH, AK-DHSS. Http://dhss.alaska.gov/dph/Chronic/Pages/Tobacco/default.aspx

- Alaska Uniform Crime Reporting (UCR) Program. Criminal Records and Identification Bureau, Division of Statewide Services, Alaska Department of Public Safety. Https://dps.alaska.gov/statewide/r-i/ucr

- Alaska YRBS. SCDPHP, DPH, AK-DHSS. Http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx

- No Child Left Behind. Division of Teaching & Learning Support, Alaska Department of Education & Early Development. Http://education.alaska.gov/esea/NCLB

- Juvenile Justice Data. Division of Juvenile Justice, AK-DHSS. Http://dhss.alaska.gov/djj/Pages/GeneralInfo/Stats.aspx

- Tobacco Tax Program. Tax Division Programs, Alaska Department of Revenue. Http://tax.alaska.gov/programs/programs/index.aspx?60170

Resources Added Since Last Profile Update

- Informed Alaskans Initiative. SCDPHP, DPH, AK-DHSS. Http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/default.aspx
- Alaska Indicator-Based Information System (AK-IBIS). Http://ibis.dhss.alaska.gov/
- Instant Atlas Health maps. Http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/instantatlas.aspx
- Injury Surveillance InstantAtlas Display – Substance Abuse Maps. Injury Surveillance Program, Section of Epidemiology, DPH, AK-DHSS. Http://dhss.alaska.gov/dph/Epi/injury/Pages/Data-At-A-Glance.aspx
- Office of Substance Misuse and Addiction Prevention (OSMAP) website. DPH, AK-DHSS. Http://dhss.alaska.gov/osmap/Pages/default.aspx
- Heroin & Opioids – Public Health Information. DPH, AK-DHSS. Http://dhss.alaska.gov/dph/Director/Pages/heroin-opioids/default.aspx
- Marijuana – Public Health Information. DPH, AK-DHSS. Http://dhss.alaska.gov/dph/Director/Pages/marijuana/default.aspx
- Alaska Epidemiology Bulletin. Section of Epidemiology, DPH, AK-DHSS. Http://epibulletins.dhss.alaska.gov/

Data Limitations

This report focused on a five-year data period from 2012–2016 to facilitate comparison between datasets and provide a statistically valid statewide assessment of resources. While some data were not available for the 2012–2016 period, the most recent 5 years of available data were used. Revisions to this report will be completed as data are made available.

Where past AK-EPSUAD updates presented data on both alcohol- and drug-related injury hospitalizations from the Alaska Trauma Registry (ATR), this update includes only ATR data on alcohol-related injury hospitalizations. Beginning January 1, 2011, the ATR discontinued data collection on adult poisonings with the exception of work-related and non-intentional inhalation poisonings (e.g., carbon monoxide, ammonia, chlorine gas). Due to the gap in adult poisoning data, this report does not include ATR data for hospitalized injuries associated with drug use. Data from the Health Facilities Data Reporting Program (HFDRP) are being reviewed to fill this data gap. Additionally, past AK-EPSUAD updates reported on Fetal Alcohol Spectrum Disorder (FASD) as well as Fetal Alcohol Syndrome (FAS). However, due to the lack of comprehensive statewide data on FASD, this update provides only information on FAS.

This report adopted the guidelines used by the Alaska Division of Public Health's Health Analytics and Vital Records Section (HAVRS, formerly known as the Alaska Bureau for Vital Statistics) for mortality rates. Because a population with a high proportion of young people will generally have a lower crude death rate than a population with a high percentage of elderly person, age-adjusted mortality rates are more appropriate than crude rates when comparing health indicators for populations that have different age distributions. The age-adjusted rates in this report were calculated using the standard population based on the decennial U.S. Census for 2000. Regional breakouts of mortality data were presented at both the borough and census area level and the behavioral health region level.

Since 2004, the Alaska BRFSS used both the standard CDC-funded survey instrument as well as a supplemental survey, predominantly funded by the Alaska Tobacco Control Program. The supplemental survey was conducted using standard BRFSS protocols and employs the same marginal weights. This second survey provided additional information on tobacco use in Alaska and other issues of public health concern in Alaska. Data summarized by CDC and national organizations do not include the additional survey; as a result, prevalence rates may differ from those produced by the Alaska Health Survey Laboratory.

The Alaska YRBSS is composed of two CDC-funded high school samples. The statewide traditional high school sample includes students attending public traditional schools, excluding boarding, correspondence, home study, alternative, and correctional schools. The statewide alternative high school sample is comprised of students enrolled in public schools that serve at-risk students who benefit from nontraditional school settings and programs. The Alaska YRBSS also includes school district-level high school samples and a statewide correctional high school sample.

The traditional high school YRBS was first conducted in Alaska in 1995, and has been administered in most odd-numbered years since. Weighted (representative) data were collected in 1995, 2003, 2007, 2009, 2013, 2015, and 2017, resulting in published reports. Alaska also conducted statewide samples of its alternative high schools in odd-numbered years since 2009. Representative data were collected in 2009, 2011, 2013, 2015, and 2017. The school district-level YRBS has been offered biennially since 2003. (See Data Resources)

In past updates, statewide YRBS estimates were based upon datasets processed by CDC. The CDC data processing procedure includes data cleaning and editing to identify implausible responses, logical inconsistencies, and missing data and ensures that every state's dataset is processed in an identical fashion for comparability. Since the Alaska YRBS questionnaire includes both CDC standard and site-added questions, in 2017, the Alaska YRBS Program identified several additional logic edits that could be used to clean Alaska YRBS data. These edits resulted in small differences between CDC and Alaska-produced prevalence estimates and confidence intervals for select YRBS measures. For consistency with Alaska YRBS publications and the YRBS query module in AK-IBIS, this Profile reports Alaska-processed YRBS results.

Note to Data Users

Throughout the profile, underlined text within a table indicates a hyperlink to an indicator report on the topic of interest in the Alaska Indicator-Based Information System (AK-IBIS). For topics for which an indicator report was available in AK-IBIS, a link to the indicator report was provided to allow data users to easily access additional information on the topic for further research. In tables in which indicators were broken out by sex, race, grade, or other characteristics, hyperlinks to the relevant AK-IBIS indicator report were only included for the first breakout group. For instance, in Table 1.2, hyperlinks to AK-IBIS indicator reports of YRBS alcohol indicators by sex were included in the Female section of the table only.

Additionally, table and chart numbering in this update of the profile has changed to reflect the addition of new tables and charts and the removal of tables and charts for which updated data were unavailable. For convenient comparison to past profile updates, please see Appendix I for an overview of numbering changes.

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Introduction

Purpose

The purpose of this profile is to summarize information from new and established data sources for use in prevention/intervention planning, monitoring, and evaluation and provide recommendations to ensure comparable variable definitions and to improve data collection for future surveillance.

The profile summarizes information from several established sources for use in prevention/intervention planning, monitoring, and evaluation

Background: Strategic Prevention Framework State Incentive Grant

The Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Substance Abuse Prevention (CSAP) funds a process by which a Substance Abuse Epidemiological Outcomes Workgroup (SEOW) can be established in all 50 states, DC and the U. S. Territories. In support of this process, CSAP developed and implemented the Strategic Prevention Framework (SPF).

The SPF uses a five-step process known to promote youth development, reduce risk-taking behaviors, build assets and resilience, and prevent problem behaviors across the life span (Figure 1). The five step process includes: Assessment (data Processes collection, review and analysis); Capacity (assessment and cataloguing of human, dollar, agency and service capacity); Planning (using data and capacity assessments, developing a strategic plan of action for the state or community); Implementation (developing and implementing appropriate programs and projects to provided needed services); and Evaluation (are the programs working, is change happening, are services "making a difference").

Figure 1. Strategic Plan Framework Processes

In 2006, the Alaska Department of Health and Social Services, Division of Behavioral Health (DBH) received funding from CSAP for the development, implementation and maintenance of a SEOW. The role of the SEOW was to assist in developing an initial epidemiological profile on substance use, abuse and dependency in Alaska by 1) identifying available data across disciplines; 2) helping to design the focus of the profile that would be most useful for the State of Alaska and its end-users and 3) providing a critical eye to assess core issues, root causes and other areas of concern that most impact our state's overall health and well-being relating to substance use, abuse and dependency.

Alaska's SEOW completed Step 1 of the SPF in November 2008—a cross-discipline, population-based review of alcohol, illicit drug, and tobacco data and other statistics associated with their use to better understand the impact on the health of Alaskans and to guide the development of a successful strategic plan of action to prevent and improve these conditions. Over the next three years, the SEOW maintained and improved its ability to identify key data constructs for each type of substance use and its consequences; capture data from new sources for review and inclusion in the State epidemiologic profile; and publish a 5-year data summary.

In July 2009, DBH was awarded a SPF State Incentive Grant (SIG) that enabled the State to continue its efforts through the Substance Abuse Epidemiologic Workgroup (SEW). As an integral part of the SPF SIG process, the SEW, composed of statistical and prevention program experts (Appendix A), established a clear, systematic approach to evaluate surveillance information and new scientifically valid evidence related to substance use, consequences of continued use, abuse and dependency, and protective and risk factors.

Having a broad scope of state-level data across multiple professional disciplines pertaining to the aforementioned constructs, it was necessary for the SEW to expand and refine the process initiated by the SEOW. Besides the review of all potential substance-related data, the SEW assessed issues impacting the past, present, and future quality of the data used for the indicators; and scored the overall relevance of data as it related to the constructs .

The SEW is responsible for 1) on-going review of substance-related consumption, consequence, and influences data that best described substance use, abuse, dependency and treatment in Alaska; 2) identifying measures for data development to improve substance-related surveillance for future SPF activities; and 3) providing direction and advice on format and content of an annual report titled "State Epidemiologic Profile on Substance Use, Abuse, and Dependency". For more information on the selection process, see Appendix G.

Profile Overview

The following information summarizes the profile's layout for individual datasets reported. Each section of the epidemiologic profile begins with a problem statement followed by applicable definitions of data elements, a brief description of the data presented and website address. These data and/or their summary reports also can be accessed using the Data Resource information listed at the front of this report.

SECTION 1

CONSUMPTION

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Problem Statement: Alcohol Sales and Consumption

Alcohol misuse has long been a significant problem in Alaska, where per capita alcohol consumption has exceeded the national average since at least 2005[1]. In 2016, nearly 60% of Alaskan adults reported current (i.e. past-month) alcohol use, and approximately 1 in 5 (18.2%) reported binge alcohol use. Long-term alcohol misuse is associated with a wide range of negative health consequences, including brain damage, cancer, and liver fibrosis and cirrhosis, and also places significant strain on communities. In 2015, the estimated cost of alcohol abuse to the Alaska economy was $1.84 billion[2].

Although alcohol consumption among adults remains common in Alaska, alcohol use among Alaskan youth has declined in recent years. The percentage of Alaskan traditional high school students reporting ever using alcohol decreased significantly from 67% in 2011 to 56% in 2015. Both male and female students in Alaska traditional high schools reported lower percentages of current alcohol use in 2015 than their counterparts nationwide, and male traditional high school students were also less likely than American students overall to ever use alcohol and to binge drink. However, the majority of students in Alaska traditional high school still report using alcohol in their lifetime, and alcohol use is known to be associated with other high risk behaviors including abuse of other substances, sexual activity, and behavior resulting in injury and delinquency.

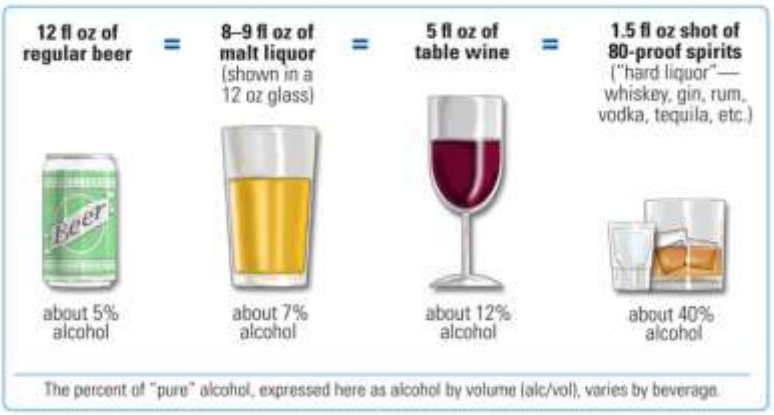
[1] Hull-Jilly DMC, Casto LD. State Epidemiologic Profile on Substance Use, Abuse and Dependency – 2007–2011. Alaska Department of Health and Social Services. Released November 7, 2013. Available at http://dhss.alaska.gov/dph/Epi/Documents/01-Internal/injury/sa/SubstanceAbuseEpiProfile_2013.pdf

[2] Alaska *Epidemiology Bulletin*. Health Impacts of Alcohol Misuse in Alaska. Released May 7, 2018. Available at http://www.epi.alaska.gov/bulletins/docs/rr2018_02.pdf

Data Analysis

Data on alcohol sales and consumption were provided through the Alcohol Epidemiologic Data System (AEDS), the Youth Risk Behavior Survey (YRBS), the Behavioral Risk Factor Surveillance System (BRFSS), the National Survey on Drug Use and Health (NSDUH), and the Pregnancy Risk Assessment Monitoring System (PRAMS).

Definition: 1 drink = 1 can of beer, 1 glass of wine, 1 cocktail, 1 bottled wine cooler, or 1 shot of liquor



https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/what-standard-drink

Alcohol Epidemiologic Data System (AEDS)

https://pubs.niaaa.nih.gov/publications/surveillance110/CONS16.htm

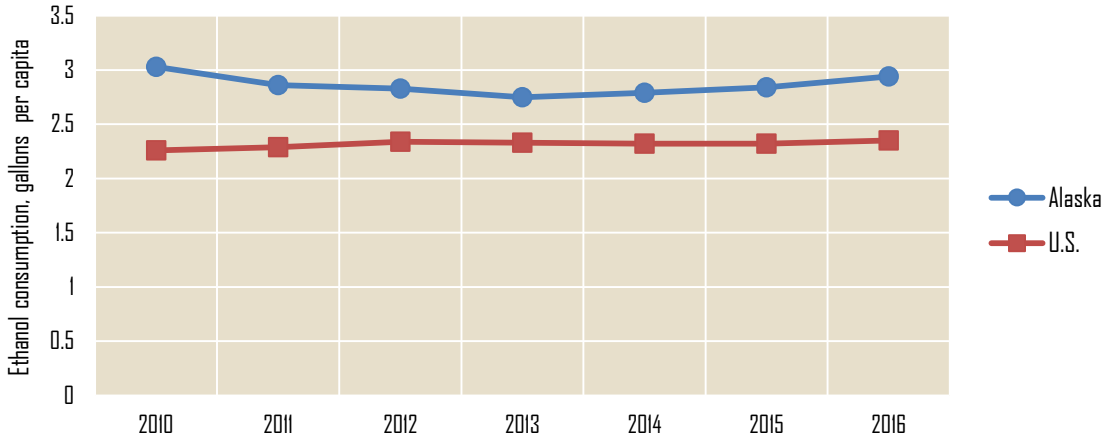
Estimates of alcohol consumption are based on alcoholic beverage sales data collected by the Alcohol Epidemiologic Data System (AEDS), which is managed by the National Institute on Alcohol Abuse and Alcoholism. AEDS endeavors to collect sales data from all States and the District of Columbia, as these data are more accurate representations of actual consumption of alcoholic beverages than production and shipping data from beverage industry sources. States report sales data to AEDS in the form of volume or tax revenue, which AEDS converts to gallons using State tax rates. To calculate per capita consumption rates, AEDS uses state population estimates for persons aged 14 years and older from the Centers for Disease Control and Prevention (CDC) Wide-ranging Online Data for Epidemiologic Research (WONDER) online query system. Although age 14 is below the minimum legal age for the purchase of alcoholic beverages throughout the United States, most self-report surveys indicate that many 14-year-olds drink alcoholic beverages.

Ethanol consumption in Alaska was consistently greater than national averages for all alcohol-containing beverages. During 2010–2016, spirits were consumed at a higher rate than both beer and wine in Alaska, at a rate 1.5 times higher than the national average in 2016 (Table 1.1). The amount of alcohol consumed per capita in Alaska has remained relatively stable during 2010–2016, ranging from 3.03 gallons of ethanol consumed per capita in 2010 to 2.75 gallons of ethanol consumed per capita in 2013 (Chart 1.1).

Table 1.1. Trends in Ethanol Consumption in Gallons per Capita, Alaska, 2010–2016

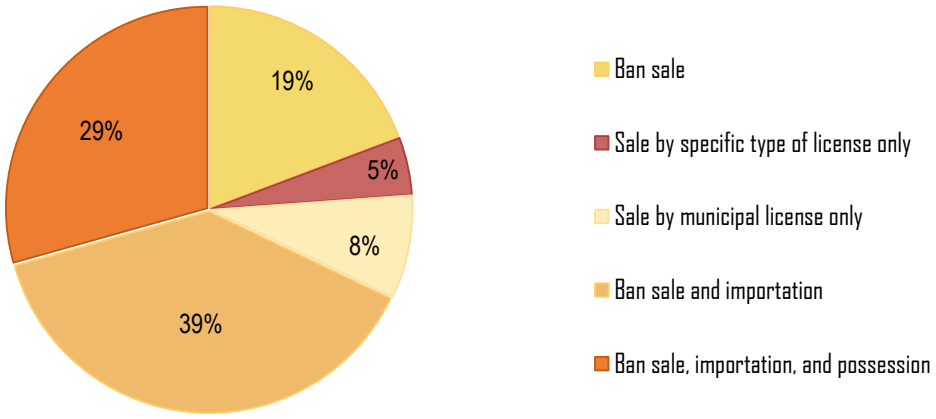
Beverage Type	2010	2011	2012	2013	2014	2015	2016	U.S. 2015	U.S. 2016
Beer	1.23	1.15	1.17	1.07	1.11	1.11	1.15	1.09	1.08
Spirits	1.25	1.17	1.13	1.16	1.16	1.20	1.23	0.81	0.83
Wine	0.55	0.54	0.53	0.52	0.52	0.53	0.56	0.42	0.44

Chart 1.1. Trends in Ethanol Consumption per Capita, All Beverages, Alaska, 2010–2016



As of November 2016, 109 communities had some restriction that prohibits alcohol sales, importation, or possession. Of these communities, 95 (87%) ban the sale of alcohol and 32 (29%) ban the sale, importation, and possession of alcohol (Chart 1.2). Of these communities, most had lower rates of serious injury resulting from assault, motor vehicle collisions and other causes. "Dry" communities (banning sale, importation, and possession of alcohol) with a local police presence had a lower age-adjusted rate of serious injury caused by assault.

Chart 1.2. Communities with Alcohol Restrictions, Alaska, 2016, N=109



Source: Alaska Alcohol and Marijuana Control Board

Youth Risk Behavior Survey (YRBS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/yrbsst23/YRBSSelection.html and Alaska Youth Risk Behavior Survey Results Summary Tables – 2011 available at: http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs11.aspx

Definitions of alcohol use:

- **Current alcohol use** was defined as having at least one drink within the past 30 days.
- **Current binge drinking** was defined as having 5 or more drinks in a row within the past 30 days.

The prevalence of alcohol use before 13 years of age and binge alcohol use were higher among males, while the prevalence of any alcohol use and current alcohol use continued to be slightly higher among females (Table 1.2). Reports of alcohol use before sexual intercourse were lower for both males and females compared to the 2015 national averages. The percentage of adolescents reporting current alcohol use increased through the four years of high school. The YRBS results for All Grades indicated that the prevalence of alcohol use was generally lower in Alaska than in the U.S. overall

(only Grade 12 binge drinking was higher than the 2015 national average), indicating a sustained long-term decline of current and episodic alcohol use among youth (Chart 1.3 and Chart 1.4).

Table 1.2. Trends in Alcohol Use Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015

	2011 (95% CI)	**2013** (95% CI)	**2015** (95% CI)	**U.S. 2015** (95% CI)
Female				
% Ever Drank Alcohol	69.9 (65.1, 74.3)	61.5 (56.0, 66.7)	59.7 (55.9, 63.3)	65.3 (61.5, 69.0)
% Alcohol Before 13	15.0 (12.2, 18.3)	11.9 (9.1, 15.5)	10.5 (8.1, 13.6)	14.6 (12.7, 16.6)
% Current Drinking	31.3 (26.2, 36.8)	22.5 (18.1, 27.6)	23.0 (20.2, 26.2)	33.5 (29.8, 37.5)
% Current Binge Drinking	16.5 (12.8, 21.1)	12.4 (9.3, 16.4)	11.9 (9.5, 14.8)	16.8 (14.4, 19.6)
% Drank Alcohol or Used Drugs Before Last Sexual Intercourse	16.0 (10.2, 24.3)	14.3 (9.3, 21.4)	15.1 (9.8, 22.6)	16.4 (14.4, 18.7)
% Drank on School Property[1]	3.1 (1.9, 5.0)	N/A	N/A	N/A
Male				
% Ever Drank Alcohol	63.7 (58.2, 68.8)	58.6 (53.1, 63.8)	52.4 (47.2, 57.6)	61.4 (59.1, 63.7)
% Alcohol Before 13	19.1 (15.6, 23.1)	14.4 (11.6, 17.7)	16.7 (13.7, 20.3)	19.7 (17.9, 21.5)
% Current Drinking	26.8 (22.0, 32.1)	21.6 (17.5, 26.3)	20.3 (16.8, 24.4)	32.2 (30.4, 34.0)
% Current Binge Drinking	16.7 (13.8, 20.1)	12.6 (9.9, 16.0)	12.8 (10.2, 15.9)	18.6 (16.9, 20.5)
% Drank Alcohol or Used Drugs Before Last Sexual Intercourse	21.0 (15.0, 28.5)	16.6 (10.3, 25.5)	15.6 (10.8, 22.0)	24.6 (21.1, 28.4)
% Drank on School Property[1]	3.7 (2.4, 5.7)	N/A	N/A	N/A

1. Question was included in 2011 YRBS but not future years

Chart 1.3. Trends in Traditional High School Students Reporting Alcohol Use Before Age 13, by Grade, Alaska YRBS, 2011–2015

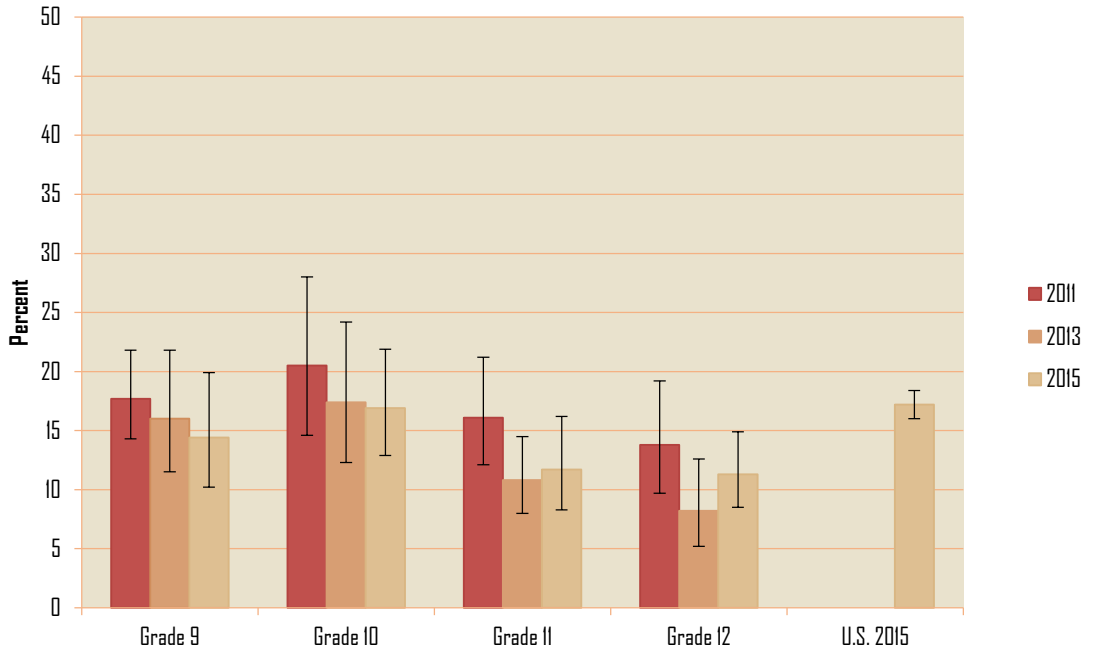
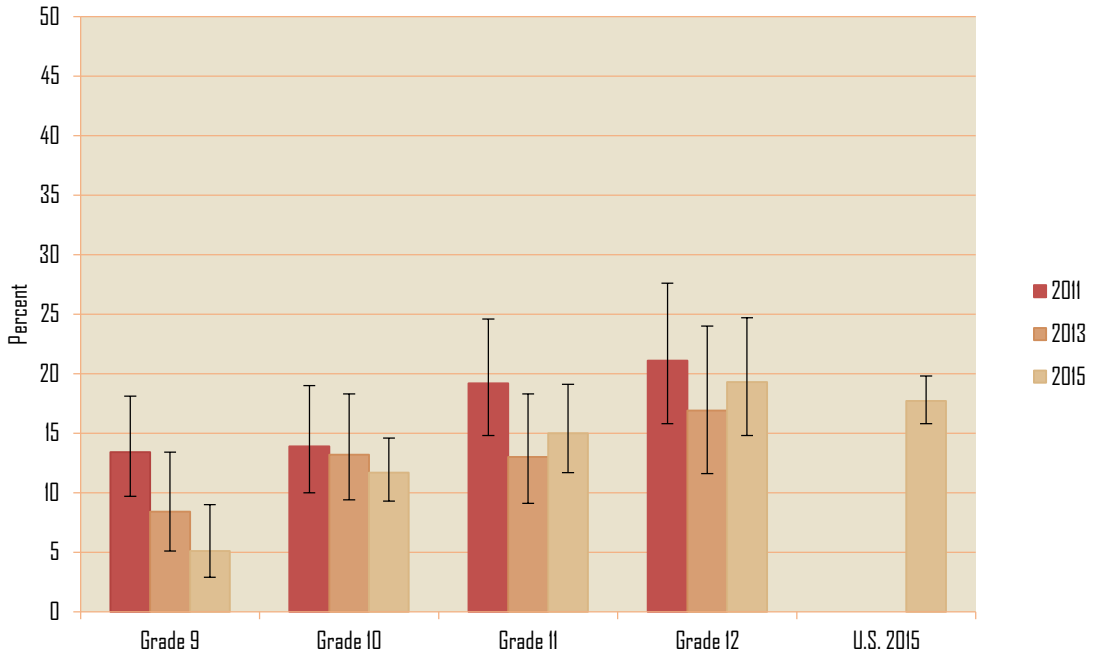


Chart 1.4. Trends in Traditional High School Students Reporting Current Binge Drinking, by Grade, Alaska YRBS, 2011–2015



Since the initial administration of the YRBS in Alaska (1995), alternative schools serving at-risk students were routinely excluded from traditional statewide YRBS surveys. In 2009, high school (HS) students in Alaska's alternative schools were included for the first time. In 2015, students from alternative schools reported significantly higher rates for all alcohol use indicators when compared to their traditional school counterparts (Charts 1.5–1.8).

Note: the following charts use YRBS: Youth Risk Behavior Survey – Statewide (Traditional) and Statewide (Alternative). (See http://ibis.dhss.alaska.gov/query/Introduction.html)

Chart 1.5. Percentage of Youth Reporting Lifetime Use of Alcohol, Comparing Traditional and Alternative High Schools (HS), by Gender and by Grade, Alaska YRBS, 2015

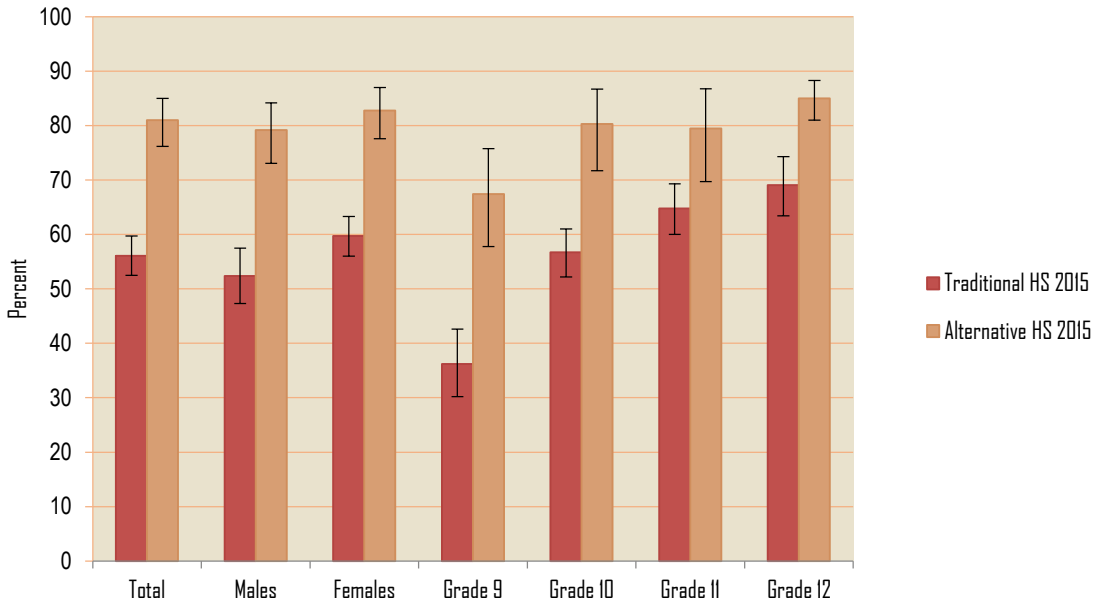


Chart 1.6. Percentage of Youth Reporting Alcohol Use Before Age 13, Comparing Traditional and Alternative High Schools (HS), by Gender and by Grade, Alaska YRBS, 2015

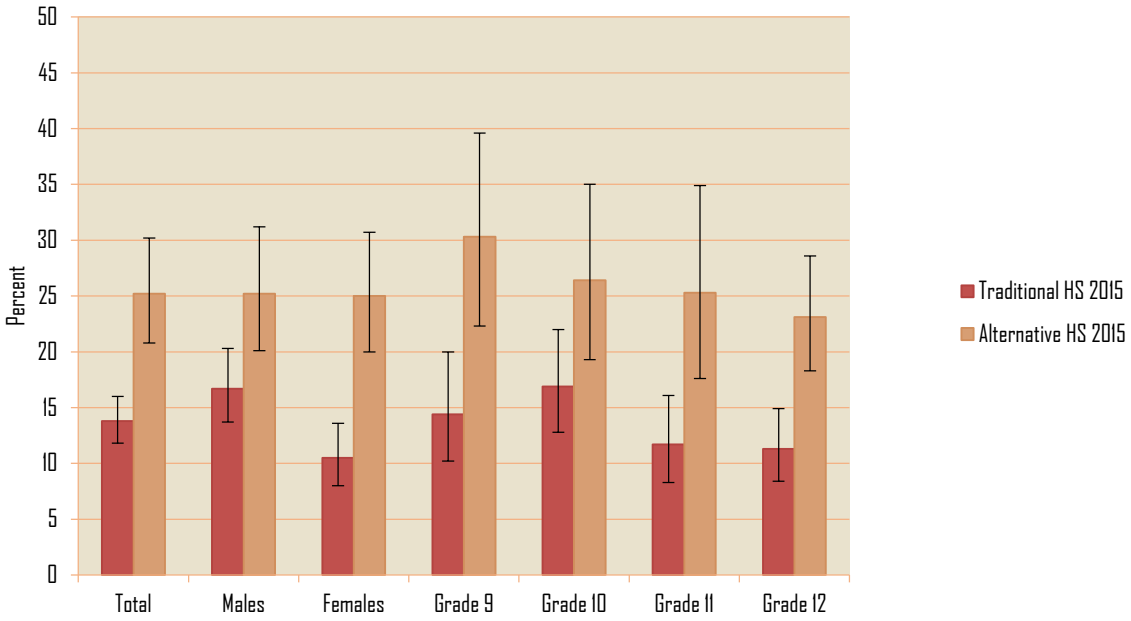


Chart 1.7. Percentage of Youth Reporting Current Alcohol Use, Comparing Traditional and Alternative High Schools (HS), by Gender and by Grade, Alaska YRBS, 2015

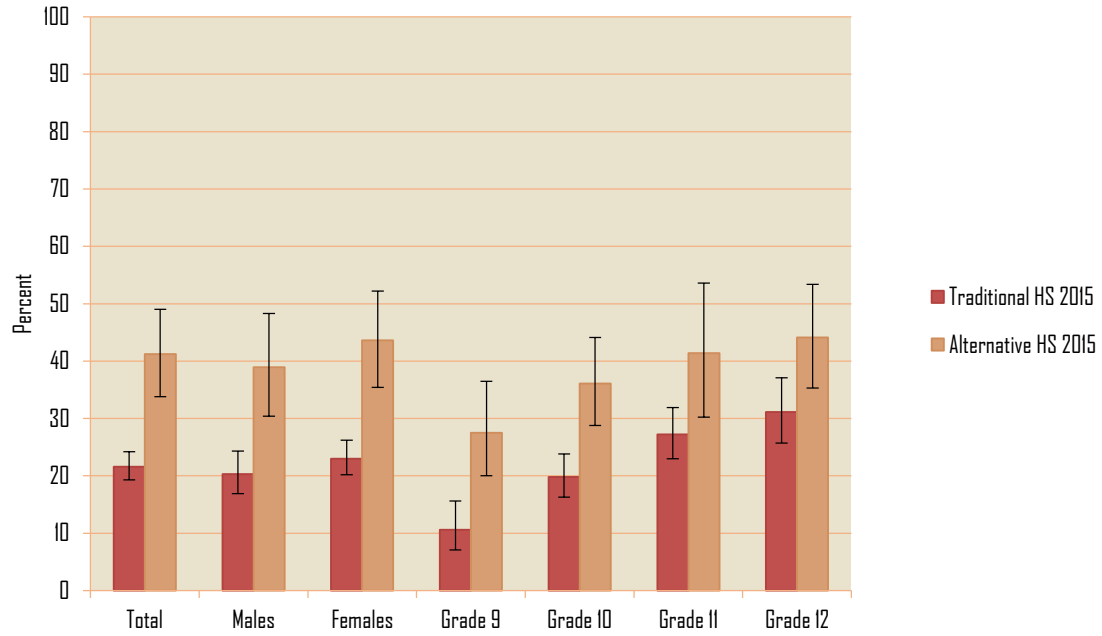
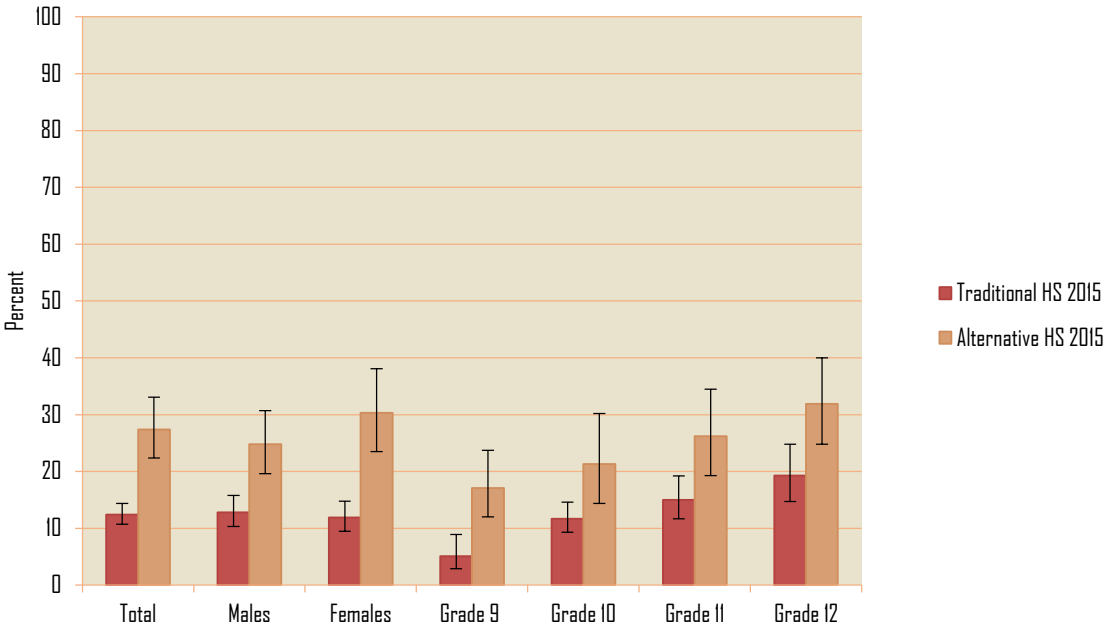


Chart 1.8. Percentage of Youth Reporting Current Binge Drinking, Comparing Traditional and Alternative High Schools (HS), by Gender and by Grade, Alaska YRBS, 2015



Behavioral Risk Factor Surveillance System (BRFSS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/brfss23/BRFSSSelection.html

Definitions of alcohol use:

- **Current alcohol use** was defined as having at least one drink within the past 30 days.
- **Heavy alcohol use** was defined as having more than two drinks per day for males and more than one drink per day for females in the past 30 days.
- **Binge alcohol use** was defined as having five or more drinks for males or four or more drinks for females on at least one occasion in the past 30 days.

Nearly 60% of adults in Alaska reported current alcohol use. Results of reported use (current, heavy, and binge) were variable from year to year. In 2016, overall prevalence of alcohol use in Alaska was higher than the national average. The prevalence of binge drinking in 2016 was higher among men (22%) than women (15%). During 2012–2016, current alcohol use among females remained the same (54.0% in 2012 and 53.9% in 2016; Table 1.3), while current alcohol use among males increased 3% (59.6% in 2012 and 61.5% in 2016; Table 1.3).

Table 1.3. Trends in Alcohol Use Among Adults, by Gender, Alaska BRFSS, 2012–2016

	2012 (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)	**2016** (95% CI)	**U.S. 2016** (95% CI)
Female						
% Binge Alcohol Use	13.1 (11.3, 15.1)	14.1 (12.0, 16.6)	14.3 (12.3, 16.6)	14.7 (12.7, 16.8)	14.6 (12.6, 17.0)	12.0 (11.7, 12.3)
% Current Alcohol Use	54.0 (51.1, 56.8)	50.8 (47.5, 54.0)	51.7 (48.7, 54.7)	50.6 (47.9, 53.3)	53.9 (51.0, 56.8)	47.7 (47.3, 48.2)
% Heavy Alcohol Use	5.9 (4.7, 7.3)	7.9 (6.3, 9.7)	9.1 (7.5, 11.0)	8.6 (7.2, 10.3)	7.2 (5.8, 9.0)	5.9 (5.7, 6.1)
Male						
% Binge Alcohol Use	21.2 (18.8, 23.8)	22.6 (20.0, 25.5)	25.6 (22.9, 28.5)	24.8 (22.5, 27.3)	21.6 (19.3, 24.2)	22.0 (21.7, 22.4)
% Current Alcohol Use	59.6 (56.6, 62.5)	58.9 (55.7, 61.9)	60.6 (57.5, 63.5)	60.0 (57.3, 62.6)	61. (58.6, 64.3)	59.5 (59.1, 60.0)
% Heavy Alcohol Use	7.1 (5.6, 8.9)	7.5 (6.0, 9.2)	9.1 (7.4, 11.2)	7.3 (6.1, 8.7)	7.4 (6.0, 9.1)	6.9 (6.6, 7.1)
Total						
% Binge Alcohol Use	17.3 (15.7, 19.0)	18.5 (16.8, 20.4)	20.2 (18.4, 22.0)	19.9 (18.3, 21.5)	18.2 (16.6, 19.9)	16.9 (16.6, 17.1)
% Current Alcohol Use	56.9 (54.8, 58.9)	55.0 (52.7, 57.2)	56.3 (54.1, 58.4)	55.4 (53.5, 57.3)	57.8 (55.8, 59.8)	53.5 (53.2, 53.8)
% Heavy Alcohol Use	6.5 (5.5, 7.6)	7.7 (6.6, 8.9)	9.1 (7.9, 10.5)	7.9 (7.0, 9.0)	7.3 (6.3, 8.5)	6.4 (6.2, 6.5)

Reports of binge, current, and heavy alcohol use by age group were variable from 2012 to 2016. In 2016, the prevalence of alcohol use was higher than the national averages for adults aged 35 years and older, while the prevalence of alcohol use was lower than the national averages for adults aged 18 to 24 years. Prevalence of binge alcohol use was highest among adults aged 25 through 34 years.

Table 1.4. Trends in Alcohol Use Among Adults, by Age Group, Alaska BRFSS, 2012–2016

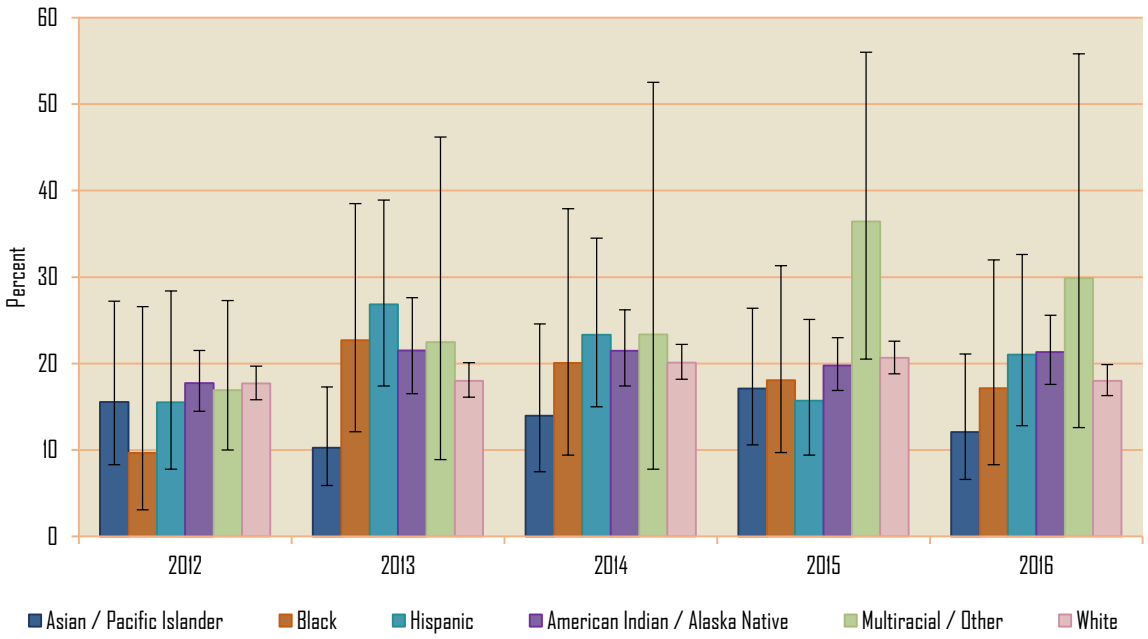
		2012 (95% CI)	2013 (95% CI)	2014 (95% CI)	2015 (95% CI)	2016 (95% CI)	U.S. 2016 (95% CI)
Ages 18–24	% Binge Alcohol Use	20.8 (15.8, 26.8)	25.7 (19.9, 32.5)	25.2 (19.3, 32.2)	26.2 (21.0, 32.1)	19.5 (14.9, 25.0)	25.2 (24.4, 26.1)
	% Current Alcohol Use	45.9 (39.1, 52.9)	42.3 (35.2, 49.8)	48.6 (41.2, 56.1)	50.6 (44.2, 57.0)	44.5 (37.9, 51.2)	52.0 (50.9, 53.0)
	% Heavy Alcohol Use	5.7 (3.2, 10.2)	7.5 (4.6, 11.9)	7.8 (4.6, 13.1)	6.1 (3.9, 9.6)	5.4 (3.2, 9.1)	7.2 (6.7, 7.7)
Ages 25–34	% Binge Alcohol Use	25.5 (21.4, 30.1)	27.4 (22.7, 32.6)	28.6 (24.0, 33.7)	28.6 (24.3, 33.2)	23.7 (19.7, 28.3)	27.1 (26.4, 27.9)
	% Current Alcohol Use	63.3 (58.4, 67.9)	62.8 (57.5, 67.9)	59.0 (53.6, 64.2)	61.3 (56.4, 66.0)	64.2 (59.0, 69.1)	62.9 (62.1, 63.6)
	% Heavy Alcohol Use	8.1 (5.6, 11.5)	8.0 (5.5, 11.4)	11.0 (8.0, 14.9)	9.7 (7.2, 12.9)	6.3 (4.2, 9.5)	7.6 (7.2, 8.0)
Ages 35–44	% Binge Alcohol Use	17.8 (14.5, 21.8)	22.1 (18.0, 27.0)	23.4 (19.1, 28.4)	25.7 (21.6, 30.1)	22.9 (18.7, 27.7)	20.2 (19.6, 20.8)
	% Current Alcohol Use	62.3 (57.4, 66.9)	59.0 (53.3, 64.5)	64.6 (59.5, 69.5)	61.9 (57.0, 66.5)	63.4 (58.1, 68.3)	58.0 (57.2, 58.8)
	% Heavy Alcohol Use	5.1 (3.5, 7.4)	9.9 (7.1, 13.7)	8.1 (6.0, 11.0)	9.0 (6.8, 11.8)	12.1 (8.5, 17.0)	6.7 (6.4, 7.2)
Ages 45–54	% Binge Alcohol Use	19.1 (15.7, 23.1)	14.5 (11.3, 18.4)	18.4 (15.0, 22.5)	16.9 (14.1, 20.1)	20.0 (16.2, 24.5)	16.7 (16.1, 17.2)
	% Current Alcohol Use	59.5 (55.1, 63.8)	57.7 (52.9, 62.3)	55.0 (50.4, 59.5)	57.6 (53.6, 61.5)	61.9 (57.3, 66.4)	56.2 (55.5, 57.0)
	% Heavy Alcohol Use	7.7 (5.7, 10.5)	7.8 (5.4, 11.2)	11.3 (8.2, 15.3)	7.7 (5.8, 10.0)	5.8 (4.1, 8.1)	7.0 (6.6, 7.4)
Ages 55–64	% Binge Alcohol Use	11.7 (9.0, 15.0)	11.1 (8.7, 14.1)	15.6 (12.6, 19.1)	14.0 (11.4, 17.1)	15.0 (12.1, 18.5)	11.4 (11.0, 11.8)
	% Current Alcohol Use	56.6 (52.2, 60.8)	53.4 (48.8, 58.0)	59.7 (55.3, 63.9)	54.6 (50.8, 58.3)	59.3 (55.3, 63.2)	51.0 (50.3, 51.7)
	% Heavy Alcohol Use	6.0 (4.3, 8.4)	5.4 (4.1, 7.0)	9.1 (6.9, 11.9)	8.4 (6.4, 11.0)	9.2 (7.4, 11.5)	6.1 (5.8, 6.4)
Ages 65 and over	% Binge Alcohol Use	4.2 (3.0, 5.8)	7.7 (4.5, 12.8)	6.2 (4.5, 8.6)	6.9 (5.2, 9.2)	6.2 (4.7, 8.2)	4.9 (4.7, 5.2)
	% Current Alcohol Use	48.3 (43.4, 53.1)	48.9 (43.8, 54.0)	47.7 (43.3, 52.0)	43.9 (40.1, 47.7)	47.6 (43.6, 51.7)	42.5 (42.0, 43.0)
	% Heavy Alcohol Use	4.8 (3.2, 7.3)	6.6 (4.8, 9.2)	6.2 (4.5, 8.5)	6.1 (4.5, 8.2)	4.6 (3.6, 6.0)	4.1 (3.9, 4.3)

In 2016, binge alcohol use was reported by 18% of adults in Alaska; prevalence was higher in Alaska than national averages for all race categories. Prevalence of current alcohol use was higher among Hispanics followed by Whites. Prevalence of heavy alcohol use was higher among Multiple Races/Other Races followed by Hispanics and American Indian/Alaska Natives. During 2012–2016, no significant differences were found in reported heavy or binge alcohol use among any races (Table 1.5; Chart 1.9).

Table 1.5. Trends in Alcohol Use Among Adults, by Race and Ethnicity, Alaska BRFSS, 2012–2016

		2012 (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)	**2016** (95% CI)	**US 2016** (95% CI)
Asian / Pacific Islander	% Binge Alcohol Use	15.5 (8.3, 27.2)	10.3 (5.9, 17.3)	14.0 (7.5, 24.6)	17.1 (10.6, 26.4)	12.1 (6.6, 21.1)	10.3 (9.3, 11.4)
	% Current Alcohol Use	46.8 (34.6, 59.4)	37.8 (27.4, 49.4)	39.4 (27.8, 52.3)	37.5 (28.2, 47.8)	37.8 (27.6, 49.3)	44.5 (42.7, 46.4)
	% Heavy Alcohol Use	0.8 (0.2, 3.4)	2.6 (1.0, 6.6)	5.8 (2.1, 14.8)	0.9 (0.2, 3.8)	5.0 (2.2, 11.2)	2.3 (1.9, 2.8)
Black	% Binge Alcohol Use	9.7 (3.1, 26.6)	22.7 (12.1, 38.5)	20.1 (9.4, 37.9)	18.1 (9.7, 31.3)	17.1 (8.3, 32.0)	13.7 (13.0, 14.5)
	% Current Alcohol Use	36.6 (22.9, 52.9)	49.1 (33.7, 64.6)	55.7 (40.1, 70.2)	37.2 (25.9, 50.2)	51.7 (37.4, 65.8)	47.3 (46.4, 48.3)
	% Heavy Alcohol Use	7.2 (1.8, 25.0)	13.6 (5.2, 31.0)	0.8 (0.1, 5.3)	1.3 (0.2, 7.5)	2.9 (0.6, 13.1)	4.8 (4.4, 5.3)
Hispanic	% Binge Alcohol Use	15.5 (7.8, 28.4)	26.9 (17.4, 38.9)	23.3 (15.0, 34.5)	15.7 (9.4, 25.1)	21.0 (12.8, 32.6)	17.2 (16.4, 17.9)
	% Current Alcohol Use	53.5 (40.5, 66.0)	55.2 (42.2, 67.6)	52.5 (40.1, 64.7)	60.6 (50.2, 70.2)	67.3 (57.3, 75.8)	44.4 (43.4, 45.3)
	% Heavy Alcohol Use	7.0 (2.0, 22.2)	14.3 (7.6, 25.2)	11.6 (5.3, 23.8)	5.4 (2.6, 11.0)	9.2 (3.6, 21.8)	4.7 (4.3, 5.2)
American Indian / Alaska Native	% Binge Alcohol Use	17.7 (14.5, 21.5)	21.5 (16.5, 27.6)	21.5 (17.4, 26.2)	19.8 (16.9, 23.0)	21.3 (17.6, 25.6)	17.1 (15.2, 19.2)
	% Current Alcohol Use	42.0 (37.4, 46.7)	43.1 (37.1, 49.2)	38.3 (33.5, 43.3)	43.2 (39.3, 47.1)	44.4 (39.7, 49.1)	42.1 (39.7, 44.5)
	% Heavy Alcohol Use	4.9 (3.2, 7.4)	6.6 (4.7, 9.2)	8.0 (5.5, 11.4)	7.7 (6.0, 10.0)	9.2 (6.7, 12.6)	6.8 (5.7, 8.1)
Multiple Races / Other	% Binge Alcohol Use	16.9 (10.0, 27.3)	22.5 (8.9, 46.2)	23.4 (7.8, 52.5)	36.4 (20.5, 56.0)	29.9 (12.6, 55.8)	17.9 (16.4, 19.6)
	% Current Alcohol Use	61.8 (50.4, 72.0)	61.4 (34.6, 82.7)	68.0 (45.1, 84.6)	73.7 (55.4, 86.3)	56.1 (35.9, 74.5)	52.2 (50.1, 54.2)
	% Heavy Alcohol Use	6.6 (2.9, 14.3)	1.0 (0.1, 6.9)	7.6 (1.1, 38.4)	13.3 (5.3, 29.7)	25.5 (9.1, 54.0)	6.3 (5.5, 7.2)
White	% Binge Alcohol Use	17.7 (15.8, 19.7)	18.0 (16.1, 20.1)	20.1 (18.2, 22.2)	20.7 (18.8, 22.6)	18.0 (16.3, 19.9)	17.9 (17.7, 18.2)
	% Current Alcohol Use	63.1 (60.7, 65.4)	59.7 (57.2, 62.1)	61.7 (59.3, 64.0)	60.7 (58.5, 62.8)	62.3 (60.1, 64.5)	58.0 (57.7, 58.4)
	% Heavy Alcohol Use	7.3 (6.1, 8.7)	7.7 (6.5, 9.1)	9.8 (8.4, 11.5)	9.3 (8.0, 10.7)	7.0 (5.9, 8.1)	7.4 (7.2, 7.6)

Chart 1.9. Trends in Adults Reporting Binge Alcohol Use, by Race and Ethnicity, Alaska BRFSS, 2012–2016



National Survey on Drug Use and Health (NSDUH)

State of Alaska Department of Health and Social Services' Indicator-Based Information System (AK-IBIS) – Interactive query modules available at:
http://ibis.dhss.alaska.gov/topic/databases/NSDUH.html

Definitions of alcohol use:

- **Current alcohol use** is defined as any reported use within the past 30 days.
- **Alcohol Dependency/Abuse** is listed in 2015–2016 NSDUH tables as 'Alcohol Use Disorder', where Alcohol Use Disorder is defined as meeting criteria for alcohol dependence or abuse within the past year. Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).
- **Binge alcohol use** was defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. Binge alcohol use data from the 2013–2014 survey was not included because they are not comparable to later survey data, as the definition of binge drinking changed in 2014 for females from 5 or more drinks in one sitting to 4 or more drinks in one sitting.

Surveys indicated that reported alcohol use had remained relatively unchanged during 2013–2016. Results from the 2015–2016 NSDUH survey indicated that 10% of Alaskan adolescents (aged 12–17 years) reported current alcohol use and 6% of Alaskan adolescents reported binge drinking. Because alcohol can be legally purchased at 21 years of age, a lower prevalence among adolescents compared

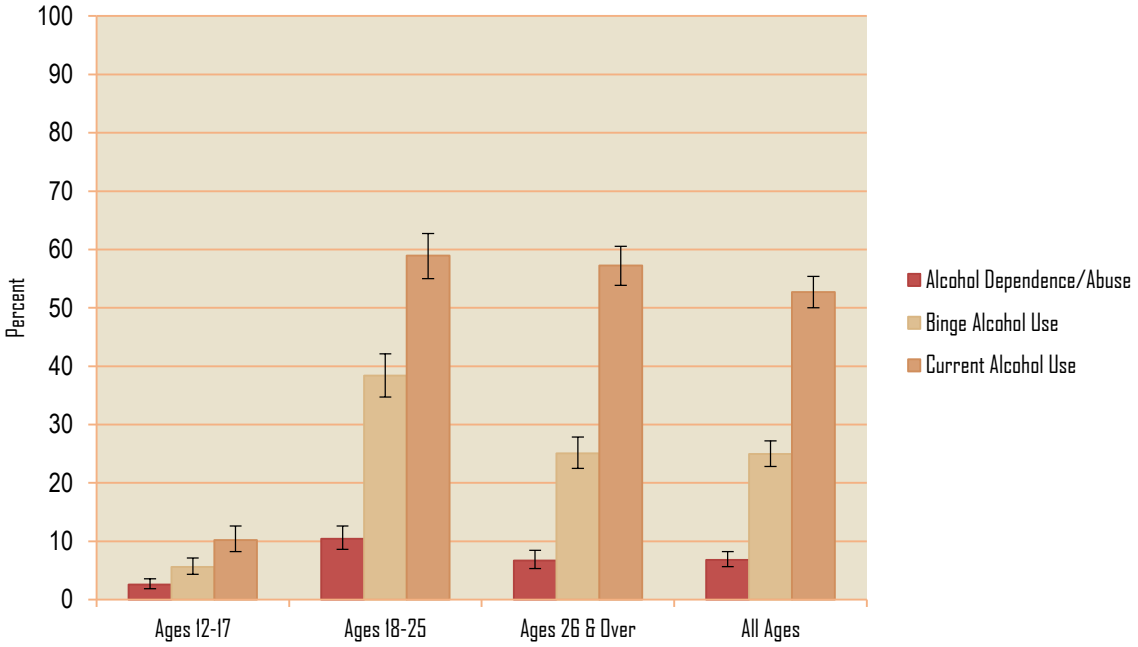
to adults (aged 18 years or older) was expected. During 2013–2016, there was no significant difference in report of current alcohol use by adults (aged 18 years or older). Alcohol use prevalence among Alaskans aged 12 years or older was slightly higher than the national average during 2015–2016 (Table 1.6; Chart 1.10).

Table 1.6. Trends in Reported Alcohol Use, by Age Group, Alaska NSDUH, 2013–2016

	2013–2014 (95% CI)	2014–2015 (95% CI)	2015–2016 (95% CI)	U. S. 2015–2016 (95% CI)
Ages 12–17				
% Alcohol Dependency/Abuse[1]	2.1 (1.5, 2.9)	2.5 (1.8, 3.5)	2.6 (1.9, 3.6)	2.2 (2.0, 2.4)
% Binge Alcohol Use	*	**	5.6 (4.4, 7.1)	5.3 (5.0, 5.6)
% Current Alcohol Use	9.2 (7.0, 12.1)	11.0 (8.4, 14.3)	10.2 (8.2, 12.6)	9.4 (9.0, 9.8)
% Needing But Not Receiving Treatment for Alcohol Use	2.0 (1.4, 2.8)	**	2.3 (1.6, 3.2)	2.1 (1.9, 2.4)
Ages 18–25				
% Alcohol Dependency/Abuse[1]	12.7 (10.5, 15.1)	12.3 (10.2, 14.8)	10.4 (8.6, 12.6)	10.8 (10.3, 11.3)
% Binge Alcohol Use	*	**	38.4 (34.7, 42.1)	38.7 (37.9, 39.5)
% Current Alcohol Use	59.6 (55.5, 63.7)	62.6 (58.3, 66.6)	58.9 (55.0, 62.7)	57.7 (57.0, 58.5)
% Needing But Not Receiving Treatment for Alcohol Use	12.9 (10.7, 15.4)	**	10.1 (8.3, 12.2)	10.5 (10.0, 10.9)
Ages 26 and over				
% Alcohol Dependency/Abuse[1]	6.2 (5.0, 7.7)	7.2 (5.9, 8.6)	6.7 (5.3, 8.4)	5.3 (5.1, 5.5)
% Binge Alcohol Use	*	**	25.1 (22.5, 27.9)	24.5 (24.1, 25.0)
% Current Alcohol Use	59.0 (55.3, 62.7)	59.4 (56.2, 62.6)	57.2 (53.9, 60.5)	55.1 (54.6, 55.6)
% Needing But Not Receiving Treatment for Alcohol Use	5.8 (4.7, 7.1)	**	6.5 (5.2, 8.0)	5.0 (4.8, 5.3)
All Ages				
% Alcohol Dependency/Abuse[1]	6.7 (5.7, 8.0)	7.4 (6.4, 8.6)	6.8 (5.7, 8.2)	5.7 (5.5, 5.9)
% Binge Alcohol Use	*	**	25.0 (22.8, 27.2)	24.6 (24.2, 25.0)
% Current Alcohol Use	54.0 (51.1, 56.9)	55.0 (52.4, 57.5)	52.7 (50.0, 55.4)	51.2 (50.8, 51.7)
% Needing But Not Receiving Treatment for Alcohol Use	6.4 (5.5, 7.5)	**	6.5 (5.5, 7.7)	5.5 (5.3, 5.7)

* Binge alcohol use data from the 2013-2014 survey are not included because they are not comparable to later survey data, as the definition of binge drinking changed in 2014 for females from 5 or more drinks in one sitting to 4 or more drinks in one sitting.
** Data are unavailable as this question was not asked on the 2014–2015 NSDUH

Chart 1.10. Trends in Reported Alcohol Use, by Age Group, Alaska NSDUH, 2015–2016



Pregnancy Risk Assessment Monitoring System (PRAMS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/prams23/PRAMSSelection.html

The Pregnancy Risk Assessment Monitoring System (PRAMS) was developed by the CDC as part of its initiative to reduce infant mortality and low birth weight. The PRAMS survey collects state-specific, population-based data on maternal attitudes and experiences before, during, and after pregnancy. PRAMS includes women of all ages who delivered a live born infant in the year(s) indicated.

Definitions of alcohol use:

- **Drinking before pregnancy** is defined as the consumption of alcohol during the 3 months before pregnancy.
- **Binge drinking before pregnancy** is defined as the consumption of 4 alcoholic drinks or more in a 2 hour time span during the 3 months before pregnancy.
- **Drinking during pregnancy** is defined as the consumption of alcohol during the last 3 months of pregnancy.
- **Binge drinking during pregnancy** is defined as the consumption of 4 alcoholic drinks or more in a 2 hour time span during the last 3 months of pregnancy.

The prevalence of maternal drinking before or during pregnancy did not change significantly from 2010 to 2015 for any age group. During 2010-2015, women age 20-24 years showed the highest prevalence of binge drinking before and during pregnancy and women age 35 years and older showed the highest prevalence of drinking during pregnancy (Table 1.7).

Table 1.7. Trends in Maternal Drinking, by Age Group, Alaska PRAMS, 2010–2015 (NEW)

	2010 (95% CI)	**2011** (95% CI)	**2012** (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)
Age < 20 years						
% Drinking Before Pregnancy	46.1 (33.5, 59.4)	33.3 (22.4, 46.2)	39.4 (26.4, 54.1)	31.4 (21.4, 43.4)	19.2 (10.8, 32.0)	27.9 (17.9, 40.7)
% Binge Drinking Before Pregnancy	22.2 (12.8, 35.7)	26.1 (16.3, 39.0)	20.3 (10.7, 35.1)	22.6 (14.0, 34.3)	12.4 (5.5, 25.6)	12.7 (6.0, 24.9)
% Drinking During Pregnancy	0.8 (0.1, 5.3)	2.6 (0.4, 16.2)	5.7 (1.6, 18.1)	5.5 (1.9, 15.1)	0.0	1.3 (0.2, 6.8)
% Binge Drinking During Pregnancy	0.8 (0.1, 5.3)	0.0	1.6 (0.2, 10.3)	1.2 (0.3, 4.7)	0.0	0.0
Age 20–24 years						
% Drinking Before Pregnancy	58.8 (51.5, 65.7)	62.3 (55.0, 69.1)	56.9 (49.1, 64.5)	62.1 (54.8, 68.8)	55.0 (47.8, 62.1)	58.7 (51.5, 65.6)
% Binge Drinking Before Pregnancy	34.8 (28.1, 42.1)	29.0 (22.8, 36.1)	25.7 (19.2, 33.5)	24.8 (18.8, 31.9)	19.6 (14.7, 25.7)	24.3 (18.6, 31.1)
% Drinking During Pregnancy	4.3 (1.9, 9.3)	4.8 (2.4, 9.5)	3.5 (1.4, 8.3)	2.5 (1.2, 5.4)	1.7 (0.6, 4.7)	4.7 (2.5, 8.7)
% Binge Drinking During Pregnancy	2.3 (0.8, 6.8)	1.5 (0.5, 4.9)	1.4 (0.4, 4.9)	0.7 (0.2, 2.0)	0.3 (0.1, 1.8)	1.6 (0.5, 5.2)
Age 25–34 years						
% Drinking Before Pregnancy	60.3 (55.2, 65.2)	65.7 (60.8, 70.2)	62.1 (56.9, 67.1)	66.3 (61.7, 70.6)	63.3 (58.6, 67.7)	59.0 (54.1, 63.8)
% Binge Drinking Before Pregnancy	25.8 (21.7, 30.5)	27.1 (23.0, 31.7)	21.1 (17.0, 25.7)	18.9 (15.5, 22.8)	16.4 (13.3, 20.0)	19.1 (15.7, 23.1)
% Drinking During Pregnancy	9.2 (6.6, 12.6)	6.9 (4.8, 9.9)	6.9 (4.7, 10.0)	9.6 (7.1, 12.9)	8.3 (6.0, 11.5)	7.4 (5.1, 10.6)
% Binge Drinking During Pregnancy	1.0 (0.4, 2.4)	0.7 (0.2, 2.1)	0.3 (0.1, 1.2)	0.1 (0.0, 0.7)	0.7 (0.3, 2.0)	0.5 (0.1, 2.0)
Age 35 + years						
% Drinking Before Pregnancy	56.1 (44.5, 67.1)	60.8 (49.4, 71.1)	60.3 (49.6, 70.2)	59.2 (49.7, 68.1)	57.7 (46.9, 67.7)	62.2 (52.4, 71.2)
% Binge Drinking Before Pregnancy	14.9 (8.2, 25.6)	14.3 (8.2, 23.7)	18.7 (11.7, 28.3)	13.0 (8.1, 20.3)	10.1 (5.5, 17.8)	10.6 (5.9, 18.6)
% Drinking During Pregnancy	8.5 (3.9, 17.5)	13.1 (6.8, 23.5)	12.6 (6.9, 21.8)	10.5 (5.4, 19.3)	9.6 (4.8, 18.3)	10.8 (5.9, 19.1)
% Binge Drinking During Pregnancy	0.4 (0.1, 1.6)	2.2 (0.4, 10.6)	1.7 (0.3, 8.6)	0.6 (0.1, 2.9)	0.0	0.0

Problem Statement: Illicit Drug Use

Illicit drug use, like alcohol use, is a major contributing factor for both intentional and unintentional injury, leading to death and permanent disability. While marijuana use was the most commonly reported drug of abuse, other drugs used include inhalants, hallucinogens, opioids, and misused prescription drugs. Although marijuana was legalized for adult use in Alaska in 2015, information spans years of illicit and licit use.

Youth Risk Behavior Survey (YRBS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/yrbsst23/YRBSSelection.html and Alaska Youth Risk Behavior Survey Results Summary Tables – 2011 available at: http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs11.aspx

Definitions of illicit drug use:

- **Illicit drugs** include cocaine (including crack), marijuana or hashish, heroin, methamphetamines, inhalants, hallucinogens, ecstasy or prescription-type psychotherapeutics used non-medically, which include stimulants, sedatives, tranquilizers, and pain relievers.
- **Current use** was defined as any reported use one or more times in the 30 days preceding the survey.
- **Ever used (lifetime use)** was defined as any reported use preceding the survey.

Data Analysis

In 2015, the prevalence of any lifetime use and current use was higher among male high school students than female high school students for all categories of illicit drugs. The prevalence of inhalant abuse was higher than cocaine, heroin, methamphetamine, and ecstasy (Tables 1.8). Current marijuana use among all Alaskan adolescents was 19% in 2015 compared to 22% for the national average. However, early initiation (before age 13) of marijuana use was higher among all Alaska adolescents (10%) than the national average (8%) in 2015. During 2011–2015, students in grades 9, 10, and 11 reporting current marijuana use decreased, while students in grade 12 reporting current marijuana use increased 28% (Table 1.9; Chart 1.11).

In 2011, YRBS began monitoring prescription drugs (OxyContin, Percocet, Vicodin, Codeine, Adderall, Ritalin, Xanax). In 2015, 13% of female adolescents and 16% of male adolescents reported using prescription drugs without a doctor's prescription (Table 1.8). Students in grade 12 exhibited the highest prevalence of using prescription drugs without a doctor's prescription (19%) followed by students in grade 10 (18%; Table 1.9).

Table 1.8. Trends in Illicit Drug Use Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015

	2011 (95 %CI)	2013 (95 %CI)	2015 (95% CI)	U.S. 2015 (95% CI)
Female				
% Ever Used Cocaine	5.0 (3.5, 7.1)	4.9 (3.3, 7.3)	2.5 (1.5, 4.3)	3.8 (3.1, 4.6)
% Ever Used Inhalants	8.4 (6.3, 11.0)	5.3 (3.5, 7.9)	5.4 (4.1, 7.0)	6.6 (5.5, 7.9)
% Current Marijuana Use	18.7 (15.1, 23.0)	17.7 (13.8, 22.4)	16.3 (13.5, 19.6)	20.1 (17.6, 22.9)
% Marijuana Before 13	8.7 (6.1, 12.3)	9.9 (7.0, 13.8)	6.1 (4.2, 9.0)	5.6 (4.6, 6.9)
% Ever Used Heroin	1.6 (0.9, 3.0)	1.2 (0.5, 2.7)	1.0 (0.4, 2.4)	1.2 (0.9, 1.8)
% Ever Used Methamphetamine	2.5 (1.4, 4.1)	1.8 (1.0, 3.4)	1.6 (0.8, 3.2)	2.3 (1.7, 3.0)
% Ever Used Ecstasy	4.1 (2.6, 6.2)	5.8 (3.7, 9.0)	2.1 (1.2, 3.4)	3.9 (3.1, 4.7)
% Ever Used Injection Drugs[1]	1.5 (0.8, 2.8)	1.3 (0.6, 2.7)	*	*
% Ever Taken Prescription Drugs Without a Doctor's Prescription	15.1 (12.2, 18.6)	12.5 (9.6, 16.2)	13.1 (10.4, 16.5)	15.6 (14.3, 17.1)
Male				
% Ever Used Cocaine	4.8 (3.3, 6.8)	6.0 (4.4, 8.1)	6.0 (4.1, 8.7)	6.3 (5.1, 7.9)
% Ever Used Inhalants	6.2 (4.4, 8.6)	7.2 (5.2, 9.9)	6.6 (4.8, 9.0)	7.2 (6.2, 8.4)
% Current Marijuana Use	23.5 (19.5, 28.0)	21.2 (18.1, 24.7)	21.4 (18.1, 25.1)	23.2 (20.4, 26.3)
% Marijuana Before 13	11.9 (8.3, 16.7)	10.5 (8.3, 13.3)	13.2 (10.6, 16.3)	9.2 (7.7, 11.0)
% Ever Used Heroin	3.0 (2.0, 4.7)	2.8 (1.6, 4.8)	2.9 (1.9, 4.4)	2.7 (1.9, 3.8)
% Ever Used Methamphetamine	3.6 (2.4, 5.6)	2.8 (1.7, 4.7)	3.1 (2.0, 4.7)	3.6 (2.6, 4.9)
% Ever Used Ecstasy	7.2 (5.5, 9.5)	6.3 (4.5, 8.8)	5.5 (3.9, 7.7)	6.0 (4.9, 7.3)
% Ever Used Injection Drugs[1]	2.0 (1.1, 3.6)	2.6 (1.4, 4.7)	*	*
% Ever Taken Prescription Drugs Without a Doctor's Prescription	16.4 (13.2, 20.2)	14.0 (11.2, 17.3)	15.6 (12.8, 19.0)	17.8 (16.1, 19.6)

* Question was included in 2011 and 2013 YRBS but not future years

Note: % Ever Used Steroids was included in last Epi Profile update but was removed in this update because this question is no longer asked on the Alaska YRBS.

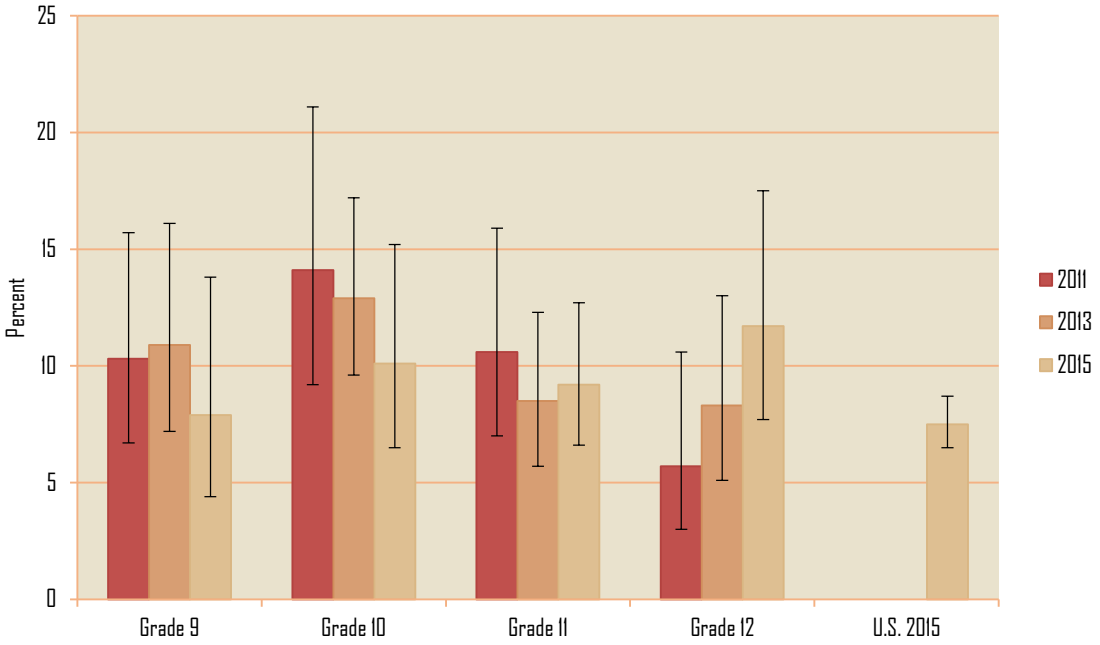
Table 1.9. Trends in Illicit Drug Use Among Traditional High School Students, by Grade, Alaska YRBS, 2011–2015

	2011 (95% CI)	2013 (95% CI)	2015 (95% CI)	U.S. 2015 (95% CI)
Grade 9				
% Ever Used Cocaine	4.5 (2.5, 7.8)	5.7 (3.8, 8.4)	2.3 (0.9, 5.6)	3.4 (2.6, 4.5)
% Ever Used Inhalants	6.4 (4.4, 9.3)	7.0 (4.1, 11.8)	5.4 (3.5, 8.3)	8.3 (6.9, 10.0)
% Current Marijuana Use	16.0 (10.9, 23.0)	15.0 (10.9, 20.1)	10.3 (7.0, 15.0)	15.2 (13.3, 17.3)
% Marijuana Before 13	10.3 (6.7, 15.7)	10.9 (7.2, 16.1)	7.9 (4.4, 13.8)	8.5 (7.1, 10.1)
% Ever Used Heroin	1.8 (0.9, 3.5)	2.8 (1.3, 5.7)	1.8 (0.8, 4.2)	1.8 (1.2, 2.6)
% Ever Used Methamphetamine	3.1 (1.7, 5.4)	2.4 (1.3, 4.5)	1.0 (0.4, 2.8)	2.0 (1.5, 2.7)
% Ever Used Ecstasy	3.6 (2.1, 6.2)	6.1 (3.8, 9.7)	1.1 (0.4, 3.2)	3.2 (2.5, 4.1)
% Ever Used Injection Drugs[1]	1.5 (0.7, 3.3)	1.7 (0.7, 3.8)	*	*
% Ever Taken Prescription Drugs Without a Doctor's Prescription	11.4 (8.4, 15.2)	9.9 (6.9, 14.0)	6.4 (4.3, 9.5)	13.0 (11.0, 15.3)
Grade 10				
% Ever Used Cocaine	4.2 (2.5, 7.1)	5.9 (3.5, 10.0)	4.4 (2.6, 7.5)	5.1 (3.8, 6.8)
% Ever Used Inhalants	7.2 (4.8, 10.8)	6.1 (3.6, 10.2)	6.0 (4.1, 8.7)	7.5 (6.0, 9.2)
% Current Marijuana Use	23.8 (18.8, 29.8)	22.6 (17.8, 28.2)	17.6 (13.7, 22.3)	20.0 (16.5, 24.1)
% Marijuana Before 13	14.1 (9.2, 21.1)	12.9 (9.6, 17.2)	10.1 (6.5, 15.2)	8.3 (6.5, 10.5)
% Ever Used Heroin	2.1 (1.0, 4.7)	2.9 (1.2, 6.7)	2.0 (1.0, 3.9)	2.4 (1.6, 3.6)
% Ever Used Methamphetamine	2.4 (1.1, 5.1)	3.6 (1.7, 7.4)	2.8 (1.5, 5.3)	3.3 (2.3, 4.9)
% Ever Used Ecstasy	5.5 (3.3, 8.8)	5.8 (3.4, 9.9)	4.4 (2.6, 7.2)	4.9 (3.7, 6.4)
% Ever Used Injection Drugs[1]	1.3 (0.5, 3.4)	2.9 (1.3, 6.0)	*	*
% Ever Taken Prescription Drugs Without a Doctor's Prescription	15.9 (12.0, 20.9)	12.6 (8.2, 18.9)	17.8 (14.7, 21.5)	15.3 (12.7, 18.4)
Grade 11				
% Ever Used Cocaine	6.1 (4.1, 9.0)	4.8 (2.8, 8.0)	4.8 (2.8, 8.0)	5.0 (3.9, 6.5)
% Ever Used Inhalants	8.8 (5.7, 13.2)	6.5 (4.1, 10.0)	7.5 (4.9, 11.2)	5.9 (4.6, 7.4)
% Current Marijuana Use	23.2 (17.8, 29.5)	17.7 (13.4, 23.1)	21.2 (17.1, 26.1)	24.8 (22.3, 27.5)
% Marijuana Before 13	10.6 (7.0, 15.9)	8.5 (5.7, 12.3)	9.2 (6.6, 12.7)	6.7 (5.3, 8.4)
% Ever Used Heroin	4.0 (2.2, 7.2)	1.3 (0.5, 3.6)	2.7 (1.2, 5.9)	1.9 (1.1, 3.0)
% Ever Used Methamphetamine	4.2 (2.2, 7.8)	1.5 (0.6, 3.9)	3.4 (1.7, 6.7)	2.8 (1.9, 4.0)
% Ever Used Ecstasy	7.3 (5.0, 10.4)	6.5 (4.1, 10.2)	5.1 (3.1, 8.4)	5.7 (4.6, 7.1)
% Ever Used Injection Drugs[1]	3.1 (1.7, 5.5)	1.7 (0.7, 4.1)	*	*
% Ever Taken Prescription Drugs Without a Doctor's Prescription	19.2 (14.7, 24.5)	14.5 (10.9, 19.0)	16.2 (12.0, 21.5)	18.9 (17.4, 20.6)

Grade 12				
% Ever Used Cocaine	4.2 (2.3, 7.9)	6.2 (3.7, 10.4)	6.3 (3.4, 11.2)	7.2 (5.6, 9.1)
% Ever Used Inhalants	6.5 (3.5, 11.8)	6.2 (4.0, 9.4)	5.2 (3.2, 8.6)	6.0 (4.9, 7.5)
% Current Marijuana Use	22.2 (17.2, 28.2)	22.4 (17.3, 28.6)	28.4 (23.3, 34.1)	27.6 (23.8, 31.6)
% Marijuana Before 13	5.7 (3.0, 10.6)	8.3 (5.1, 13.0)	11.7 (7.7, 17.5)	6.1 (4.9, 7.5)
% Ever Used Heroin	1.5 (0.6, 4.1)	1.6 (0.6, 4.1)	1.0 (0.3, 3.1)	1.9 (1.3, 2.9)
% Ever Used Methamphetamine	2.8 (1.1, 6.8)	2.4 (1.2, 4.7)	2.4 (1.1, 5.4)	3.8 (2.7, 5.3)
% Ever Used Ecstasy	7.0 (4.0, 11.9)	6.6 (3.7, 11.6)	5.3 (3.3, 8.4)	6.1 (4.8, 7.7)
% Ever Used Injection Drugs[1]	1.1 (0.3, 3.8)	1.9 (0.8, 4.7)	*	*
% Ever Taken Prescription Drugs Without a Doctor's Prescription	16.9 (11.8, 23.5)	17.6 (13.8, 22.2)	18.6 (13.9, 24.5)	20.3 (18.1, 22.7)

* Question was included in 2011 and 2013 YRBS but not future years
Note: % Ever Used Steroids was included in last Epi Profile update but was removed in this update because this question is no longer asked on the Alaska YRBS.

Chart 1.11. Trends in Traditional High School Students Reporting Marijuana Use Before Age 13, by Grade, Alaska YRBS, 2011–2015



As stated previously, alternative schools serving at-risk students were routinely excluded from traditional statewide YRBS surveys. In 2009, high school (HS) surveys in Alaska's alternative schools were conducted for the first time. In 2015, high school students from alternative schools reported significantly higher rates for all illicit drug use indicators when compared to their traditional school counterparts (Charts 1.12–1.19). Illicit drugs included marijuana, heroin, methamphetamine, ecstasy, cocaine, and prescription drugs taken without a doctor's prescription.

Note: the following charts use YRBS: Youth Risk Behavior Survey – Statewide (Traditional) and Statewide (Alternative). (See http://ibis.dhss.alaska.gov/query/Introduction.html)

Chart 1.12. Percent of Youth Reporting Ever Using Marijuana, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

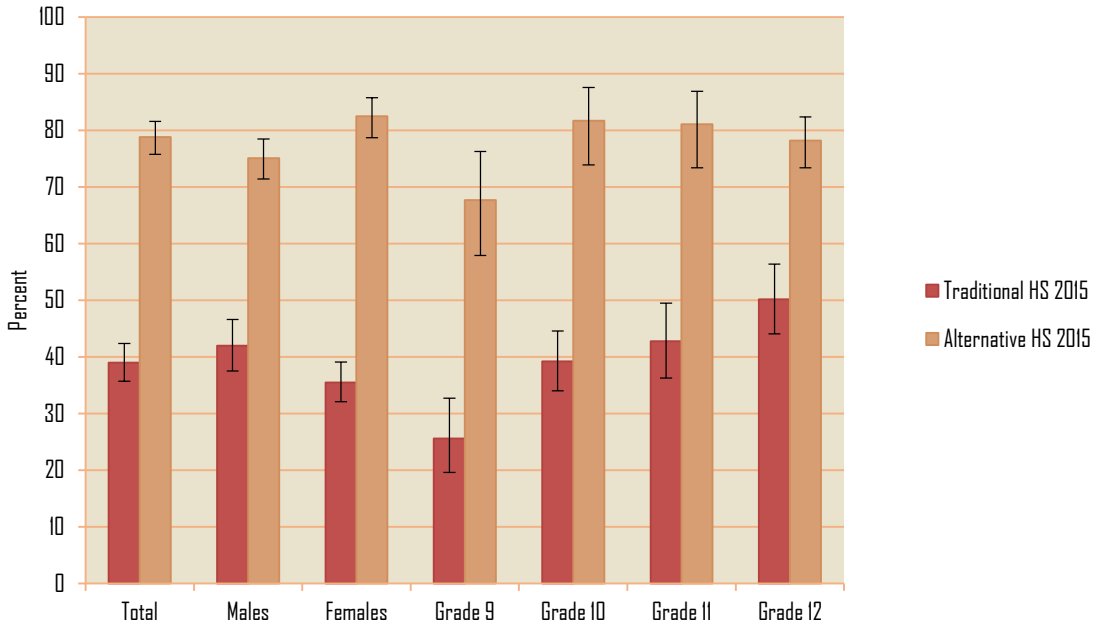


Chart 1.13. Percent of Youth Reporting Marijuana Use Before Age 13, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

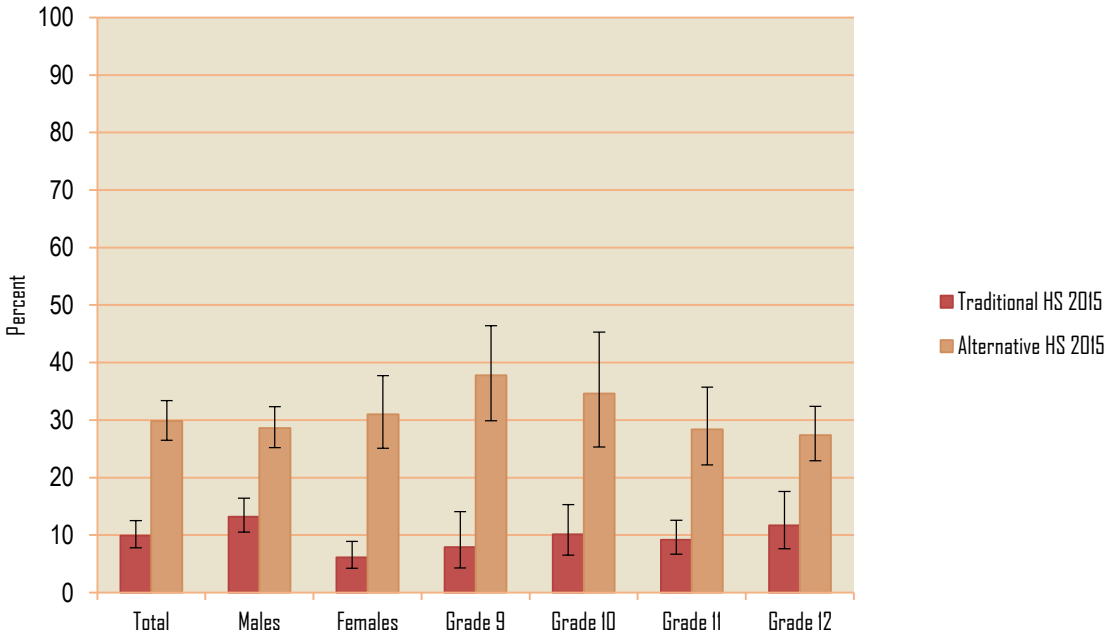


Chart 1.14. Percent of Youth Reporting Current Marijuana Use, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

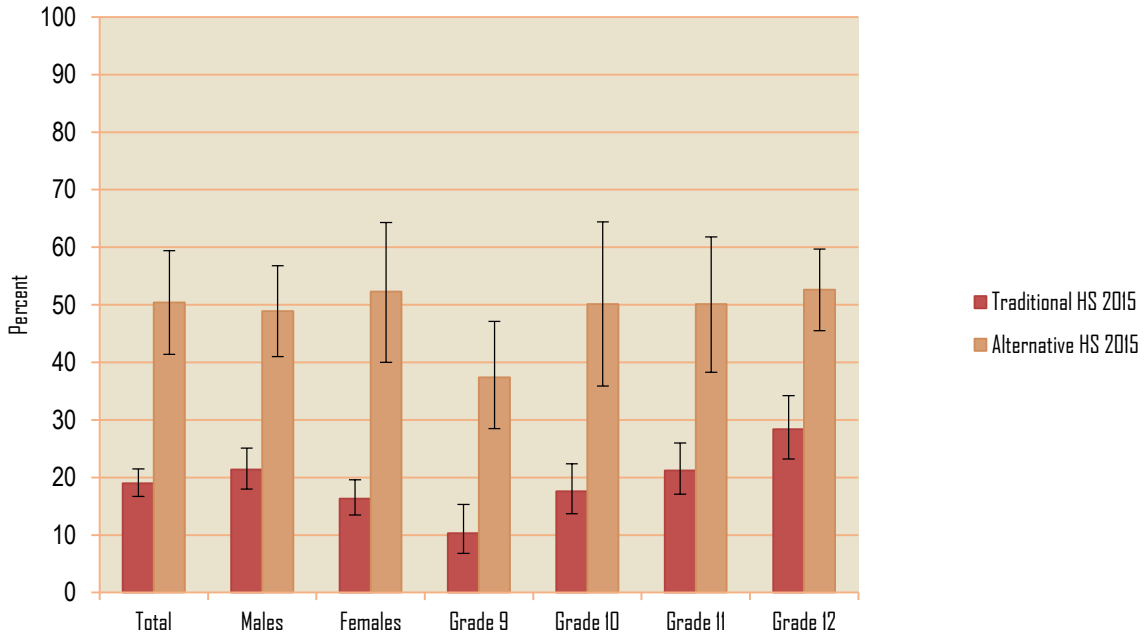


Chart 1.15. Percent of Youth Reporting Ever Using Heroin, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

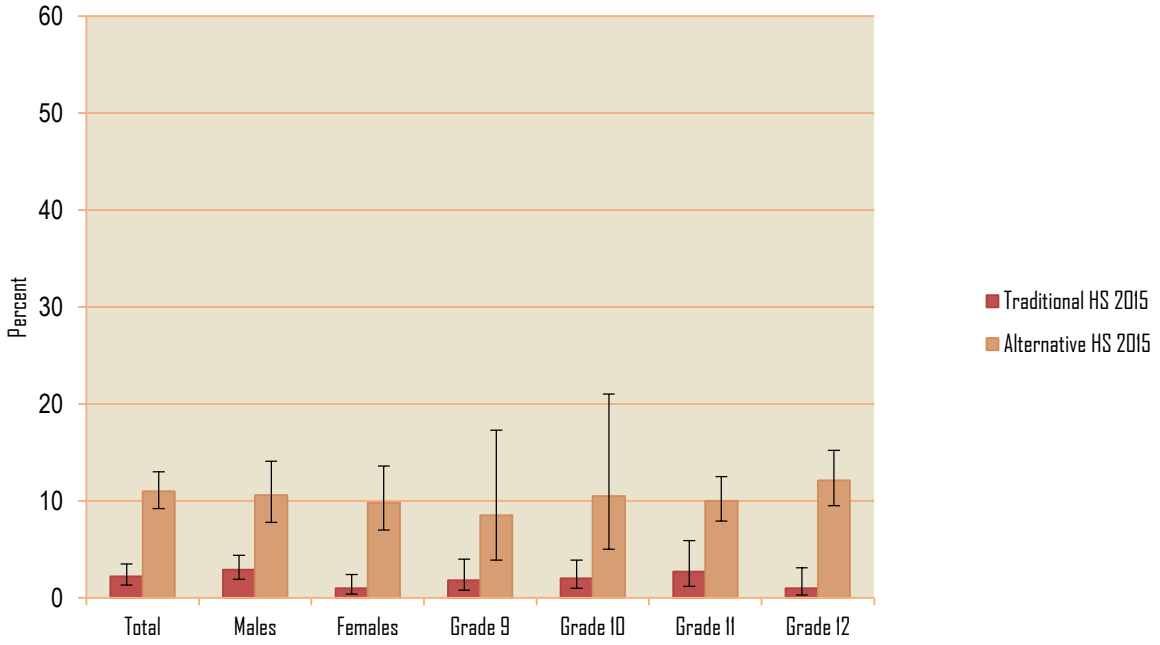


Chart 1.16. Percent of Youth Reporting Ever Using Methamphetamine, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

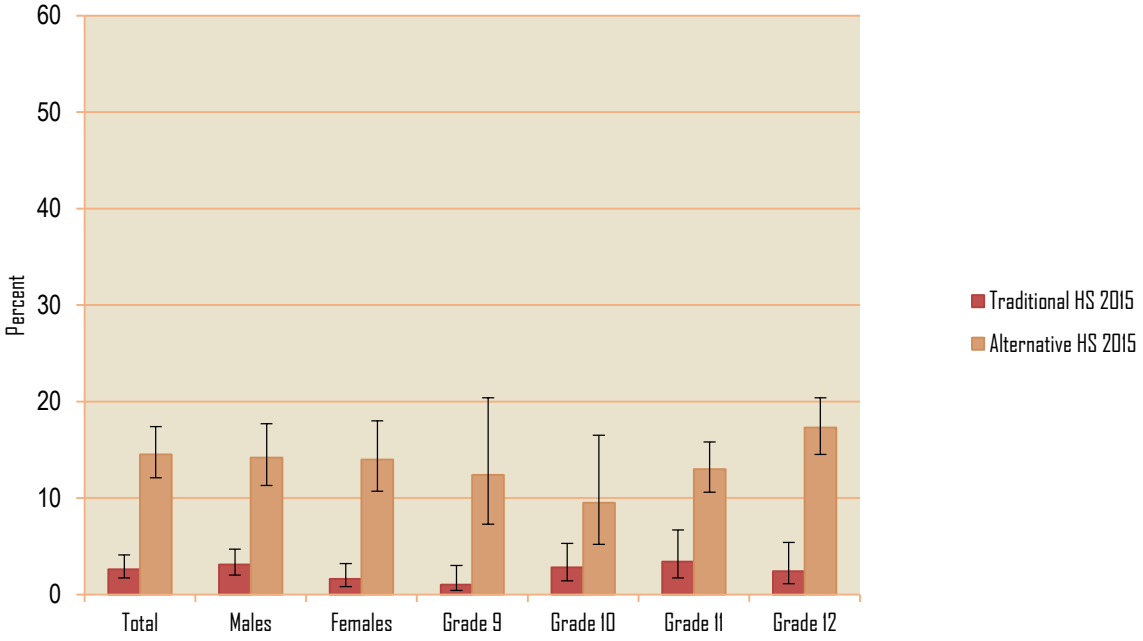


Chart 1.17. Percent of Youth Reporting Ever Using Ecstasy, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

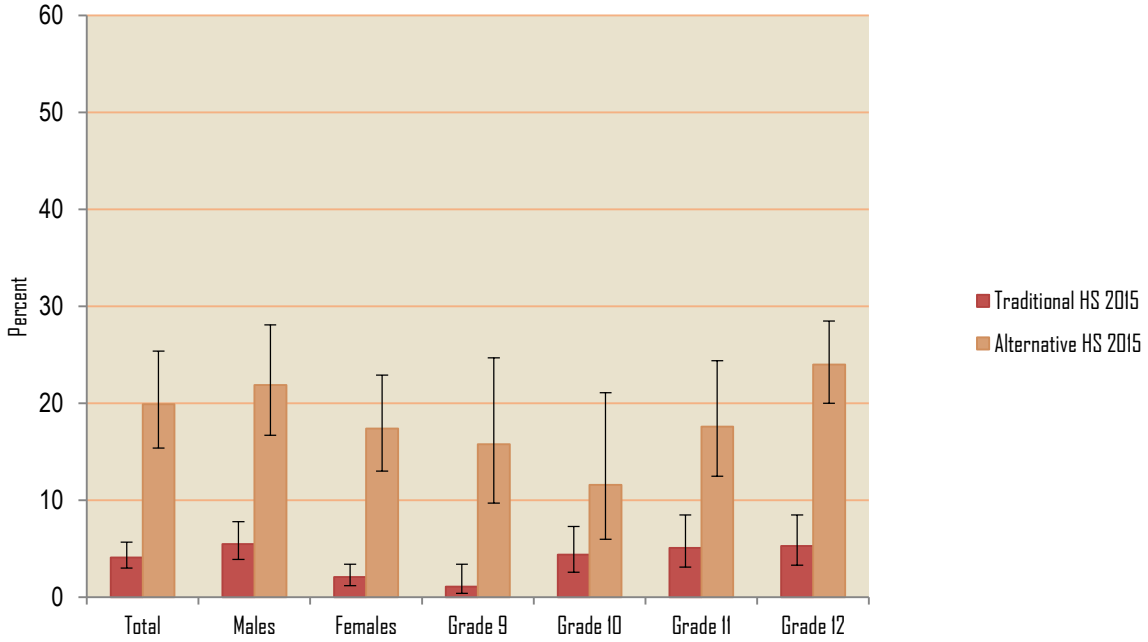


Chart 1.18. Percent of Youth Reporting Ever Using Cocaine, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

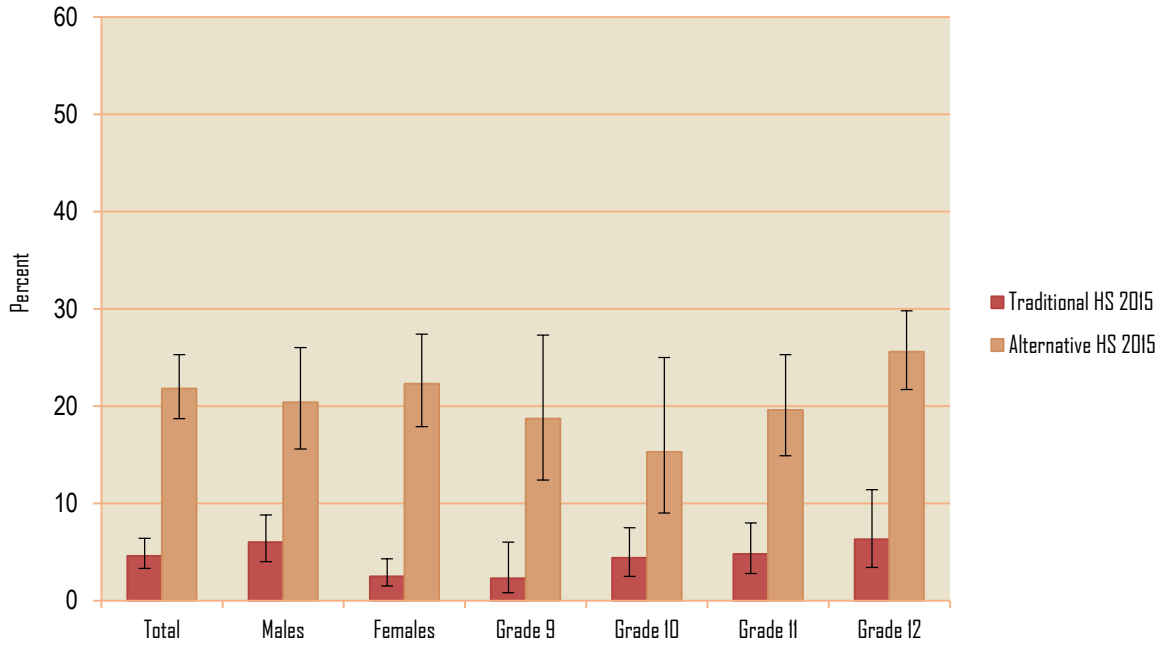
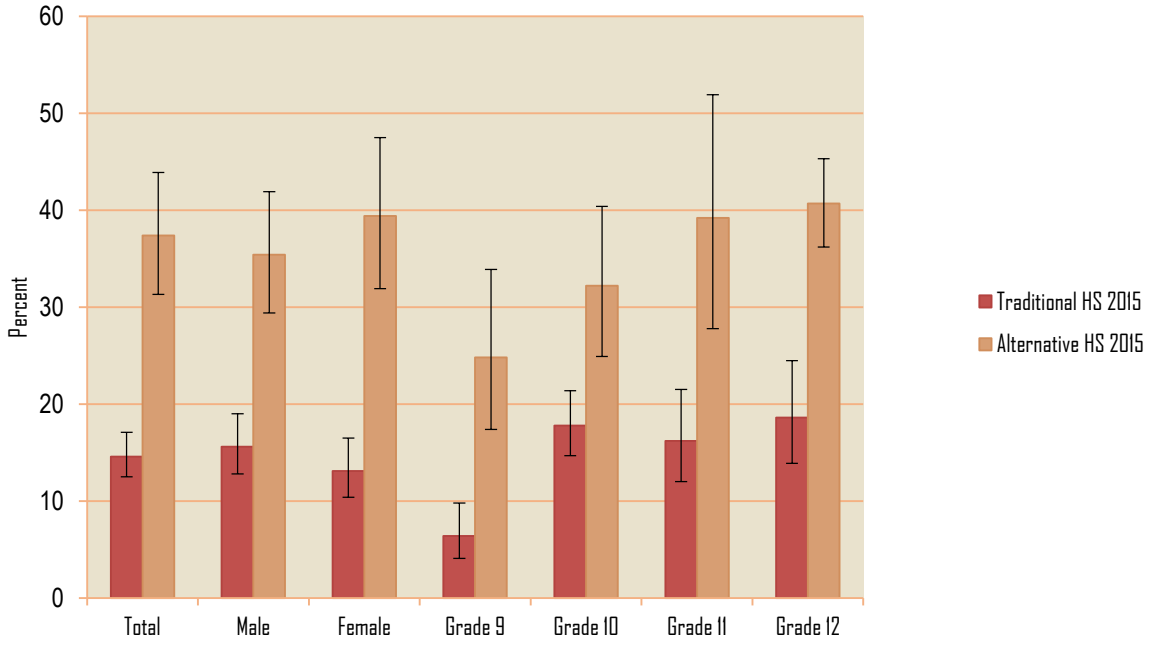


Chart 1.19 Percent of Youth Reporting Having Taken a Prescription Drug (such as OxyContin, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) Without a Doctor's Prescription One or More Times During Their Life, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015



National Survey on Drug Use and Health (NSDUH)

Substance Abuse and Mental Health Services Administration, SMAHSA Data and Dissemination available at: https://www.samhsa.gov/data/

Definitions of illicit drug use:

- **Other Illicit Drugs** include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.
- **Current use** was defined as any reported use within the past 30 days.
- **Drug Dependence/Abuse** was listed in 2015-2016 NSDUH tables as 'Illicit Drug Use Disorder', where Illicit Drug Use Disorder was defined as meeting criteria for illicit drug dependence or abuse. **Dependence or abuse** was based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).
- **Needing But Not Receiving Treatment** referred to respondents classified as needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a specialty facility
- (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers).

Overall, the 2015–2016 NSDUH results on drug use for all respondents in Alaska were generally higher than the national averages. Additionally, Alaskans reported higher drug use and dependence during 2015–2016 compared to 2013–2014 (although this was not statistically significant). Reported current marijuana use and current other illicit drug use were higher among respondents aged 18–25 years (27% and 8%, respectively; Table 1.10; Chart 1.20). During 2015–2016, respondents aged 18–25 years also had a higher prevalence of reported misuse of prescription pain relievers in the past year (Chart 1.21).

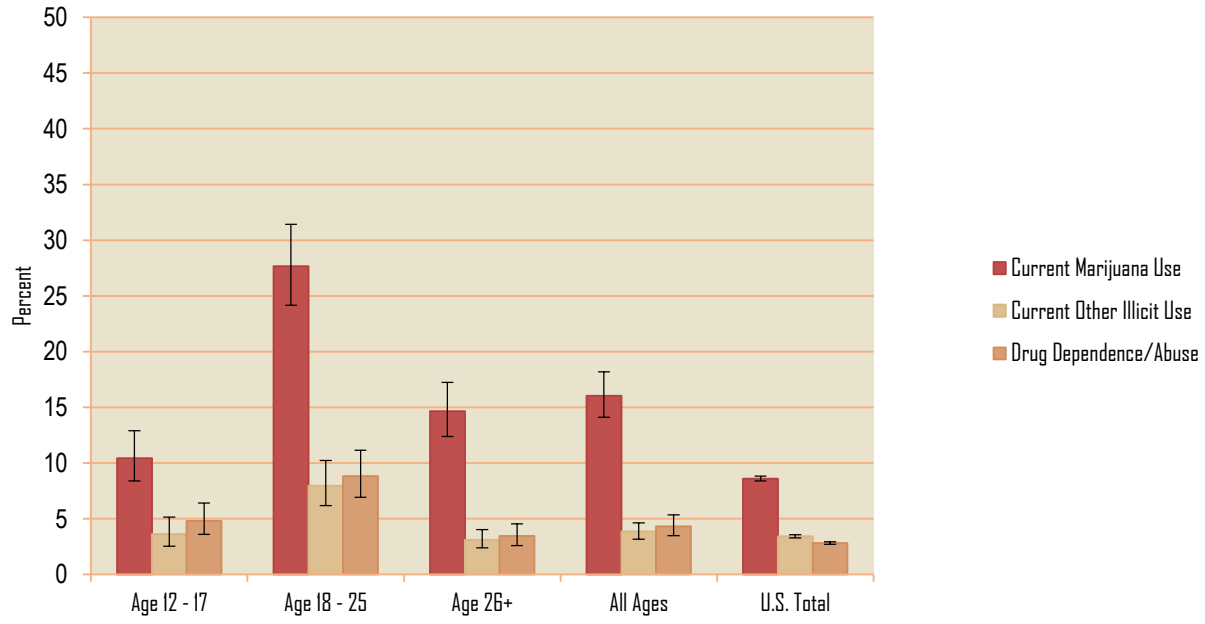
Table 1.10. Trends in Reported Illicit Drug Use, by Age Group, Alaska NSDUH, 2013–2016

	2013–2014 (95% CI)	**2014–2015** (95% CI)	**2015–2016** (95% CI)	**U. S. 2015–2016** (95% CI)
Age 12–17				
% Current Marijuana Use	9.2 (7.4, 11.3)	10.6 (8.5, 13.2)	10.4 (8.4, 12.9)	6.7 (6.4, 7.1)
% Current Other Illicit Use	2.9 (2.1, 4.1)	*	3.6 (2.5, 5.1)	2.7 (2.5, 2.9)
% Drug Dependence/Abuse[1]	3.4 (2.5, 4.7)	*	4.0 (3.6, 6.4)	3.3 (3.1, 3.5)
% Needing But Not Receiving Treatment for Illicit Drug Use	3.0 (2.2, 4.1)	*	4.4 (3.3,5.9)	3.1 (2.9, 3.4)
Age 18–25				
% Current Marijuana Use	21.3 (18.2, 24.7)	25.0 (21.4, 29.0)	27.6 (24.2, 31.4)	20.3 (19.7, 20.9)
% Current Other Illicit Use	7.4 (5.7, 9.6)	*	8.0 (6.2, 10.2)	7.3 (6.9, 7.7)
% Drug Dependence/Abuse[1]	8.7 (6.9, 11.0)	*	8.8 (6.9, 11.1)	7.1 (6.8, 7.5)
% Needing But Not Receiving Treatment for Illicit Drug Use	8.1 (6.3, 10.2)	*	8.3 (6.4, 10.7)	6.6 (6.3, 7.0)

Age 26 and over				
% Current Marijuana Use	10.4 (8.5, 12.8)	12.8 (10.8, 15.1)	14.6 (12.4, 17.2)	6.9 (6.6, 7.1)
% Current Other Illicit Use	2.8 (2.0, 3.9)	*	3.1 (2.4, 4.0)	2.9 (2.7, 3.0)
% Drug Dependence/Abuse[1]	2.1 (1.5, 3.0)	*	3.4 (2.6, 4.5)	2.0 (1.9, 2.2)
% Needing But Not Receiving Treatment for Illicit Drug Use	1.7 (1.2, 2.5)	*	2.4 (1.8, 3.3)	1.8 (1.7, 1.9)
All Ages				
% Current Marijuana Use	11.8 (10.1, 13.8)	14.4 (12.6, 16.3)	16.0 (14.1, 18.2)	8.6 (8.4, 8.8)
% Current Other Illicit Use	3.5 (2.7, 4.4)	*	3.8 (3.2, 4.6)	3.4 (3.3, 3.6)
% Drug Dependence/Abuse[1]	3.2 (2.5, 4.0)	*	4.3 (3.5, 5.3)	2.8 (2.7, 2.9)
% Needing But Not Receiving Treatment for Illicit Drug Use	2.8 (2.2, 3.5)	*	3.4 (2.8, 4.2)	2.5 (2.4, 2.6)

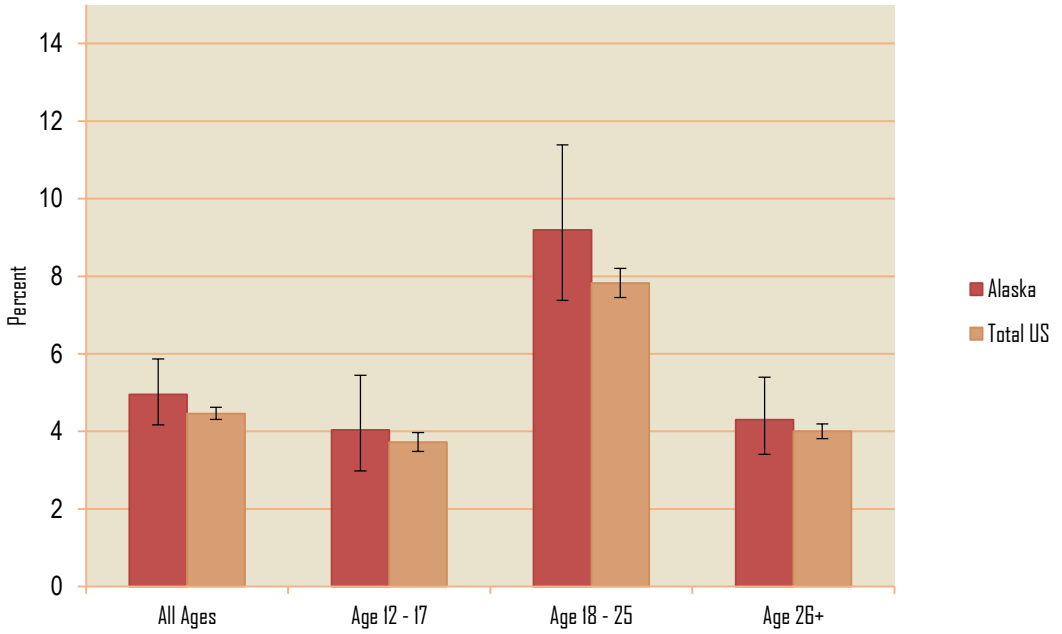
* Data are unavailable as this question was not asked on the 2014–2015 NSDUH
Note: Alaska legalized recreational use of marijuana in 2015 for adults 21 years or older.

Chart 1.20. Reported Illicit Drug Use, Dependency or Abuse, by Age Group, Alaska NSDUH, 2015–2016



Note: Alaska legalized recreational use of marijuana in 2015 for adults 21 years or older.

Chart 1.21. Misuse of Prescription Pain Relievers in the Past Year Among Persons Aged 12 Years or Older, by Age Group, Alaska NSDUH, 2015–2016



Note: This chart was changed from 2-year comparison to one year comparison because this survey question was not asked on the 2014-2015 NSDUH

Pregnancy Risk Assessment Monitoring System (PRAMS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/prams23/PRAMSSelection.html

The Pregnancy Risk Assessment Monitoring System (PRAMS) was developed by the CDC as part of its initiative to reduce infant mortality and low birth weight. The PRAMS survey collects state-specific, population-based data on maternal attitudes and experiences before, during, and after pregnancy. PRAMS includes women of all ages who delivered a live born infant in the year indicated. Note: Alaska legalized recreational use of marijuana in 2015 for adults 21 years or older.

Definitions of Marijuana use:

- **Prenatal marijuana** use was defined as whether the mother reported smoking marijuana or hash during their most recent pregnancy. In 2016, the definition of prenatal marijuana use changed to whether the mother reported using marijuana or hash in any form during their most recent pregnancy.

Survey findings during 2010–2015 indicated that the overall prevalence of prenatal marijuana use among Alaskan women remained about the same. However, the prevalence of prenatal marijuana use increased 32% for Alaska Natives during 2014–2015.
Note: Alaska legalized recreational use of marijuana in 2015 for adults 21 years or older.

Table 1.11. Trends in Prenatal Marijuana Use for Alaska Native and White Women, Alaska PRAMS, 2010–2015

	2010 (95% CI)	**2011** (95% CI)	**2012** (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)
% Overall	6.3 (4.6, 8.4)	7.8 (6.0, 10.0)	4.9 (3.5, 6.8)	6.3 (4.8, 8.2)	5.4 (4.0, 7.1)	6.4 (5.0, 8.2)
% Alaska Native	9.6 (7.0, 13.1)	12.3 (9.2, 16.3)	8.9 (6.0, 13.0)	9.3 (7.0, 12.4)	10.4 (7.6, 14.0)	13.7 (10.6, 17.5)
% White	5.6 (3.5, 8.9)	6.9 (4.7, 10.2)	3.5 (2.0, 6.2)	6.6 (4.4, 9.6)	3.2 (1.9, 5.6)	5.1 (3.2, 8.0)

Note: This table was located at the end of the Tobacco Use section in past updates but has been moved to the Illicit Drug section in this update as it pertains to marijuana.

Problem Statement: Tobacco Use

Nationally, cigarette smoking is responsible for more than 480,000 deaths annually. This is approximately one in five deaths each year.[1] Each year, more Alaskans die as a result of direct tobacco use and exposure to second-hand smoke than suicide, motor vehicle crashes, chronic liver disease and cirrhosis, homicide and HIV/AIDS combined. During 2012–2016, there were an average of 697 smoking-related deaths per year in Alaska. In 2014, tobacco use cost the state an estimated $575 million in direct medical expenditures and an additional $264 million in lost productivity due to smoking-related illness. The prevalence of smoking among Alaska Native adults is more than double the prevalence of smoking among as non-Native adults. Additionally, adults with low socioeconomic status were more likely to be smokers than adults with high socioeconomic status.[2]

Data Analysis

Data on tobacco sales and consumption were provided through the Tobacco Tax Program from the Alaska Department of Revenue. Data on adult and youth smoking habits were largely provided by the BRFSS and the YRBS, respectively. Some rates were not available; limiting factors included low number of observations, insufficient sample size, or confidence interval range that was too broad to obtain reliable results. National averages were available for the most recent year comparison. In accordance with tobacco regulations, states were required to provide detailed information on progress made in enforcing youth tobacco access laws and to ensure compliance with the federal Synar Amendment prohibiting the sales and distribution of tobacco products to minors.

1. CDC, Smoking and Tobacco Use Fact Sheets. Accessed October 30, 2018 at: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm.

2. Alaska Department of Health and Social Services, Section of Chronic Disease Prevention and Health Promotion. Alaska Tobacco Facts, Update 2018. Accessed October 30, 2018 at: http://dhss.alaska.gov/dph/Chronic/Documents/Tobacco/PDF/2018_AKTobaccoFacts.pdf.

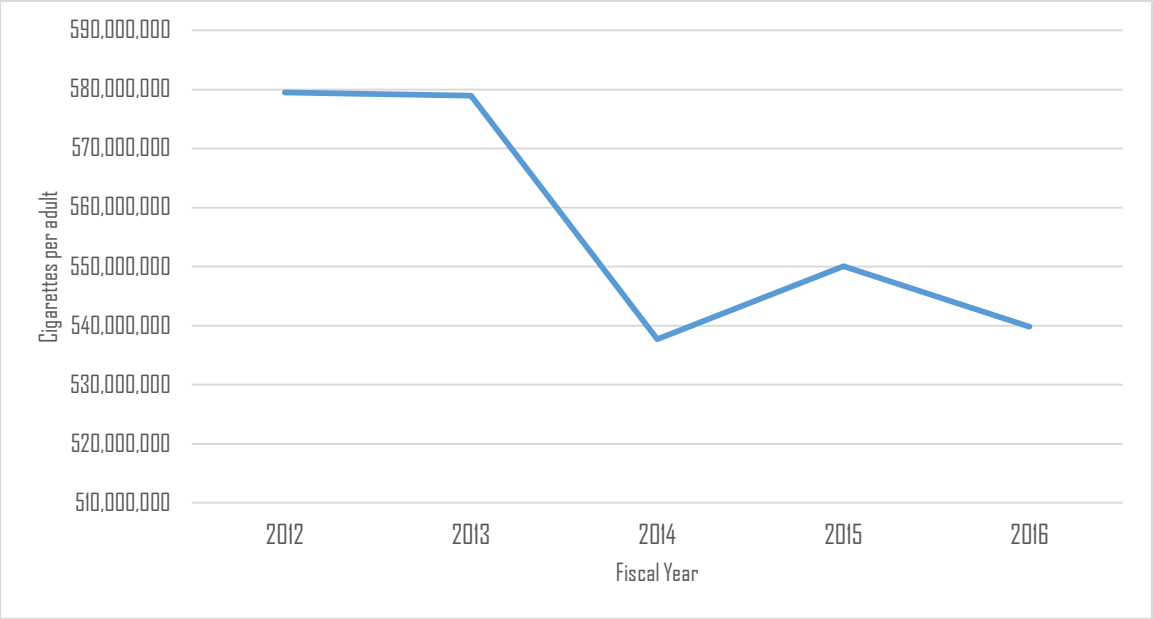
Tobacco and Smoking Surveillance

http://dhss.alaska.gov/dph/Chronic/Pages/Tobacco/default.aspx

Alaska Tobacco Tax Reports, 2012–2016 Update. Available at http://tax.alaska.gov/programs/programs/reports/index.aspx?60170 and Annual SYNAR Reports, Tobacco Sales to Youth available at: https://store.samhsa.gov/product/2013-Annual-Synar-Reports-Tobacco-Sales-to-Youth/SYNAR-14

Trends in tobacco use were measured from the baseline year of 1996, prior to the tobacco tax increase in 1997 and Alaska joining the national Tobacco Master Settlement Agreement in 1998. Cigarettes sales have continued to diminish since these two noteworthy events in tobacco prevention and control; the number of cigarettes sold per adult in Alaska decreased 9% (from 580 million cigarettes in 2012 to 540 million cigarettes in 2016; Chart 1.22).

Chart 1.22. Annual Per Adult Sales of Cigarettes, By Fiscal Year, Alaska, 1996–2014



Note: This figure was added in place of Table 1.10 "Trends in Annual Cigarette Sales per Capita, Alaska", because it provides more comprehensive data on annual cigarette sales than were presented in Table 1.10 in previous updates.

The Alcohol, Drug Abuse, and Mental Health Administration Reorganization Act, which includes the Synar Amendment (section 1926), requires states to enact and enforce laws prohibiting tobacco product distribution and sales to individuals under 18 years of age. To determine compliance with this legislation, each state is required to conduct annual, unannounced inspections of retail tobacco outlets and report the findings the U.S. Department of Health and Human Services. These reports provide both Congress and the states with information on the progress of state compliance and assist with identifying state-based needs for program enhancement, particularly with enforcing retailer compliance. In 2013, Alaska achieved "20% or below" compliance established by Synar. In 2013, the retailer violation rate in Alaska was 7.3%, which was lower than the national weighted average of 9.6%.

Youth Risk Behavior Survey (YRBS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/yrbsst23/YRBSSelection.html

Definitions of tobacco use:

- **Current cigarette/cigar use** was defined as reporting smoking on at least one day in the 30 days preceding the survey.
- **Daily cigarette use** was defined as reported smoking at least one cigarette every day in the 30 days preceding the survey.
- **Frequent cigarette use** was defined as reported smoking on 20 or more days in the 30 days preceding the survey.
- **Smokeless tobacco use** was defined as reported use of chewing tobacco, snuff, or dip on at least one day in the 30 days preceding the survey.
- **Iq'mik** is a substance made of tobacco and the ash of a fungus (Phellinus igniarius) that grows on birch trees. The practice is prevalent in several regions, particularly the Yukon-Kuskokwim Delta.

During 2011–2015, daily cigarette use decreased among Alaska traditional high school students, from 3.7% in 2011 to 2.6% in 2015. The same period saw a decline in the prevalence of adolescents reporting ever trying cigarettes and cigarette use before 13 years of age. In 2015, nearly one third of survey respondents reported ever trying cigarettes. Additionally, the percentage of adolescents reporting current smokeless tobacco use was higher than the percentage of adolescents reporting current cigarette use (13.4% and 11.1%, respectively; Table 1.12). During 2011–2015, the prevalence of current cigarette use was higher among male students and students enrolled in Grade 12 (Table 1.12; Chart 1.23). There were no significant differences across grade levels in the prevalence of students reporting cigarette use before the age of 13 (Chart 1.24).

Table 1.12. Trends in Cigarette Use Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015

	2011 (95% CI)	2013 (95% CI)	2015 (95% CI)	U.S. 2015 (95% CI)
Female				
% Ever Tried Cigarettes	42.4 (36.7, 48.3)	35.4 (29.9, 41.3)	28.5 (24.9, 32.4)	30.7 (26.3, 35.4)
% Cigarette Before 13	10.2 (7.6, 13.7)	9.1 (6.5, 12.8)	7.8 (5.8, 10.4)	5.0 (4.0, 6.3)
% Current Cigarette Use	14.6 (10.0, 20.7)	8.0 (5.4, 11.7)	8.4 (6.0, 11.7)	9.7 (8.1, 11.7)
% Daily Cigarette Use	3.0 (1.6, 5.5)	2.1 (0.9, 5.1)	1.4 (0.5, 3.8)	2.2 (1.6, 2.9)
% Frequent Cigarette Use	4.9 (3.0, 7.9)	3.7 (1.9, 6.8)	2.6 (1.2, 5.7)	3.3 (2.4, 4.4)
% Cigarette Use on School Property[1]	3.9 (2.2, 6.8)	2.3 (1.3, 4.3)		
% Current Cigar Use	6.1 (4.0, 9.1)	4.6 (3.2, 6.5)	3.7 (2.2, 5.9)	6.3 (5.1, 7.9)
% Current Smokeless Tobacco Use[2]		6.9 (3.6, 12.8)	9.8 (7.2, 13.2)	
% Smokeless Tobacco Use on School Property[2]		4.3 (1.8, 9.8)	7.7 (5.3, 11.1)	
Among Current Smokers, % Who Tried to Quit	*	*	*	52.8 (48.5, 57.0)
Male				
% Ever Tried Cigarettes	46.1 (41.1, 51.1)	35.9 (31.3, 40.8)	36.0 (32.2, 40.0)	33.8 (30.7, 37.1)
% Cigarette Before 13	11.7 (8.9, 15.2)	9.2 (6.7, 12.6)	9.7 (7.1, 13.2)	8.0 (6.6, 9.6)
% Current Cigarette Use	13.4 (10.7, 16.7)	12.3 (9.3, 16.1)	13.3 (10.6, 16.7)	11.8 (10.4, 13.4)
% Daily Cigarette Use	4.3 (2.2, 8.0)	2.3 (1.1, 4.6)	3.5 (2.1, 5.6)	2.4 (1.8, 3.2)
% Frequent Cigarette Use	5.4 (3.2, 8.8)	4.2 (2.6, 6.7)	4.6 (2.8, 7.3)	3.4 (2.6, 4.6)
% Cigarette Use on School Property[1]	3.8 (2.2, 6.3)	2.4 (1.3, 4.5)		
% Current Cigar Use	14.2 (11.2, 17.9)	9.2 (6.6, 12.7)	9.9 (7.6, 12.9)	14.0 (12.3, 15.8)
% Current Smokeless Tobacco Use[2]		13.2 (9.9, 17.4)	16.5 (12.8, 21.2)	
% Smokeless Tobacco Use on School Property[2]		8.4 (5.9, 11.7)	11.1 (8.0, 15.3)	
Among Current Smokers, % Who Tried to Quit	*	*	*	39.7 (34.6, 45.0)

1. Question was included in 2011 and 2013 YRBS but not future years
2. Iq'mik use was asked on the Alaska YRBS survey for the first time in 2013. Because this is an Alaska-added survey question, no U.S. data are available for comparison.
*Data were suppressed because 1) the sample size is ≤100 students, 2) the observed number of events could be used to calculate the number in a cell that has been suppressed, or 3) the relative standard error is greater than 50% or can't be determined.

Chart 1.23. Trends in Current Cigarette Use Among Traditional High School Students, by Grade, Alaska YRBS, 2011–2015

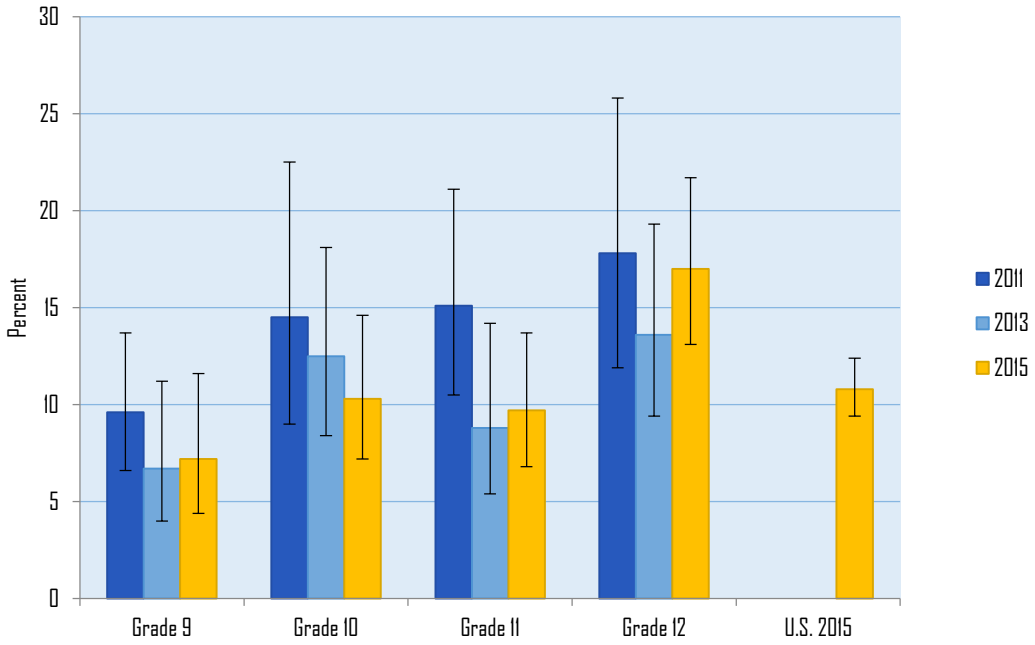
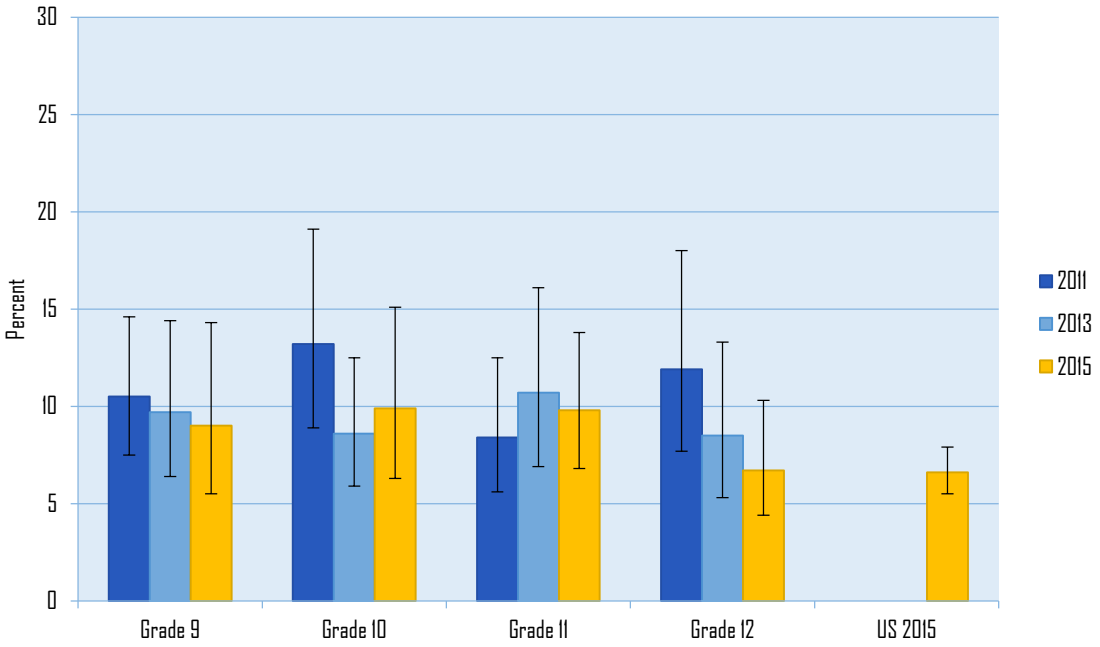


Chart 1.24. Trends in Traditional High School Students Reporting Cigarette Use Before Age 13, by Grade, Alaska YRBS, 2011–2015



As stated previously, alternative schools serving at-risk students have been routinely excluded from traditional statewide YRBS surveys. In 2009, surveys of high school students in Alaska's alternative schools were conducted for the first time. In 2015, students from alternative high schools reported significantly higher rates for all tobacco use indicators when compared to their traditional high school counterparts. Tobacco use indicators included smoking a whole cigarette for the first time before age 13, smoking at least 20 cigarettes in the preceding month, and using chewing tobacco, snuff, or dip at least once in the preceding month (Chart 1.25–1.27).

Chart 1.25. Percent of Students Who Smoked a Whole Cigarette for the First Time Before Age 13, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

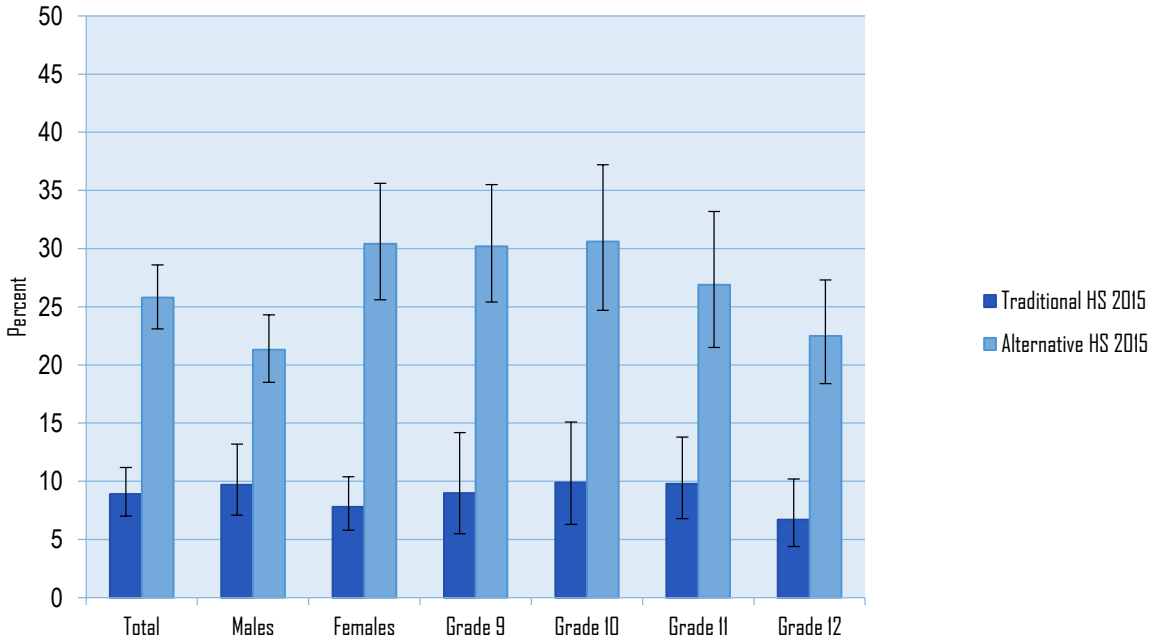


Chart 1.26. Percent of Students Who Smoked Cigarettes on 20 or More of the Past 30 Days, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

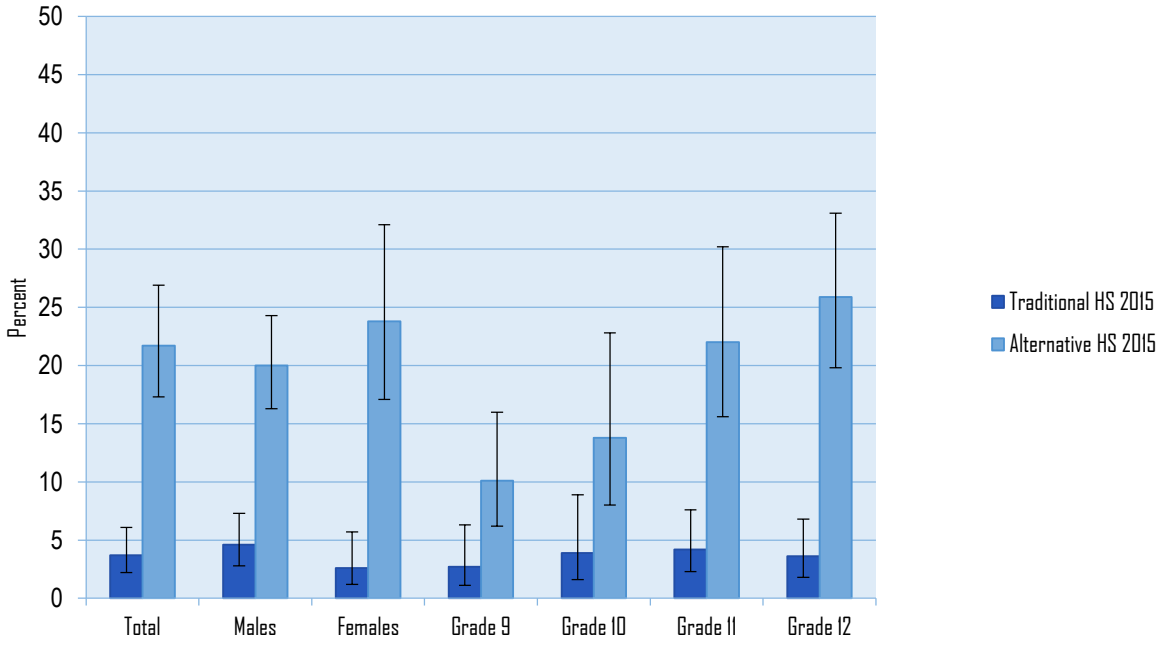
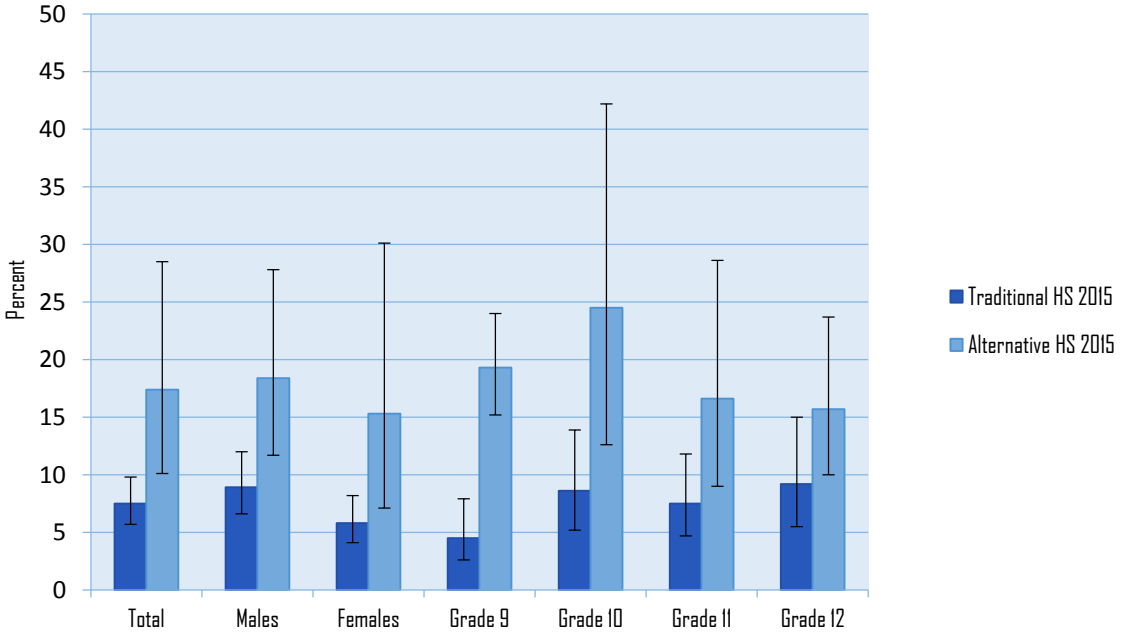


Chart 1.27. Percent of Students Who Used Chewing Tobacco, Snuff, or Dip on One or More of the Past 30 Days, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015



Behavioral Risk Factor Surveillance System (BRFSS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/brfss23/BRFSSSelection.html and AK-IBIS Health Indicator Report of Tobacco Use – Adults (18+) – Not Smoking Cigarettes (HA2020 Leading Health Indicator 3). Accessed 4/27/18. http://ibis.dhss.alaska.gov/indicator/view/CigSmokAdlt.HAP.html.

Definitions of cigarette use:

- **Current cigarette use** was defined as smoking at least 100 cigarettes in a lifetime and smoking either every day or some days.
- **Daily use** was defined as smoking cigarettes every day.

In 2016, 20% of adults in Alaska reported current cigarette use, a small decrease from the 2012 prevalence of 21% (this decrease was not statistically significant). Prevalence was higher among adults aged 25-34 years and males (25% and 22%, respectively; Table 1.13; Chart 1.28). The prevalence of current and daily cigarette use among Alaskan adults in 2016 were both higher than the national averages. Further, the prevalence of current and daily cigarette use among American Indians/Alaska Natives in Alaska was higher than all other racial groups (Chart 1.29; Table 1.14).

Table 1.13. Trends in Cigarette Use Among Adults, by Gender, Alaska BRFSS, 2012–2016

	2012 (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)	**2016** (95% CI)	**U.S. 2016** (95% CI)
Female						
% Current Cigarette Use	19.7 (17.5, 22.0)	19.6 (17.7, 21.7)	19.0 (17.1, 21.0)	17.5 (15.5, 19.6)	17.5 (15.2, 20.0)	14.2 (13.9, 14.4)
% Daily Cigarette Use	13.8 (12.0, 15.8)	14.5 (12.8, 16.4)	12.8 (11.3, 14.5)	12.2 (10.5, 14.1)	11.6 (9.8, 13.7)	9.9 (9.7, 10.2)
Male						
% Current Cigarette Use	22.2 (20.1, 24.4)	23.9 (21.8, 26.2)	21.4 (19.5, 23.5)	20.8 (18.7, 23.0)	22.1 (19.8, 24.6)	18.6 (18.2, 18.9)
% Daily Cigarette Use	15.3 (13.5, 17.3)	16.6 (14.7, 18.6)	14.5 (12.9, 16.3)	14.5 (12.8, 16.4)	15.6 (13.6, 17.8)	12.4 (12.1, 12.7)

Chart 1.28. Percentage of Adults Who Are Current Smokers, by Age Group, Alaska BRFSS, 2016

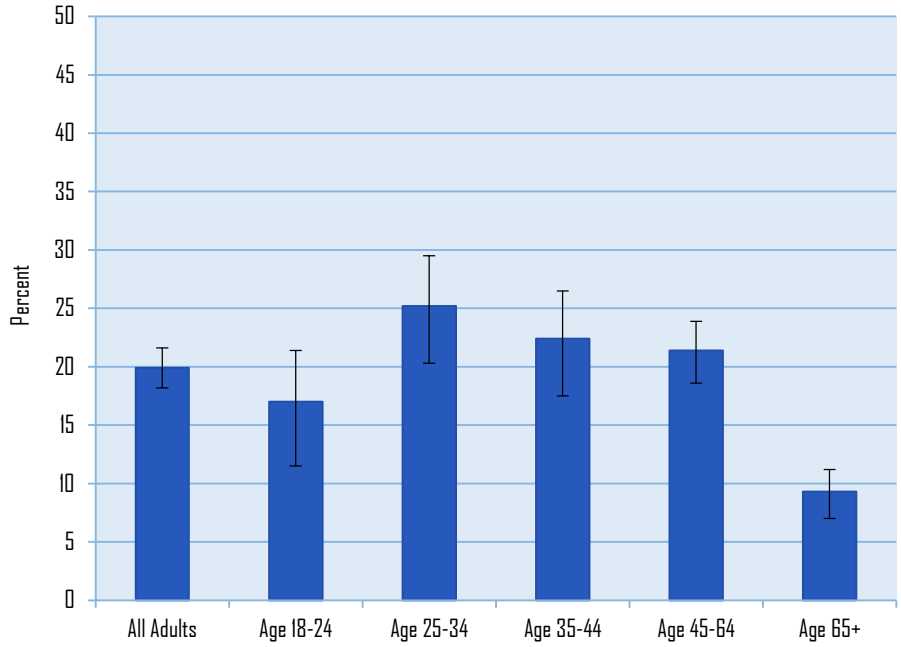


Chart 1.29. Trends in Current Cigarette Use Among Adults, by Race and Ethnicity, Alaska BRFSS, 2012–2016

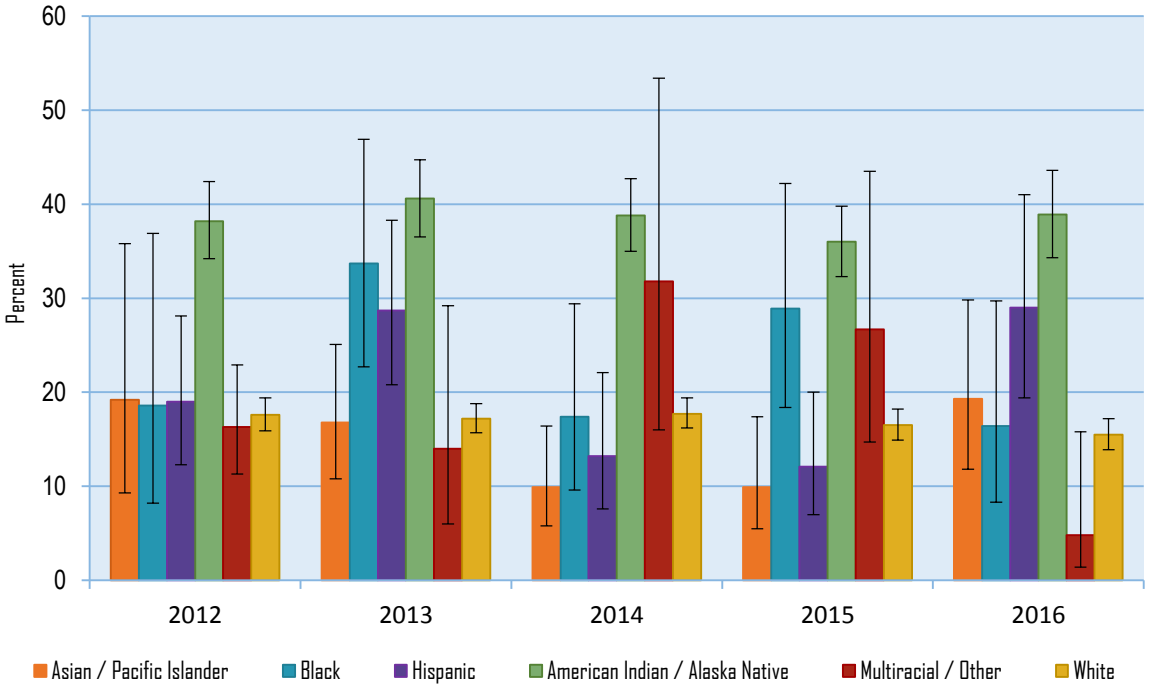


Table 1.14. Trends in Cigarette Use Among Adults, by Race and Ethnicity, Alaska BRFSS, 2012–2016

	2012 (95% CI)	2013 (95% CI)	2014 (95% CI)	2015 (95% CI)	2016 (95% CI)	U.S. 2016 (95% CI)
Asian / Pacific Islander						
% Current Cigarette Use	19.2 (9.3, 35.8)	16.8 (10.8, 25.1)	9.9 (5.8, 16.4)	9.9 (5.5, 17.4)	19.3 (11.8, 29.8)	6.9 (6.1, 7.7)
% Daily Cigarette Use	14.2 (5.9, 30.5)	10.4 (5.9, 17.5)	5.3 (2.5, 10.6)	4.0 (2.1, 7.4)	12.3 (6.5, 22.1)	3.8 (3.2, 4.4)
Black						
% Current Cigarette Use	18.6 (8.2, 36.9)	33.7 (22.7, 46.9)	17.4 (9.6, 29.4)	28.9 (18.4, 42.2)	16.4 (8.3, 29.7)	18.4 (17.6, 19.1)
% Daily Cigarette Use	16.5 (6.7, 35.3)	20.9 (11.8, 34.3)	4.6 (2.0, 10.0)	20.2 (11.4, 33.3)	9.5 (3.8, 22.0)	11.3 (10.8, 12.0)
Hispanic						
% Current Cigarette Use	19.0 (12.3, 28.1)	28.7 (20.8, 38.3)	13.2 (7.6, 22.1)	12.1 (7.0, 20.0)	29.0 (19.4, 41.0)	12.3 (11.7, 12.9)
% Daily Cigarette Use	11.0 (6.0, 19.3)	19.5 (12.9, 28.4)	8.0 (3.8, 16.1)	5.0 (2.2, 10.8)	18.6 (11.1, 29.6)	6.5 (6.1, 7.0)
American Indian / Alaska Native						
% Current Cigarette Use	38.2 (34.2, 42.4)	40.6 (36.5, 44.7)	38.8 (35.0, 42.7)	36.0 (32.3, 39.8)	38.9 (34.3, 43.6)	28.6 (26.5, 30.8)
% Daily Cigarette Use	25.6 (22.1, 29.4)	27.2 (23.7, 31.0)	27.3 (23.9, 31.0)	25.9 (22.6, 29.7)	27.3 (23.1, 31.9)	17.5 (15.9, 19.2)
Multiracial/ Other						
% Current Cigarette Use	16.3 (11.3, 22.9)	14.0 (6.0, 29.2)	31.8 (16.0, 53.4)	26.7 (14.7, 43.5)	4.8 (1.4, 15.8)	23.7 (22.1, 25.4)
% Daily Cigarette Use	10.9 (6.7, 17.4)	6.8 (2.0, 20.5)	20.8 (7.6, 45.5)	24.8 (13.3, 41.5)	1.4 (0.2, 9.3)	16.3 (14.9, 17.8)
White						
% Current Cigarette Use	17.6 (15.9, 19.4)	17.2 (15.7, 18.8)	17.7 (16.2, 19.4)	16.5 (14.9, 18.2)	15.5 (13.9, 17.2)	17.4 (17.1, 17.6)
% Daily Cigarette Use	12.6 (11.1, 14.2)	13.0 (11.7, 14.5)	12.4 (11.2, 13.8)	11.9 (10.5, 13.4)	10.9 (9.5, 12.4)	12.7 (12.5, 12.9)

National Survey on Drug Use and Health (NSDUH)

Substance Abuse and Mental Health Services Administration, SMAHSA Data and Dissemination available at: https://www.samhsa.gov/data/

Definitions of tobacco product and cigarette use:

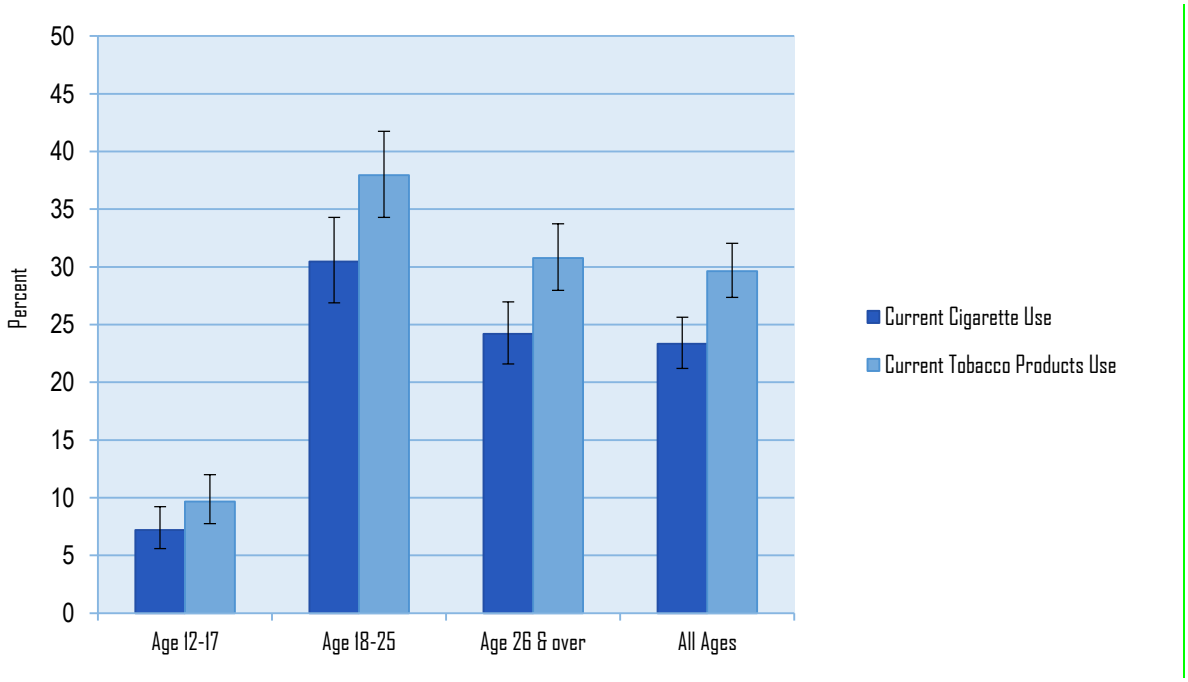
- **Tobacco products** include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.
- **Past month use** was defined as any reported use within the past 30 days.

According to the 2015–2016 NSDUH, 30% of Alaskan adults aged 18–25 years reported past month cigarette use, the highest percentage of any age group. During the same period, the prevalence of past month cigarette use and past month tobacco products use were higher than the national averages for all age groups.

Table 1.15. Trends in Reported Cigarette and Tobacco Products Use During the Past Month, by Age Group, Alaska NSDUH, 2013–2016

	2013–2014 (95% CI)	2014–2015 (95% CI)	2015–2016 (95% CI)	U.S. 2015–2016 (95% CI)
Ages 12–17				
% Past Month Cigarette Use	6.1 (4.8, 7.8)	6.0 (4.7, 7.8)	7.2 (5.6, 9.2)	3.8 (3.6, 4.1)
% Past Month Tobacco Products Use	10.7 (8.6, 13.3)	9.9 (7.8, 12.3)	9.7 (7.8, 12.0)	5.7 (5.4, 6.0)
Ages 18–25				
% Past Month Cigarette Use	34.0 (30.3, 38.0)	35.48 (31.3, 39.6)	30.5 (26.9, 34.3)	25.1 (24.4, 25.8)
% Past Month Tobacco Products Use	41.1 (37.3, 45.0)	42.6 (38.5, 46.8)	37.9 (34.3, 41.8)	31.5 (30.8, 32.2)
Ages 26 and over				
% Past Month Cigarette Use	21.9 (19.2, 24.9)	25.1 (22.4, 27.9)	24.2 (21.6, 27.0)	20.1 (19.6, 20.5)
% Past Month Tobacco Products Use	29.6 (26.5, 32.9)	32.3 (29.4, 35.3)	30.8 (28.0, 33.7)	24.6 (24.1, 25.0)
All Ages				
% Past Month Cigarette Use	22.0 (19.8, 24.4)	24.6 (22.5, 27.0)	23.3 (21.2, 25.6)	19.2 (18.9, 19.6)
% Past Month Tobacco Products Use	29.3 (26.8, 31.9)	31.5 (29.1, 34.0)	29.6 (27.4, 32.0)	23.7 (23.3, 24.1)

Chart 1.30. Reported Current Cigarette and Tobacco Products Use, by Age Group, Alaska NSDUH, 2015–2016



Pregnancy Risk Assessment Monitoring System (PRAMS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/prams23/PRAMSSelection.html

The Pregnancy Risk Assessment Monitoring System (PRAMS) was developed by the CDC as part of its initiative to reduce infant mortality and low birth weight. The PRAMS survey collects state-specific, population-based data on maternal attitudes and experiences before, during, and after pregnancy. PRAMS include women of all ages who delivered a live born infant in the year(s) indicated.

Definitions of tobacco use:

- **Smoking Before Pregnancy** was defined as whether the mother smoked during the 3 months before getting pregnant.
- **Smoking During Pregnancy** was defined as whether the mother smoked during the last 3 months of pregnancy.
- Prenatal Smokeless Tobacco Use was defined as whether the mother used tobacco products such as chewing tobacco, snuff, or iqmik (blackbull) at any time during their most recent pregnancy. Starting in 2012, other smokeless tobacco products like snus were also included.

Survey findings from 2010–2015 indicated an overall decrease in smoking before and during pregnancy for every age group except 25-34 year olds. In 2015, the prevalence of smoking before pregnancy was highest among women less than 20 years of age while the prevalence of smoking during pregnancy was highest among women aged 20–24 years (Table 1.16). The prevalence of prenatal smokeless tobacco use among Alaska Native women in 2015 was more than 3 times the prevalence among women of any race and more than 26 times the prevalence among White women (Table 1.17).

Table 1.16. Trends in Maternal Smoking, by Age Group, Alaska PRAMS, 2010–2015

	2010 (95% CI)	**2011** (95% CI)	**2012** (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)
Age < 20 years						
% Smoking Before Pregnancy	52.4 (39.5, 65.0)	45.4 (33.3, 58.0)	36.6 (24.6, 50.5)	37.5 (26.8, 49.6)	28.6 (18.3, 41.7)	32.0 (21.6, 44.4)
% Smoking During Pregnancy	25.7 (16.2, 38.3)	25.2 (15.8, 37.7)	15.9 (8.4, 28.2)	18.2 (10.8, 29.1)	13.9 (7.0, 25.8)	14.0 (7.7, 24.3)
Age 20–24 years						
% Smoking Before Pregnancy	49.4 (42.2, 56.7)	47.4 (40.1, 54.7)	43.9 (36.3, 51.7)	40.6 (33.7, 47.8)	36.0 (29.7, 42.8)	28.8 (23.0, 35.3)
% Smoking During Pregnancy	27.4 (21.2, 34.5)	20.6 (15.6, 26.7)	19.2 (14.0, 25.6)	16.8 (12.5, 22.3)	19.7 (14.9, 25.5)	16.2 (11.9, 21.6)
Age 25–34 years						
% Smoking Before Pregnancy	25.0 (20.9, 29.5)	26.9 (22.9, 31.3)	22.3 (18.3, 26.8)	22.9 (19.5, 26.8)	19.6 (16.3, 23.4)	25.0 (21.2, 29.2)
% Smoking During Pregnancy	10.8 (8.2, 14.1)	10.3 (7.9, 13.3)	10.9 (8.2, 14.2)	11.8 (9.3, 14.8)	10.3 (7.9, 13.4)	10.6 (8.2, 13.5)
Age 35 + years						
% Smoking Before Pregnancy	21.5 (13.5, 32.6)	20.2 (12.7, 30.7)	15.5 (9.5, 24.3)	19.2 (13.1, 27.3)	18.5 (12.0, 27.4)	17.3 (11.6, 25.0)
% Smoking During Pregnancy	11.7 (6.3, 20.8)	10.2 (5.2, 19.3)	9.2 (4.8, 16.9)	10.8 (6.7, 17.1)	11.5 (6.5, 19.6)	5.2 (2.9, 8.9)

Table 1.17. Trends in Prenatal Smokeless Tobacco Use for Alaska Native and White Women, Alaska PRAMS, 2010–2015 (NEW)

	2010 (95% CI)	**2011** (95% CI)	**2012** (95% CI)	**2013** (95% CI)	**2014** (95% CI)	**2015** (95% CI)
% Overall	4.7 (3.7, 6.0)	4.5 (3.5, 5.8)	5.4 (4.1, 7.1)	5.1 (4.1, 6.5)	4.5 (3.5, 5.8)	5.3 (4.2, 6.7)
% Alaska Native	18.4 (14.7, 22.8)	17.7 (13.9, 22.2)	18.9 (14.7, 24.1)	17.5 (14.3, 21.3)	15.9 (12.6, 19.9)	18.8 (15.2, 23.1)
% White	0.3 (0.0, 2.1)	0.3 (0.1, 2.1)	0.7 (0.2, 2.5)	0.9 (0.3, 2.5)	0.9 (0.3, 2.5)	0.7 (0.2, 2.3)

Note: Table 1.16.Trends in Prenatal Marijuana Use for Alaska Native and White Women, Alaska PRAMS was located at the end of the Tobacco section in past updates but has been moved to the Illicit Drug section in this update and renumbered Table 1.11 as it pertains to marijuana. See Appendix B for more information on renumbering.

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SECTION 2

CONSEQUENCE

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Problem Statement: Mortality

Drug poisoning is the leading cause of injury death in the United States[1]. In 2016, more than 63,600 overdose deaths occurred in the U.S., averaging more than 170 overdose deaths every day and outnumbering deaths due to motor vehicle accidents, firearms, homicide, and suicide[1, 2]. Increases in drug overdose deaths on a national scale are echoed in Alaska[3]. This section begins with a brief profile of mortality in Alaska and then focuses on mortality rates for premature deaths associated with substance abuse. Data were primarily gathered from the Alaska Health Analytics and Vital Records Section, and the most recent five years of data were used for analysis. Whenever possible, age adjusted death rates were provided to control for the effects of differences in population age distribution.

Data Analysis

Mortality data were provided by the Alaska Health Analytics and Vital Records Section using the following ICD-10 Codes—

Cause of Death: ICD-10 Codes	
Unintentional Injury	V01-X59, Y85-Y86
Suicide	U03, X60-X84, Y870
Homicide	U01-U02, X85-Y09, Y871
Chronic Liver Disease & Cirrhosis	K70, K73-K74
Alcohol-Induced	E244, F10, G312, G621, G721, I426, K292, K70, K852, K860, R780, X45, X65, Y15
Drug-Induced	D521, D590, D592, D611, D642, E064, E160, E231, E242, E273, E661, F110-F115, F117-F119, F120-F125, F127-F129, F130-F135, F137-F139, F140-F145, F147-F149, F150-F155, F157-F159, F160-F165, F167-F169, F170, F173-F175, F177-F179, F180-F185, F187-F189, F190-F195, F197-F199, G211, G240, G251, G254, G256, G444, G620, G720, I952, J702-J704, L105, L270-L271, M102, M320, M804, M814, M835, M871, R502, R781, R782-R785, X40-X44, X60-X64, X85, Y10-Y14

All rates were calculated per 100,000 persons and age-adjusted to the 2000 Census population.
Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
Rates based on fewer than 6 events are not reported.

[1] U.S. Department of Justice, Drug Enforcement Administration. 2017 National Drug Threat Assessment. October 2017. Available at https://www.dea.gov/sites/default/files/2018-07/DIR-040-17_2017-NDTA.pdf

[2] Centers for Disease Control and Prevention, National Center for Health Statistics. Drug Overdose Deaths in the United States, 1999–2016. NCHS Data Brief No. 294, December 2017. Available at https://www.dea.gov/sites/default/files/2018-07/DIR-040-17_2017-NDTA.pdf

[3] Alaska Epidemiology *Bulletin*. "Update on Drug Overdose Deaths – Alaska, 2016". No. 11, April 20, 2017. Available at http://epibulletins.dhss.alaska.gov/Document/Display?DocumentId=1937

Overall Mortality

Alaska Health Analytics and Vital Records Section (HAVRS)

http://dhss.alaska.gov/dph/VitalStats/Pages/default.aspx

Of the ten leading causes of death in Alaska, all except Alzheimer's disease have been associated with substance abuse as a potential contributing cause of death (Chart 2.1). Tobacco use has been strongly associated with the development of various forms of cancer, diseases of the heart, chronic lower respiratory diseases, and cerebrovascular diseases (the first, second, fourth, and fifth leading causes of death among Alaskans, respectively)[1]. Drug and alcohol use is known to impair one's judgement and motor skills, thereby increasing the risk of unintentional injury (the third leading cause of death), and an increasing number of unintentional injury deaths in recent years have been due to drug overdose[2]. Substance use is known to play a role in suicide (the sixth leading cause of death), and the influence of drugs and alcohol in one's decision to self-harm continues to be investigated[3]. Substance use has been shown to adversely impact the health of persons with diabetes (the eighth leading cause of death), making the condition more difficult to manage and more likely to become life-threatening[4]. Additionally, chronic liver disease and cirrhosis (the ninth leading cause of death) is strongly associated with alcohol abuse and substance users have been observed to experience more severe bouts of influenza (the tenth leading cause of death) than non-substance users[5].

The number and rate of death in Alaska increased with age, as expected, and this trend was generalizable across all genders and races (Table 2.1). The death rate among males was consistently higher than the rate among females across all races and age groups, and the death rate among American Indian/Alaska Native people was consistently higher than rates among other races across all genders and age groups (Table 2.1).

[1] U.S. Department of Health and Human Services. The Health Consequences of Smoking – 50 Years of Progress, A Report of the Surgeon General. Released 2014. Available at https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf.

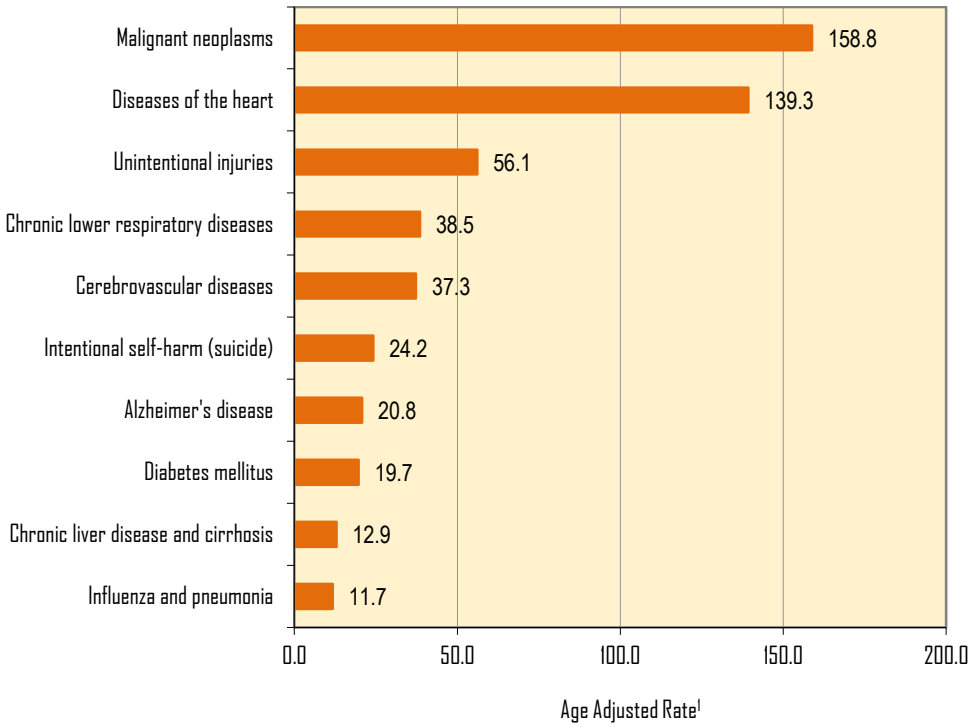
[2] State of Alaska, Department of Health and Social Services. Alaska Vital Statistics 2017 Annual Report. October 2018. Available at http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/VitalStatistics_Annualreport_2017.pdf

[3] Substance Abuse and Mental Health Services Administration (SAMHSA). Substance Use and Suicide: A Nexus Requiring a Public Health Approach. Released 2016. Available at https://store.samhsa.gov/system/files/sma16-4935.pdf

[4] Coalition Against Drug Abuse. Drug and Alcohol Use with Diabetes. Accessed December 12, 2018. Available at https://drugabuse.com/guides/substance-abuse-and-diabetes/

[5] Green, Georgiana E., "Drug Use And Smoking Among Hospitalized Influenza Patients, Connecticut 2011-2014" (2015). Public Health Theses. 1113. http://elischolar.library.yale.edu/ysphtdl/1113

Chart 2.1. Ten Leading Causes of Mortality, Alaska Residents, 2012–2016



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

The highest rate of death by borough/census area occurred in Kusilvak/Wade Hampton, where the average death rate during 2012–2016 was more than 70% higher than the statewide average (1,248.5 deaths per 100,000 persons compared to 728.3 deaths per 100,000 persons; Chart 2.2). The lowest rate of death by borough/census area occurred in the Aleutians East Borough, where the average death rate during 2012–2016 was approximately 40% lower than the statewide average (428.4 deaths per 100,000 persons compared to 728.3 deaths per 100,000 persons; Chart 2.2). Rates of death by region differed by sex, with the highest death rate among females occurring in the Denali Borough and the highest death rate among males occurring in the Lake and Peninsula Borough (1,140.8 and 1,764.2 deaths per 100,000 persons, respectively; Table 2.2).

The YK Delta region experienced the highest rate of death by behavioral health region, with a rate more than 50% higher than the statewide average (1,123.8 deaths per 100,000 persons compared to 728.3 deaths per 100,000 persons; Chart 2.3). The Other Southeast – Northern region experienced the lowest rate of death by behavioral health region, with a rate approximately 10% lower than the statewide average (626.4 deaths per 100,000 persons compared to 728.3 deaths per 100,000 persons; Chart 2.3).

Premature Deaths Associated with Substance Abuse

During 2012–2016, 730 Alaskans died from an alcohol-induced death and 626 Alaskans died from a drug-induced death (Table 2.3). Other causes of premature death strongly associated with substance abuse, including unintentional injury, suicide, homicide, and chronic liver disease and cirrhosis, accounted for an additional 3,528 deaths. Altogether, these deaths make up approximately one fifth of all deaths during 2012–2016 (Table 2.3).

Rates of premature death associated with substance abuse by borough/census area differed by cause of death (Table 2.4). The Kenai Peninsula Borough experienced the highest rate of drug-induced death, approximately 30% higher than the statewide rate (23.0 per 100,000 persons in the Kenai Peninsula Borough compared to 16.8 per 100,000 persons statewide). Meanwhile, the Yukon-Koyukuk census area experienced the highest rate of alcohol-induced death at almost five times the statewide rate (91.9 per 100,000 persons in the Yukon-Koyukuk census area compared to 18.6 per 100,000 persons statewide). The Yukon-Koyukuk census area also experienced the highest rates of death due to chronic liver disease and cirrhosis, homicide, and unintentional injury (Table 2.4).

Table 2.1. All Causes of Death by Age, Gender, and Race, Alaska Residents, 2012–2016

	Age 0–24		Age 25–64		Age 65+		All Ages	
	Deaths	**Rate[1]**	**Deaths**	**Rate[1]**	**Deaths**	**Rate[1]**	**Deaths**	**Rate[1]**
Female								
Asian/Pacific Islander	20	36.2	139	164.5	290	2,114.6	449	292.5
Black	22	56.3	92	257.6	125	2,539.6	239	299.9
American Indian / Alaska Native	162	115.6	896	609.6	1,095	4,463.0	2,153	690.8
White	173	44.2	1,782	253.2	4,086	2,999.6	6,041	490.7
All Races	382	61.1	2,941	302.9	5,637	3,142.4	8,960	504.5
Male								
Asian/Pacific Islander	35	60.3	174	240.5	255	2,722.3	465	332.6
Black	44	99.4	207	440.9	146	3,589.0	397	416.7
American Indian / Alaska Native	304	204.6	1,248	846.0	1,114	5,393.4	2,667	842.0
White	321	74.7	3,365	431.2	4,595	3,217.0	8,281	612.0
All Races	718	105.5	5,078	484.9	6,149	3,475.4	11,948	627.2
Total								
Asian/Pacific Islander	55	48.5	313	199.6	545	2,361.2	914	311.6
Black	66	79.2	299	361.7	271	3,014.5	636	363.5
American Indian / Alaska Native	466	161.4	2,145	728.4	2,209	4,888.2	4,821	767.2
White	495	60.3	5,147	346.8	8,681	3,110.9	14,323	554.2
All Races	1,101	84.3	8,020	397.4	11,786	3,307.7	20,910	568.1

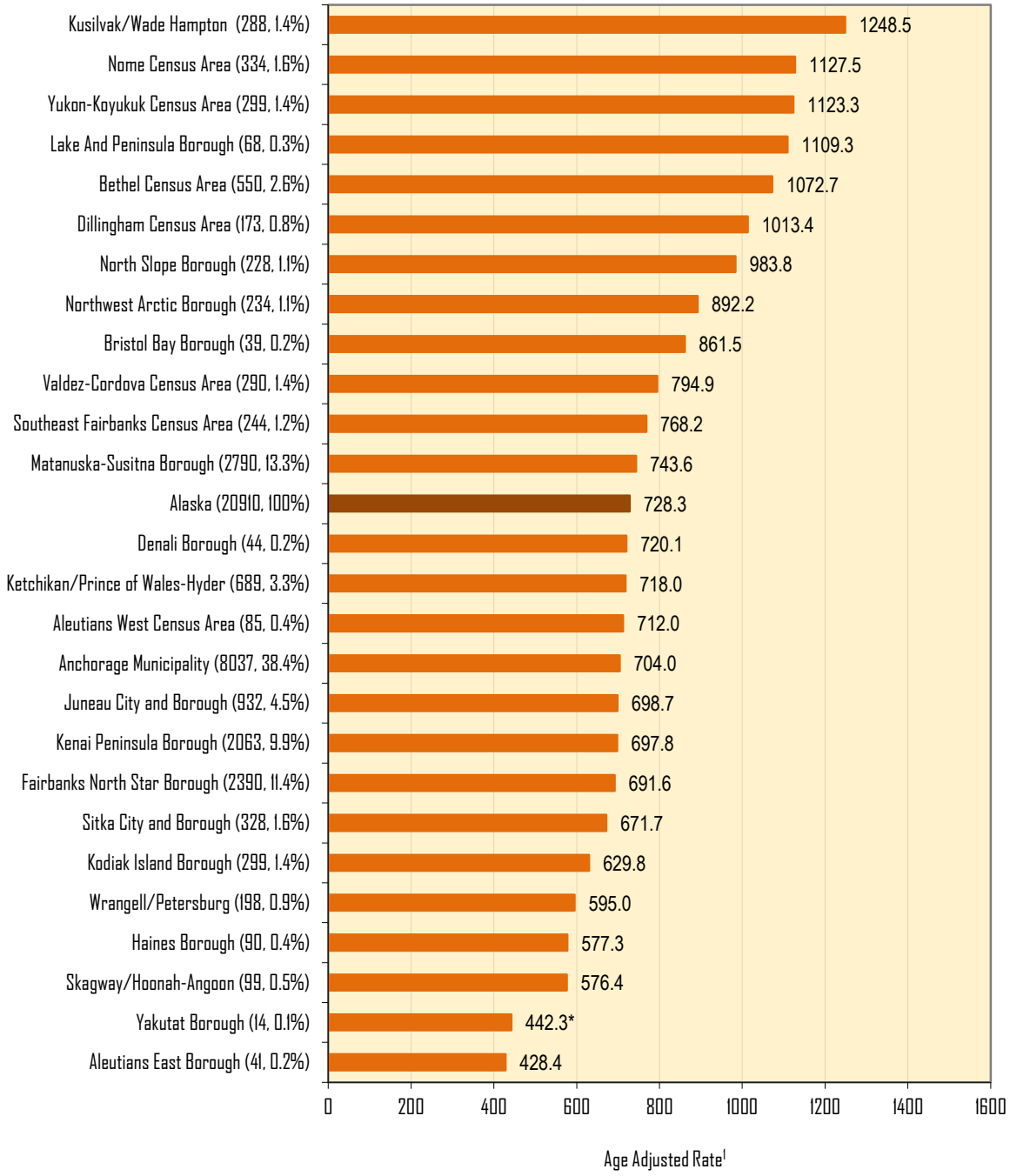
[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Table 2.2. All Causes of Death by Gender and Borough/Census Area, Alaska Residents, 2012–2016

	Total Deaths	Age-Adjusted Rate[1]	Male Deaths	Male Age-Adjusted Rate[1]	Female Deaths	Female Age-Adjusted Rate[1]
Aleutians East Borough	41	428.4	26	420.7	15	403.7*
Aleutians West Census Area	85	712.0	53	664.6	32	758.7
Anchorage Municipality	8,037	704.0	4,390	821.9	3,647	603.6
Bethel Census Area	550	1,072.7	335	1,287.5	215	863.4
Bristol Bay Borough	39	861.5	26	1,120.9	13	633.8*
Denali Borough	44	720.1	28	693.3	16	1,140.8*
Dillingham Census Area	173	1,013.4	100	1,034.1	73	980.0
Fairbanks North Star Borough	2,390	691.6	1,383	799.0	1,006	583.8
Haines Borough	90	577.3	55	771.3	35	413.2
Juneau Borough	932	698.7	503	795.0	428	609.3
Kenai Peninsula Borough	2,063	697.8	1,185	800.7	878	592.2
Kodiak Island Borough	299	629.8	192	850.1	107	451.4
Kusilvak/Wade Hampton	288	1,248.5	190	1,718.6	98	872.1
Lake And Peninsula Borough	68	1,109.3	50	1,764.2	18	563.1*
Matanuska-Susitna Borough	2,790	743.6	1,605	842.1	1,185	643.1
Nome Census Area	334	1,127.5	215	1,376.0	119	886.7
North Slope Borough	228	983.8	146	1,141.1	82	882.3
Northwest Arctic Borough	234	892.2	136	1,058.4	98	740.2
Prince of Wales-Hyder-Ketchikan	689	718.0	386	766.9	303	663.1
Sitka City and Borough	328	671.7	168	823.3	160	538.7
Skagway-Hoonah-Angoon	99	576.4	67	769.1	32	402.3
Southeast Fairbanks Census Area	244	768.2	147	862.9	97	660.5
Valdez-Cordova Census Area	290	794.9	180	1,038.9	110	615.4
Wrangell-Petersburg	198	595.0	124	696.9	74	474.4
Yakutat Borough	14	442.3*	10	920.4*	4	**
Yukon-Koyukuk Census Area	299	1,123.3	206	1,404.2	93	789.7
Alaska	20,910	728.3	11,948	846.4	8,960	616.0

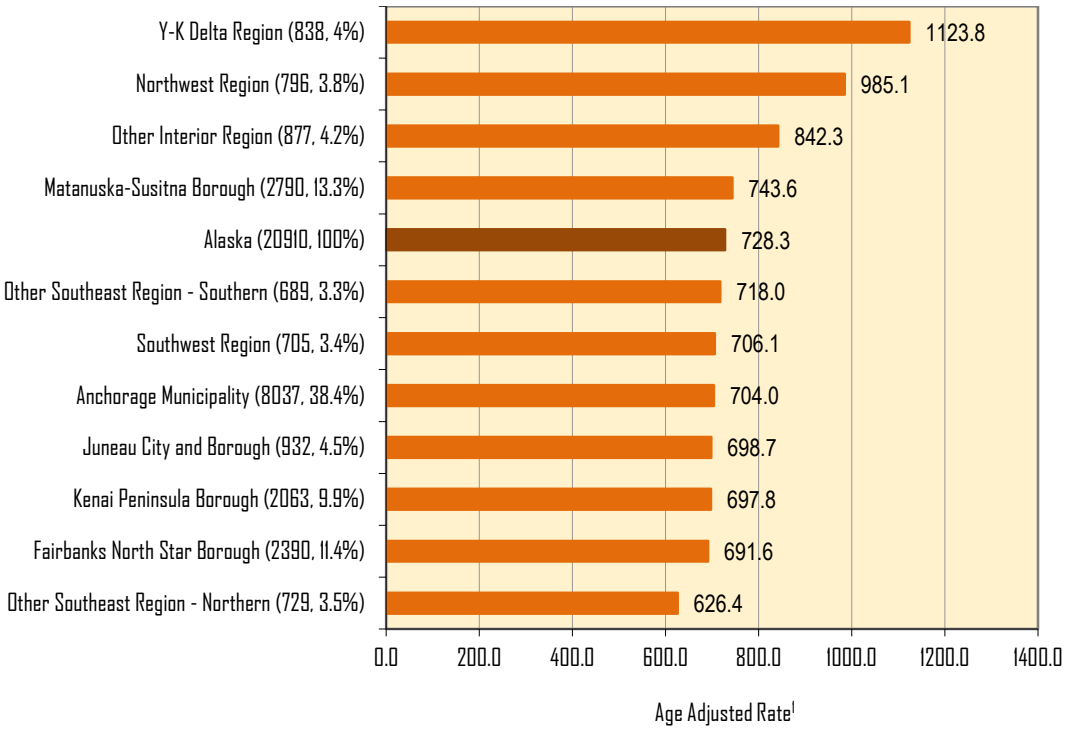
[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.2. All Causes of Death and Rates by Borough/Census Area, Alaska Residents, 2012–2016
Borough/Census Area (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

Chart 2.3. All Causes of Death and Rates by Behavioral Health Regions, Alaska Residents, 2012–2016
Regions (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Table 2.3. Number of Premature Deaths Associated with Substance Abuse, by Leading Cause and Borough/Census Area, Alaska Residents, 2012–2016

	Number of Deaths						
Health Indicators For Census Area/Boroughs	All Causes of Death	Alcohol-Induced	Chronic Liver Disease & Cirrhosis	Drug-Induced	Homicide	Suicide	Unintentional Injury
Aleutians East Borough	41	4	3	1	0	1	4
Aleutians West Census Area	85	5	3	5	1	5	6
Anchorage Municipality	8,037	310	210	281	107	327	651
Bethel Census Area	550	28	12	6	8	40	79
Bristol Bay Borough	39	1	1	1	1	4	8
Denali Borough	44	0	0	1	0	1	5
Dillingham Census Area	173	9	0	5	3	9	31
Fairbanks North Star Borough	2,390	73	63	66	30	108	222
Haines Borough	90	1	1	0	0	5	4
Juneau Borough	932	35	24	39	5	29	66
Kenai Peninsula Borough	2,063	50	39	62	7	87	179
Kodiak Island Borough	299	3	2	12	5	9	33
Kusilvak/Wade Hampton	288	10	3	2	9	49	47
Lake And Peninsula Borough	68	3	1	0	1	1	12
Matanuska-Susitna Borough	2,790	57	54	93	30	91	262
Nome Census Area	334	14	4	5	3	31	29
North Slope Borough	228	13	8	4	3	12	23
Northwest Arctic Borough	234	11	2	1	5	21	31
Prince of Wales-Hyder-Ketchikan	689	29	17	15	4	13	64
Sitka City and Borough	328	10	10	8	0	7	25
Skagway-Hoonah-Angoon	99	4	2	1	0	2	3
Southeast Fairbanks Census Area	244	4	2	5	2	7	23
Valdez-Cordova Census Area	290	18	10	5	0	12	33
Wrangell-Petersburg	198	8	4	2	0	4	16
Yakutat Borough	14	0	0	0	0	1	1
Yukon-Koyukuk Census Area	299	27	15	4	8	14	46
Alaska	20,910	730	491	626	233	892	1,912

Table 2.4. Rates of Premature Death Associated with Substance Abuse, by Leading Cause and Borough/Census Area, Alaska Residents, 2012–2016

	Age-Adjusted Death Rates[1]						
Health Indicators For Census Area/Boroughs	All Causes of Death	Alcohol-Induced	Chronic Liver Disease & Cirrhosis	Drug-Induced	Homicide	Suicide	Unintentional Injury
Aleutians East Borough	428.4	**	**	**	**	**	**
Aleutians West Census Area	712.0	**	**	**	**	**	17.4*
Anchorage Municipality	704.0	19.7	13.9	18.3	6.7	21.3	47.2
Bethel Census Area	1,072.7	35.0	17.8*	6.7*	8.8*	42.6	106.0
Bristol Bay Borough	861.5	**	**	**	**	**	135.6*
Denali Borough	720.1	**	**	**	**	**	**
Dillingham Census Area	1,013.4	44.1*	**	**	**	39.3*	155.5
Fairbanks North Star Borough	691.6	14.7	12.9	13.1	5.6	21.5	49.7
Haines Borough	577.3	**	**	**	**	**	**
Juneau Borough	698.7	17.6	14.1	22.5	**	18.2	40.8
Kenai Peninsula Borough	697.8	14.1	10.1	23.0	2.5*	30.8	63.9
Kodiak Island Borough	629.8	**	**	17.1*	**	11.2*	57.2
Kusilvak/Wade Hampton	1,248.5	31.2*	**	**	23.9*	126.5	152.5
Lake And Peninsula Borough	1,109.3	**	**	**	**	**	119.8*
Matanuska-Susitna Borough	743.6	10.8	10.9	19.0	6.4	19.2	61.3
Nome Census Area	1,127.5	30.8*	**	**	**	62.6	69.5
North Slope Borough	983.8	45.2*	28.8*	**	**	23.4*	65.6
Northwest Arctic Borough	892.2	29.8*	**	**	**	50.6	89.0
Prince of Wales-Hyder-Ketchikan	718.0	23.8	13.0*	13.2*	**	13.4*	67.4
Sitka City and Borough	671.7	18.6*	18.5*	17.3*	**	15.3*	55.9
Skagway-Hoonah-Angoon	576.4	**	**	**	**	**	**
Southeast Fairbanks Census Area	768.2	**	**	**	**	23.8*	63.6
Valdez-Cordova Census Area	794.9	36.5*	18.9*	**	**	26.8*	68.6
Wrangell-Petersburg	595.0	24.4*	**	**	**	**	54.1*
Yakutat Borough	442.3*	**	**	**	**	**	**
Yukon-Koyukuk Census Area	1,123.3	91.9	49.7*	**	27.8*	49.5*	176.6
Alaska	728.3	18.6	12.9	16.8	6.2	24.2	56.1

1. Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Problem Statement: Alcohol-Related Consequences

Alaska experiences higher rates of alcohol-attributable mortality than most other states and the U.S. as a whole[1]. In 2015, Alaska's alcohol-attributable mortality rate was the 3rd highest in the nation behind New Mexico and Wyoming[1]. A longstanding problem in Alaska, alcohol-attributable causes accounted for more deaths during 2010–2016 than meth- and opioid-attributable causes combined, despite the growing opioid epidemic[1]. Alcohol use has been strongly associated with a wide range of serious long-term health effects, including chronic liver disease and cirrhosis, diseases of the heart, and some cancers (e.g. breast, liver, mouth, skin, throat, and colon). All of these conditions are leading causes of death, both in Alaska and nationwide. Alcohol abuse negatively impacts not only the health of the individual but that of the community, with the consequences of alcohol misuse encompassing domestic/family violence, child neglect, intentional and unintentional injury, motor vehicle crash, mental illness, crime, poverty, and unemployment[1].

[1] Alaska Epidemiology *Bulletin*. "Health Impacts of Alcohol Misuse in Alaska". Volume 20, No 2, May, 7, 2018. Available at: http://www.epi.alaska.gov/bulletins/docs/rr2018_02.pdf

Data Analysis

Mortality data were provided by the Alaska Health Analytics and Vital Records Section. Injury and other consequence data were provided by the Alaska Trauma Registry, the Alaska Department of Education and Early Development, and the Alaska Birth Defects Registry.

All rates were calculated per 100,000 persons and age-adjusted to the 2000 Census population. *Rates based on fewer than 20 events are statistically unreliable and should be used with caution. Rates based on fewer than 6 events are not reported.*

Alaska Health Analytics and Vital Records Section (HAVRS)

http://dhss.alaska.gov/dph/VitalStats/Pages/default.aspx

During 2012–2016, the age-adjusted rate of alcohol-induced deaths in Alaska was nearly double the national rate (18.6 per 100,000 persons compared to 9.8 per 100,000 persons; Table 2.5). Alaska also experienced a higher rate of chronic liver disease and cirrhosis deaths than the U.S. as a whole (Table 2.5). The rate of alcohol-induced death by sex during 2012–2016 was approximately 40% higher among males than females (23.0 per 100,000 males compared to 16.4 per 100,000 females; Table 2.6). The alcohol-induced death rate among American Indian/Alaska Native people was more than four times the rate among Whites (56.3 per 100,000 persons compared to 13.6 per 100,000 persons; Table 2.6). Among females, rates of alcohol-induced death by age group were highest for adults aged 25–64 years while males experienced the highest rates of alcohol-induced death in the age 65+ group.

Across all Alaska public health regions, unintentional injury deaths outnumbered suicide deaths, chronic liver disease and cirrhosis deaths, and alcohol-induced deaths (Chart 2.4). Second to unintentional injury deaths for all regions were suicide deaths. The number of unintentional injury deaths was approximately 2–3 times greater than the number of suicide deaths for all regions except the Northern region, where the number of unintentional injury deaths was 1.3 times that of suicide deaths. In the Gulf Coast and Mat-Su regions, unintentional injury deaths outnumbered deaths of

the other three causes combined (Chart 2.4). Chronic liver disease and cirrhosis accounted for the smallest number of deaths in each region; however, it is worth noting that cirrhosis is a long-term liver disease in which damage to the liver accumulates over time, making it more likely to affect those in older age groups, unlike the other causes which affect a wider age demographic.

Alcohol-induced death rates were highest in the Yukon-Koyukuk census area, which experienced a rate almost five times the statewide average (91.9 per 100,000 persons compared to 18.6 per 100,000 persons; Chart 2.5). By behavioral health region, alcohol-induced death rates were highest in the Other Interior region, where the rate was approximately double the statewide average (37.9 per 100,000 persons compared to 18.6 per 100,000 persons), and lowest in the Mat-Su region, where the rate was just over half the statewide average (10.8 per 100,000 persons compared to 18.6 per 100,000 persons; Chart 2.6).

Similar to alcohol-induced death rates, the Yukon-Koyukuk census area experienced the highest rates of chronic liver disease and cirrhosis death by borough/census area (Chart 2.7) and the Other Interior region experienced the highest rates of chronic liver disease and cirrhosis death by behavioral health region (Chart 2.8). The Southwest region experienced the lowest rate of chronic liver disease and cirrhosis death by behavioral health region (Chart 2.8).

Table 2.5. Comparison of Alcohol Induced and Chronic Liver Disease and Cirrhosis Death Rates, Alaska and the U.S., 2012–2016

	Alaska Age-Adjusted Rate[1]	U.S. Age-Adjusted Rate[1]
Alcohol Induced Deaths	18.6	9.8
Chronic Liver Disease and Cirrhosis Deaths	12.9	12.0

[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Table 2.6. Alcohol Induced Death by Age, Gender, and Race, Alaska Residents, 2012–2016

	Age 0–24		Age 25–64		Age 65+		All Ages	
	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]
Female								
Asian/Pacific Islander	0	**	0	**	0	**	0	**
Black	0	**	3	**	0	**	3	**
American Indian / Alaska Native	8	5.7*	154	104.8	15	61.1*	177	56.8
White	0	**	98	13.9	8	5.9*	106	8.6
All Races	8	1.3*	259	26.7	24	13.4	291	16.4
Male								
Asian/Pacific Islander	0	**	3	**	0	**	3	**
Black	0	**	7	14.9*	1	**	8	8.4*
American Indian / Alaska Native	6	4.0*	149	101.0	22	106.5	177	55.9
White	1	**	195	25.0	50	35.0	246	18.2
All Races	7	1.0*	358	34.2	74	41.8	439	23.0
Total								
Asian/Pacific Islander	0	**	3	**	0	**	3	**
Black	0	**	10	12.1*	1	**	11	6.3*
American Indian / Alaska Native	14	4.8*	303	102.9	37	81.9	354	56.3
White	1	**	293	19.7	58	20.8	352	13.6
All Races	15	1.1*	617	30.6	98	27.5	730	19.8

[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.4. Comparison of Number of Alcohol Induced Deaths to Unintentional Injury, Intentional Self-Harm, and Chronic Liver Disease and Cirrhosis Deaths, by Behavioral Health Regions, Alaska Residents, 2012–2016

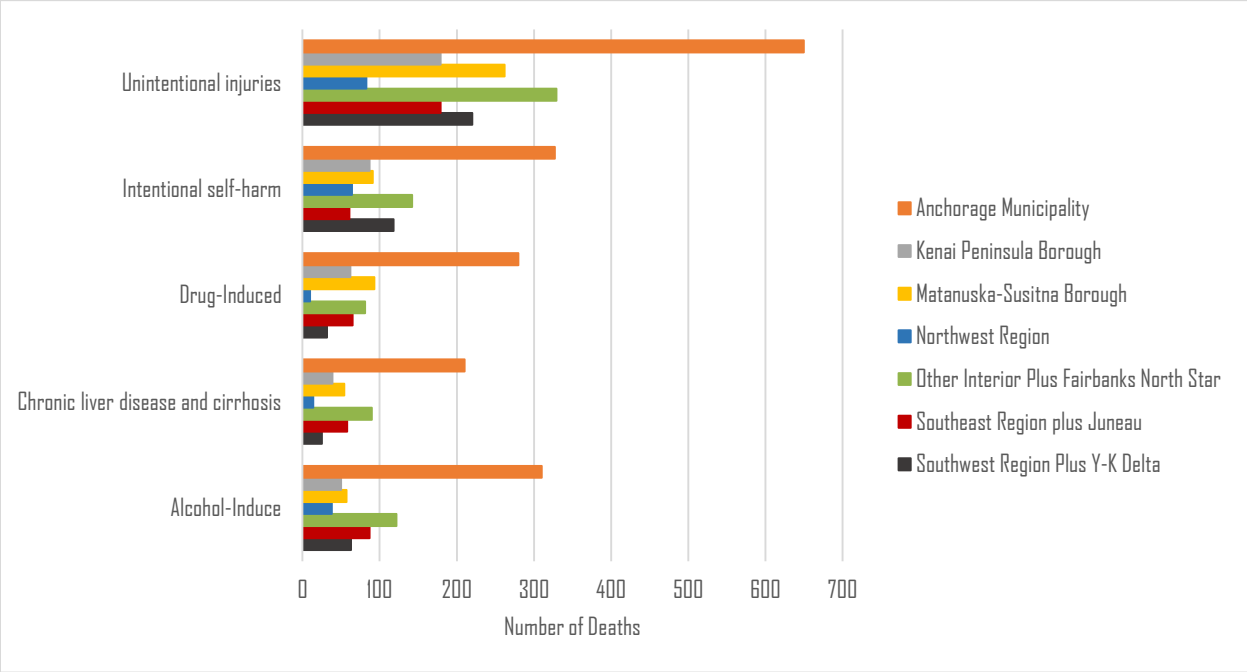
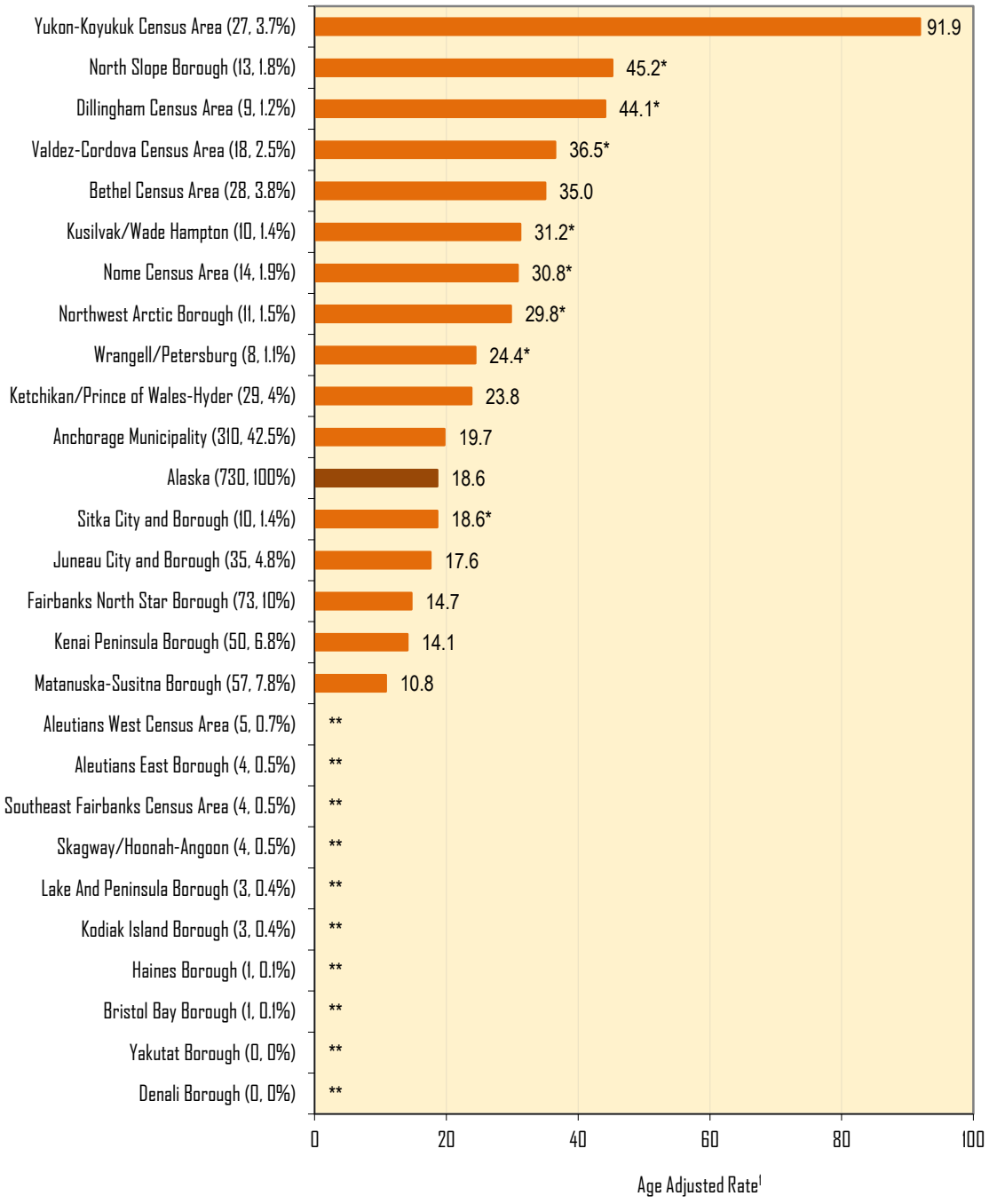


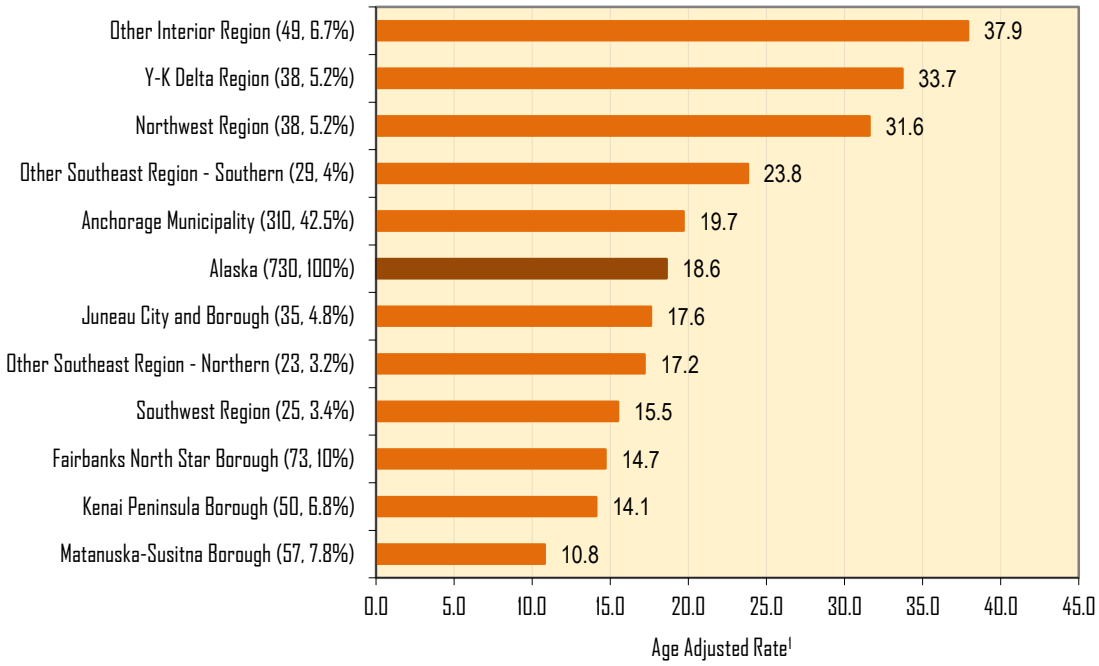
Chart 2.5. Alcohol Induced Death and Rates by Borough/Census Area, Alaska Residents, 2012-2016
Borough/Census Area (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.6. Alcohol Induced Death and Rates by Behavioral Health Regions, Alaska Residents, 2012–2016 (NEW)

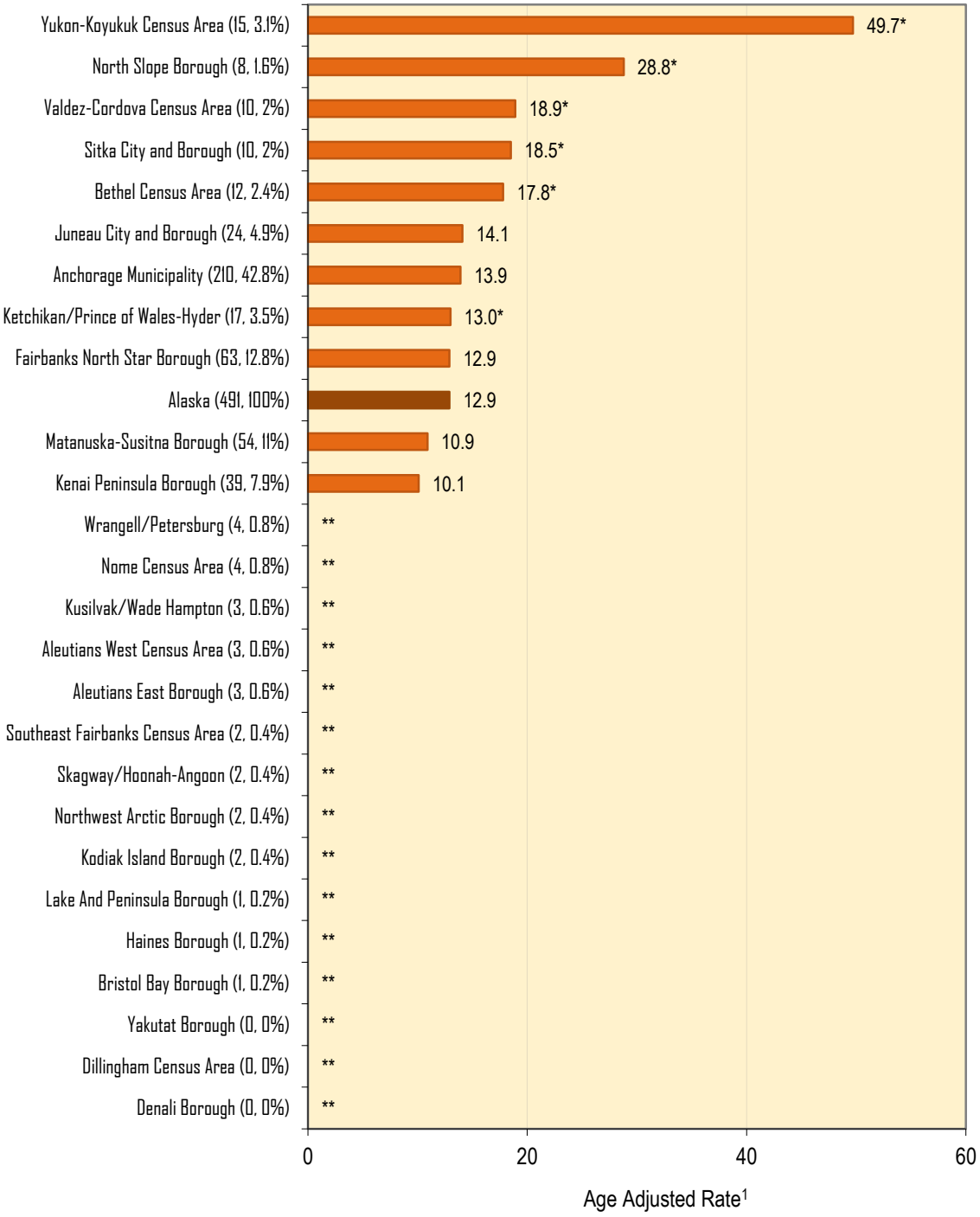
Regions (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

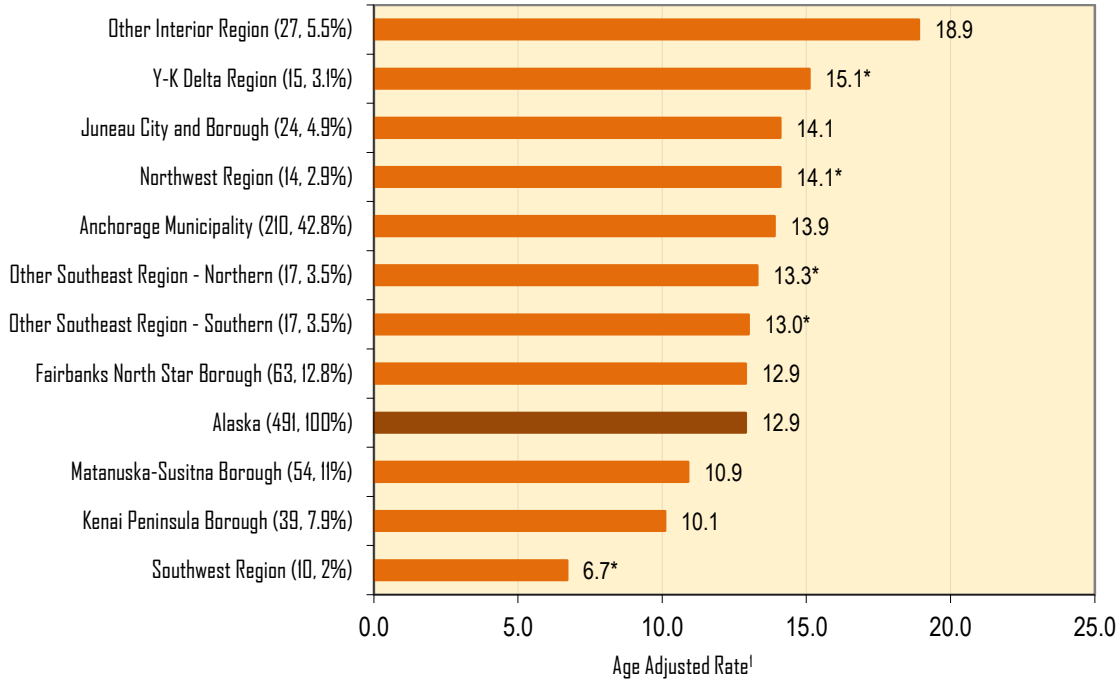
Chart 2.7. Chronic Liver Disease and Cirrhosis Death and Rates by Borough/Census Area, Alaska Residents, 2012–2016

Borough/Census Area (# of death, % of statewide total)



1. Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.8. Chronic Liver Disease and Cirrhosis Death and Rates by Behavioral Health Regions, Alaska Residents, 2012–2016 (NEW) Regions (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

Unintentional Injury Associated with Alcohol Use

In 2016, unintentional injury was the third leading cause of death in the U.S. overall and the leading cause of death for Americans aged 1–44 years[1]. In Alaska, unintentional injuries are the third leading cause of death and account for more years of potential life lost than any other cause of death[2]. Alcohol consumption is known to increase the risk of injury, both intentional and unintentional, and during 1991–2015, approximately 17–25% of injury hospitalizations captured in the Alaska Trauma Registry were attributable to alcohol[3].

[1] National Vital Statistics System, National Center for Health Statistics, CDC. 10 Leading Causes of Death by Age Group, United States – 2016. Available at: https://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_age_group_2016_1056w814h.gif

[2] State of Alaska, Department of Health and Social Services. Alaska Vital Statistics 2017 Annual Report. October 2018. Available at http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/VitalStatistics_Annualreport_2017.pdf

[3] Alaska Epidemiology *Bulletin*. "Health Impacts of Alcohol Misuse in Alaska". Volume 20, No 2, May, 7, 2018. Available at: http://www.epi.alaska.gov/bulletins/docs/rr2018_02.pdf

Alaska Health Analytics and Vital Records Section (HAVRS)

http://dhss.alaska.gov/dph/VitalStats/Pages/default.aspx

During 2012–2016, Alaska's unintentional injury death rate was approximately 30% higher than the national average (Table 2.7). The unintentional injury death rate among Alaskan males was more than twice the rate among Alaskan females (68.9 per 100,000 males compared to 33.6 per 100,000 females; Table 2.8). American Indian/Alaska Native people experienced the highest rates of unintentional injury death across all genders and age groups, ranging from 1.5–3.5 times the rate for Whites of the same gender and age (Table 2.8). The likelihood of unintentional injury death increased with increasing age (Table 2.8). The Yukon–Koyukuk census area experienced the highest rate of unintentional injury death by borough/census area, with a rate more than triple the statewide average (176.6 per 100,000 persons compared to 56.1 per 100,000 persons; Chart 2.9). By behavioral health region, the Y-K Delta Region experienced the highest unintentional injury death rate while the City and Borough of Juneau experienced the lowest rate (Chart 2.10).

Table 2.7. Comparison of Unintentional Injury Death Rates, Alaska and the U.S., 2012–2016

	Alaska Age-Adjusted Rate[1]	U.S. Age-Adjusted Rate[1]
Unintentional Injury Deaths	56.1	44.1

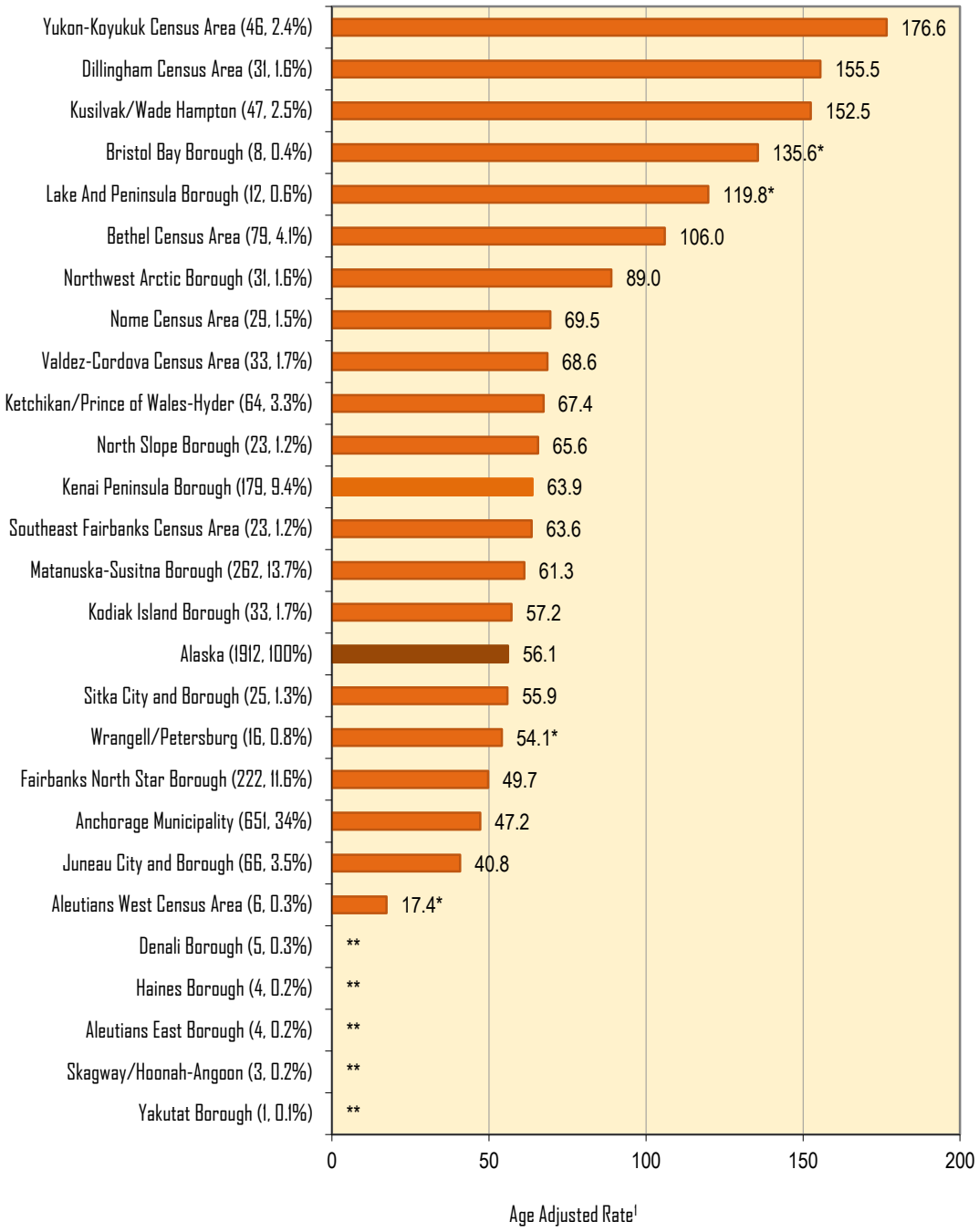
[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
Note: Alaska data are for Alaska residents.

Table 2.8. Unintentional Injury Deaths by Age, Gender, and Race, Alaska Residents, 2012–2016

	Age 0–24		Age 25–64		Age 65+		All Ages	
	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]
Female								
Asian/Pacific Islander	2	**	9	10.7*	6	43.8*	17	11.1*
Black	4	**	8	22.4*	0	**	12	15.1*
American Indian / Alaska Native	41	29.3	144	98.0	35	142.7	220	70.6
White	48	12.3	193	27.4	100	73.4	341	27.7
All Races	95	15.2	360	37.1	142	79.2	597	33.6
Male								
Asian/Pacific Islander	8	13.8*	14	19.3*	7	74.7*	29	20.7
Black	7	15.8*	32	68.2	6	147.5*	45	47.2
American Indian / Alaska Native	78	52.5	259	175.6	40	193.7	378	119.3
White	94	21.9	567	72.7	174	121.8	835	61.7
All Races	193	28.3	892	85.2	227	128.3	1,313	68.9
Total								
Asian/Pacific Islander	10	8.8*	23	14.7	13	56.3*	46	15.7
Black	11	13.2*	40	48.4	6	66.7*	57	32.6
American Indian / Alaska Native	119	41.2	404	137.2	75	166.0	599	95.3
White	143	17.4	760	51.2	274	98.2	1,177	45.5
All Races	289	22.1	1,253	62.1	369	103.6	1,912	51.9

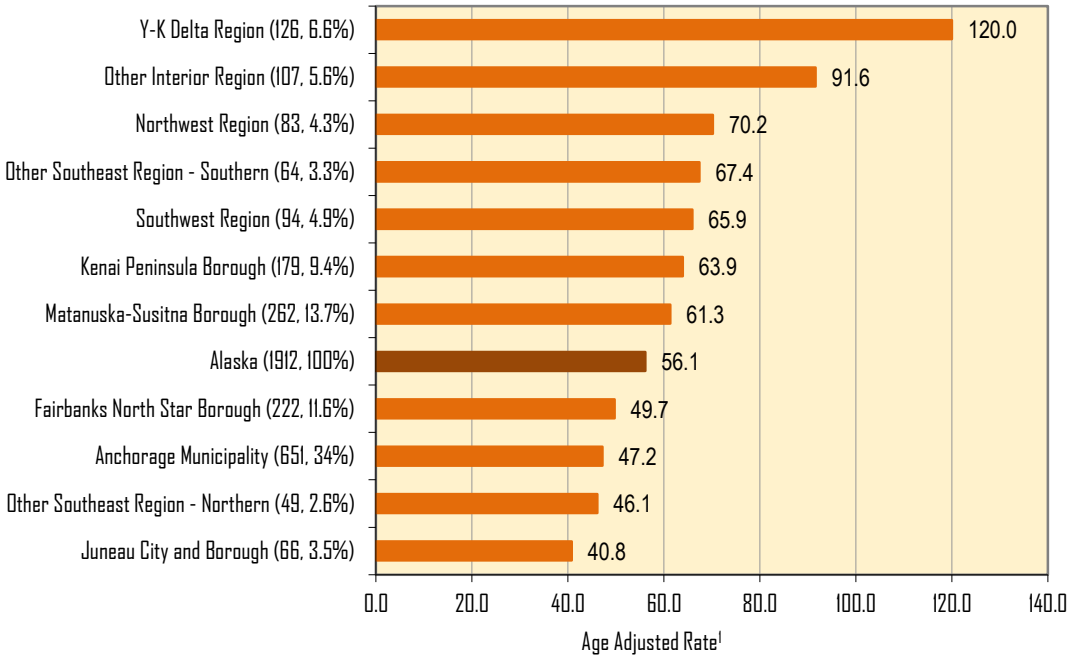
1. Events per 100,000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.9. Unintentional Injury Death and Rates by Borough/Census Area, Alaska Residents, 2012–2016
Borough/Census Area (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population..
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.10. Unintentional Injury Death and Rates by Behavioral Health Regions, Alaska Residents, 2012–2016 (NEW) Region (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Alaska Trauma Registry (ATR)

http://dhss.alaska.gov/dph/Emergency/Pages/trauma/registry.aspx

During 2012–2016, a total of 3,390 alcohol-attributable injury hospitalizations were recorded in the Alaska Trauma Registry. The most common injury cause was a fall, followed by assault/homicide and motor vehicle accident (Table 2.9). Approximately 70% of patients hospitalized for alcohol-attributable injury were male and approximately 57% were American Indian/Alaska Native (Table 2.9, 2.10). The rate of total injury hospitalizations (alcohol-attributable and non-alcohol-attributable) among American Indian/Alaska Native people was more than double the rate among Whites, and the rate of alcohol-attributable injury hospitalizations among American Indian/Alaska Native people was almost seven times the rate among Whites (Table 2.10).

Alaska experienced a 16% increase in alcohol-attributable injury hospitalizations over 2012–2016, from 651 hospitalizations in 2012 to 757 hospitalizations in 2016 (Table 2.11). Most regions within the state also experienced an increase with the exception of Interior Alaska, which experienced no change, and Southeast Alaska, which experienced a slight decrease. Increases in other regions ranged from 20% in Southwest Alaska to 49% in Northern Alaska (Table 2.11). Despite these increases, the number of Alaskans aged 20 years and younger who were hospitalized for an alcohol-attributable injury declined over 2012–2016 (Table 2.12). The statewide rate of alcohol-attributable injury hospitalizations for this age group decreased 34%, from 71 hospitalizations in 2012 to 47 hospitalizations in 2016. This decrease was reflected in most regions across the state (Table 2.12).

Table 2.9. Top Five Hospitalized Injury Causes Associated with Suspected or Confirmed Alcohol Use, Occurrence in Alaska, by Gender, ATR, 2012–2016

Primary Cause of Injury	Male (N=2,336)	Primary Cause of Injury	Female (N=1,054)
Falls	589 (25%)	Falls	409 (39%)
Assault / Homicide	584 (25%)	Assault	148 (14%)
Motor Vehicle	244 (10%)	Motor Vehicle	124 (12%)
ATV / Snow Machine	216 (9%)	Suicide / Self Inflicted*	123 (12%)
Suicide / Self Inflicted*	153 (7%)	ATV / Snow Machine	68 (6%)

*Beginning January 1, 2011, the ATR discontinued data collection on intentional self-poisoning among adults

Table 2.10. Hospitalized Injury Associated with Alcohol Use, Alaska Residents, by Race and Ethnicity, ATR, 2012–2016

	Number of Injury Cases	Number of Suspected or Proven Alcohol Use by Patient at Time of Injury[1]	Percent Suspected or Proven Alcohol Use	Rate of Injury[2]	Rate of Injury Among Persons with Suspected or Proven Alcohol Use[2]
White	10,713	1,221	11%	435.6	49.6
Black	485	84	17%	358.9	62.2
Asian/Pacific Islander	691	67	10%	257.5	25.0
American Indian / Alaska Native	5,711	1,922	34%	1,026.4	345.4
Other	439	59	13%	--	--
Unknown	285	37	13%	--	--
Total	18,324	3,390	19%	497.8	92.1

[1] Known or suspected alcohol use prior to the injury event
[2] Unadjusted rate calculated per 100,000 population, using Alaska Population for Race (Alone)

Table 2.11. Hospitalized Injury Associated with Alcohol Use, by Public Health Region, ATR, 2012–2016

Region	2012	2013	2014	2015	2016	% Difference Between 2012 and 2016
Anchorage	240	236	243	250	295	+ 23%
MatSu	43	44	43	43	52	+ 21%
Gulf Coast	62	55	101	90	79	+ 27%
Interior	82	60	59	77	83	+ <1%
Northern	53	69	64	55	79	+ 49%
Southeast	74	73	69	53	67	- 9%
Southwest	79	95	91	92	95	+ 20%
Alaska*	651	644	672	666	757	+ 16%

*Includes injuries with no known geographic location

Table 2.12. Hospitalized Injury Associated with Alcohol Use, Persons Aged 20 Years and Less, by Public Health Region, ATR, 2012–2016

Region	2012	2013	2014	2015	2016	% Reduction Between 2012 and 2016
Anchorage	25	14	12	15	13	-48%
MatSu	5	6	2	3	1	-80%
Gulf Coast	5	4	8	4	5	No change
Interior	8	5	0	1	10	+25%
Northern	7	3	11	9	6	<1%
Southeast	6	5	9	4	3	-50%
Southwest	15	17	9	16	9	-40%
Alaska*	71	55	52	52	47	-34%

*Includes injuries with no known geographic location

Out of School Suspensions and Expulsions Due to Alcohol

From the 2011–2012 school year through the 2015–2016 school year, there were 603 alcohol-related out-of-school suspensions (approx. 121 per school year; Table 2.13) and 8 alcohol-related school expulsions (approx. 1–2 per school year; Table 2.14). High school students accounted for 77.8% of alcohol-related out-of-school suspensions and 87.5% of alcohol-related expulsions, while middle school students accounted for 21.6% of alcohol-related out-of-school suspensions and 12.5% of alcohol-related expulsions.

Although numbers of alcohol-related suspensions and expulsions per school year were variable during 2011–2016, both measures decreased for this 5-year period compared to the 5-year period examined in the previous Profile (i.e. schools years 2006–2007 through 2010–2011)[1]. During 2006–2011, there were 949 alcohol-related out-of-school suspensions (approx. 190 per school year) and 26 alcohol-related school expulsions (approx. 5 per school year). This translates to a 36% decrease in alcohol-related out-of-school suspensions and a 69% decrease in alcohol-related school expulsions from the 2006–2007 school year to the 2015–2016 school year.

[1] Hull-Jilly DMC, Casto LD. State Epidemiologic Profile on Substance Use, Abuse and Dependency 2007-2011. Alaska Department of Health and Social Services. Released November 7, 2013. Available at http://dhss.alaska.gov/dph/Epi/Documents/01-Internal/injury/sa/SubstanceAbuseEpiProfile_2013.pdf

Table 2.13. Trends in Alcohol Related Out-of-School Suspensions, Alaska, 2011–2016

	School Year					
	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2011–2016
Elementary School	1	2	0	1	0	4
Middle School	31	31	21	27	20	130
High School	78	111	98	105	77	469

Source: Department of Education and Early Development, accessed December 13, 2017.

Table 2.14. Trends in Alcohol Related School Expulsions, Alaska, 2011–2016

	School Year					
	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2011–2016
Elementary School	0	0	0	0	0	0
Middle School	0	0	1	0	0	1
High School	2	0	2	3	0	7

Source: Department of Education and Early Development, accessed December 13, 2017.

Fetal Alcohol Syndrome (FAS)

http://rpubs.com/AK_ABDR/FAS

NOTE: *This section focused on Fetal Alcohol Spectrum Disorders (FASD) in past updates, but will focus on FAS in this update due to the lack of comprehensive statewide data on FASD.*

No amount of alcohol is safe to consume while pregnant, and one possible result of alcohol consumption during pregnancy is giving birth to a child with Fetal Alcohol Syndrome (FAS). FAS is a condition that occurs in children exposed to alcohol as a developing fetus, and is often characterized by physical defects, brain and nervous system problems, and behavioral problems[1]. Information on children with FAS in Alaska is collected by the Division of Public Health, Section of

Women's, Children's, and Family Health through the Alaska Birth Defects Registry (ABDR). The following section provides an overview on the most recent data on FAS. Due to lag time in reporting birth defects to the ABDR (birth defects can be reported for children up to age six), data are only available through 2013.

During 2007–2013, the ABDR received 404 reports of children with FAS in Alaska (Table 2.15). ABDR staff conducted medical record review and case confirmation to verify these reports, and estimate the true number of FAS children born between 2007 and 2013 to be approximately 133 children. No significant difference was observed in the sex of children with FAS or in the age of their mothers (Table 2.15, Table 2.16). However, birth prevalence of FAS was significantly higher among American Indian/Alaska Native people than among Whites or Asian/Pacific Islanders. Children with FAS were significantly more likely to have a low birth weight (under 2500 grams), and were significantly more likely to be born to mothers who were unmarried, reported smoking, or had completed fewer than 12 years of education (Table 2.15). As these mothers are at highest risk of consuming alcohol during pregnancy and consequently delivering a child with FAS, they present a possible target group for increased educational campaigns on the risk of consuming alcohol while pregnant.

[1] Mayo Clinic. Fetal Alcohol Syndrome. Accessed 11/8/2018. Available at https://www.mayoclinic.org/diseases-conditions/fetal-alcohol-syndrome/symptoms-causes/syc-20352901

Table 2.15 Fetal Alcohol Syndrome (FAS) by Select Birth Characteristics, Alaska, 2007–2013

	Number of Reports[1]	Estimated Number of Defects[2]	Birth Prevalence (CI)[3]
Gender			
Female	185	62.2	1.6 (1.3, 2.1)
Male	219	71.2	1.7 (1.4, 2.2)
Birth Weight			
Under 2500 grams	110	27.6	6.0 (4.0, 8.6)
Over 2500 grams	294	105.8	1.4 (1.2, 1.7)
Maternal Race			
Alaska Native/American Indian	258	69.5	3.5 (2.7, 4.4)
Asian/Pacific Islander	13	6.6	0.9 (0.4, 1.9)
Black	13	4.6	1.4 (0.5, 3.2)
White	113	50.7	1.1 (0.8, 1.4)
Maternal Age			
12-19 years	43	13.3	2.0 (1.1, 3.3)
20-24 years	115	37.9	1.7 (1.2, 2.3)
25-29 years	118	39.3	1.6 (1.2, 2.2)
30-34 years	69	24.4	1.5 (1.0, 2.1)
35-39 years	46	14.5	1.9 (1.1, 3.1)
40+ years	13	4.0	2.0 (0.8, 5.1)
Maternal Education			
Less than 12 years	112	29.6	3.9 (2.7, 5.5)
12 years	183	57.4	1.9 (1.5, 2.5)
More than 12 years	81	38.7	1.0 (0.7, 1.3)
Marital Status			
Married	66	40.9	0.8 (0.6, 1.1)
Unmarried	337	92.3	3.2 (2.6, 3.9)
Maternal Tobacco Use			
Reported smoking	261	65.8	5.7 (4.4, 7.1)
Reported not smoking	131	64.5	1.0 (0.8, 1.2)

[1] Number of unique reports of FAS received by the Alaska Birth Defects Registry (ABDR) during the specified birth year(s). Each report represents a unique child with FAS.
[2] Estimated true number of reports that are diagnosed defects based on medical record review and case confirmation.
[3] Prevalence reported per 1,000 live births; CI = 95% Confidence Interval

Table 2.16. Number of Fetal Alcohol Syndrome (FAS) Births in Alaska by Maternal Age, 2007–2013

	Maternal Age				
	19 years and Younger		**20 years and Older**		**All Ages**
	Count	% of Total	Count	% of Total	Count
Number of Reports[1]	43	10.6%	361	89.4%	404
Estimated Number of Defects[2]	13.3	10.0%	120.1	90.0%	133.4
Total live births	6,743	8.5%	72,512	91.5%	79,255

1 Number of unique reports of FAS received by the Alaska Birth Defects Registry (ABDR) during the specified birth year(s). Each report represents a unique child with FAS.

2 Estimated true number of reports that are diagnosed defects based on medical record review and case confirmation.

Problem Statement: Illicit Drug-Related Consequences

NOTE: *Beginning January 1, 2011, the Alaska Trauma Registry (ATR) discontinued data collection on adult poisonings, with the exception of work-related and non-intentional inhalation poisonings. As a result, drug-related ATR data (i.e. hospitalized injuries associated with drug use) are not reported here and Health Facilities Data Reporting (HFDR) Program data from 2015–2016 are being reviewed to fill this gap.*

Alaska is currently experiencing its highest rate of drug overdose mortality in the past decade[1]. This rise, which is widespread across all U.S. states, is driven primarily by misuse of prescription and illicit opioids, compounded by use of other illicit and prescription drugs[1]. Addiction impacts not only the drug user but the community, with societal impacts of the current opioid epidemic including increased crime rates; decreased workforce and productivity; increased rates of bloodborne infections, such as HIV and hepatitis B and C, that are spread through injection drug use; increased health care costs; breakdown of families and interpersonal relationships; and added strain on law enforcement, court systems, hospitals and emergency rooms, and other institutions[2].

[1] Alaska Division of Public Health, Health Analytics and Vital Records. Alaska Facts and Figures – 2017 Drug Overdose Mortality Update. Released November 8, 2018. Available at: http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/2017_Drug_OD_Data%20Brief.pdf

[2] Alaska Epidemiology *Bulletin*. "Health Impacts of Opioid Misuse in Alaska". Volume 20, No. 3, August 8, 2018. Available at: http://epibulletins.dhss.alaska.gov/Document/Display?DocumentId=1984

Data Analysis

Mortality data were provided by the Alaska Health Analytics and Vital Records Section. Injury and other consequence data were provided by the Alaska Trauma Registry and the Alaska Department of Education and Early Development.
All rates were calculated per 100,000 persons and age-adjusted to the 2000 Census population.
Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
Rates based on fewer than 6 events are not reported.

Alaska Health Analytics and Vital Records Section (HAVRS)
http://dhss.alaska.gov/dph/VitalStats/Pages/default.aspx

During 2012–2016, the drug-induced death rate in Alaska was similar to the national rate (Table 2.17). Prevalence of drug-induced mortality was higher among Alaskan males than females for age groups 0–24 years and 25–64 years, but was higher among female Alaskans aged 65 years or older than males of the same age (Table 2.18). Rates were more than five times greater in the 25–64 years age group than the 0–24 years and 65+ years age groups (26.8 per 100,000 persons compared to 5.1 and 5.3 per 100,000 persons, respectively; Table 2.18). Rates were higher among American Indian/Alaska Native (AI/AN) people than those of other races, with AI/AN females age 25–64 years experiencing the highest drug-induced mortality rate of any group (Table 2.18). Drug-induced death rates by region were highest in the Kenai Peninsula Borough, which experienced a rate 37% higher than the statewide average during 2012–2016 (23.0 per 100,000 persons compared to 16.8 per 100,000 persons; Chart 2.11). The Y-K Delta region experienced the lowest drug-induced mortality rate, approximately 60% lower than the statewide average (6.5 per 100,000 persons compared to 16.8

per 100,000 persons; Chart 2.12).

A large portion of Alaska's overdose death rate is due to opioid overdose, with prescription opioid overdoses occurring at a higher rate than overdoses on illicit opioids, such as heroin (Chart 2.13). However, the rate of illicit opioid overdose deaths in 2016 was more than 15 times the rate in 2010 (7.8 per 100,000 persons in 2016 compared to 0.5 per 100,000 persons in 2010), while the rate of prescription opioid overdose deaths remained relatively stable over this time (7.9 per 100,000 persons in 2016 compared to 7.3 per 100,000 persons in 2010; Chart 2.13).

Table 2.17. Comparison of Drug Induced Death Rates, Alaska and the U.S., 2012–2016

Mortality Indicator	Alaska Age-Adjusted Rate[1]	U.S. Age-Adjusted Rate[1]
Drug Induced Deaths	16.8	16.5

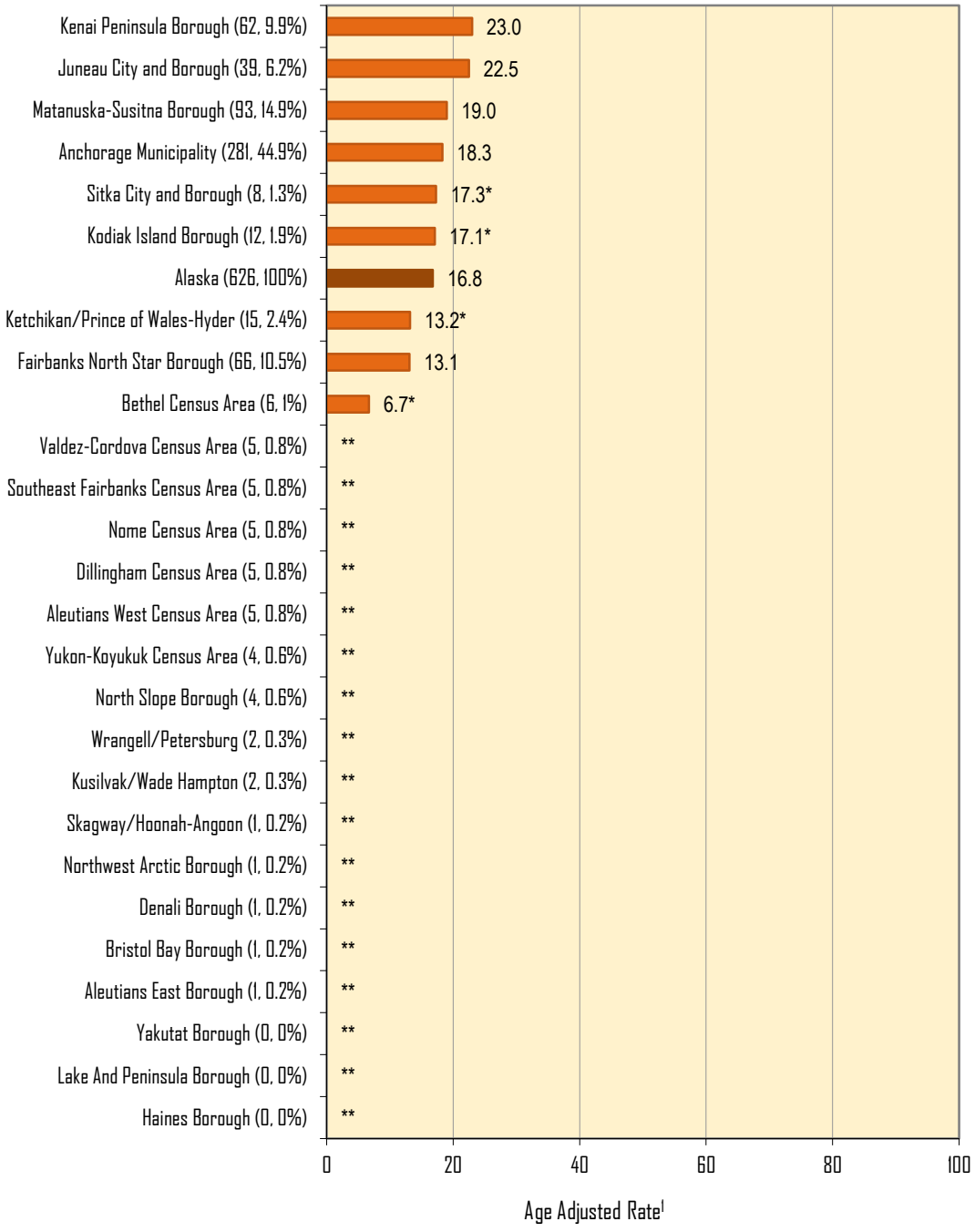
[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Table 2.18. Number and Rate of Drug Induced Deaths by Age, Gender, and Race, Alaska Residents, 2012–2016

	Age 0–24		Age 25–64		Age 65+		All Ages	
	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]
Female								
Asian/Pacific Islander	0	**	2	**	0	**	2	**
Black	2	**	8	22.4*	0	**	10	12.5*
American Indian / Alaska Native	5	**	64	43.5	1	**	70	22.5
White	14	3.6*	136	19.3	9	6.6*	159	12.9
All Races	21	3.4	213	21.9	10	5.6*	244	13.7
Male								
Asian/Pacific Islander	2	**	9	12.4*	0	**	11	7.9*
Black	0	**	14	29.8*	2	**	16	16.8*
American Indian / Alaska Native	11	7.4*	58	39.3	0	**	69	21.8
White	30	7.0	241	30.9	7	4.9*	278	20.5
All Races	45	6.6	327	31.2	9	5.1*	381	20.0
Total								
Asian/Pacific Islander	2	**	11	7.0*	0	**	13	4.4*
Black	2	**	22	26.6	2	**	26	14.9
American Indian / Alaska Native	16	5.5*	122	41.4	1	**	139	22.1
White	45	5.5	377	25.4	16	5.7*	438	16.9
All Races	67	5.1	540	26.8	19	5.3*	626	17.0

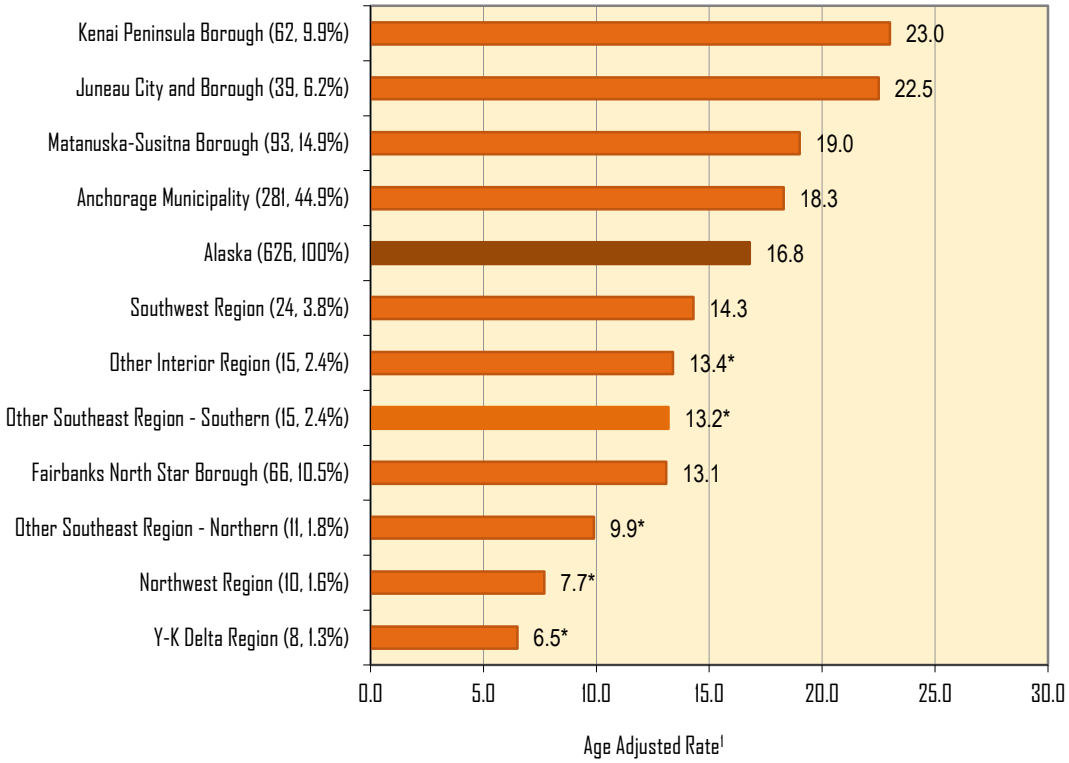
[1] Events per 100,000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.11. Drug Induced Death and Rates by Borough/Census Area, Alaska Residents, 2012–2016
Borough/Census Area (# of death, % of statewide total)



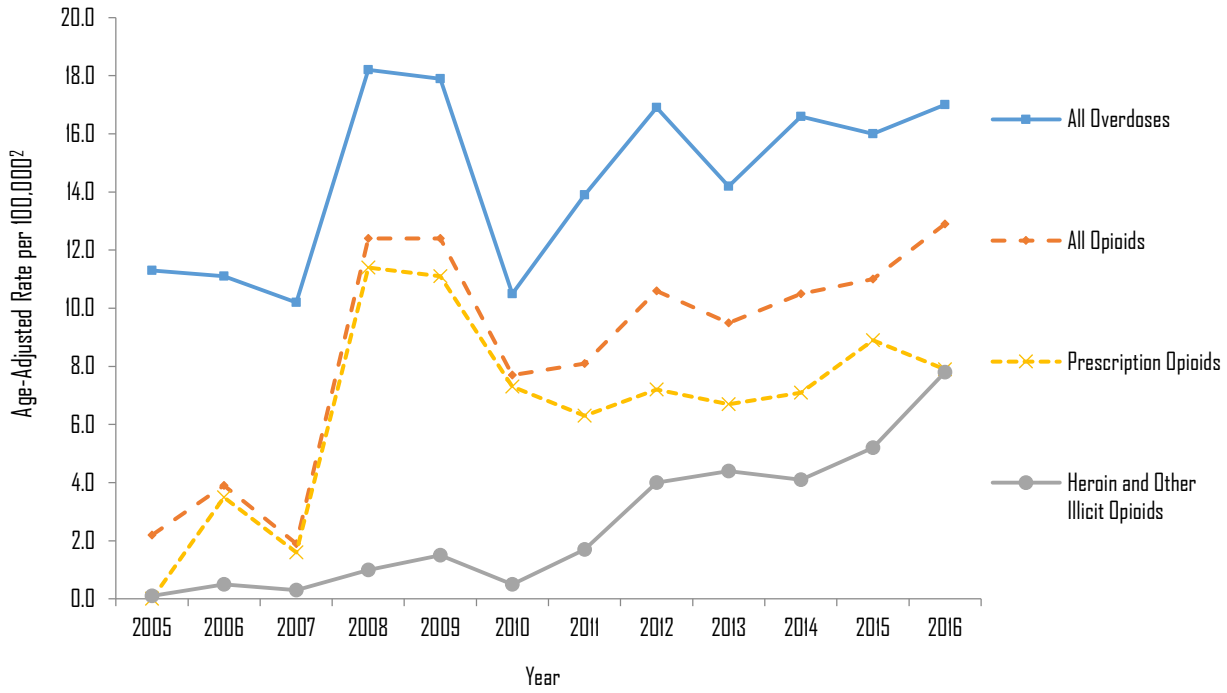
[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.12. Drug Induced Death and Rates by Behavioral Health Regions, Alaska Residents, 2012–2016
(NEW) Region (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

Chart 2.13. Alaska Overdose Mortality[1], Age-Adjusted Rates, 2005–2016 (preliminary) (NEW)



[1] Alaska Residents
[2] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.
Source: Alaska Epidemiology *Bulletin*. "Update on Drug Overdose Deaths – Alaska, 2016". No. 11, April 20, 2017. Available at http://epibulletins.dhss.alaska.gov/Document/Display?DocumentId=1937.

Out-of-School Suspensions and Expulsions Due to Illicit Drugs

From the 2011–2012 school year through the 2015–2016 school year, there were 3,112 illicit drug-related out-of-school suspensions (approx. 622 suspensions per school year; Table 2.19) and 103 illicit drug-related school expulsions (approx. 20 expulsions per school year; Table 2.20). Suspensions and expulsions for illicit drugs occurred more frequently than for alcohol, at a ratio of 5 drug-related suspensions for every alcohol-related suspension and 12 drug-related expulsions for every alcohol-related expulsion. High school students accounted for 81% of illicit drug-related suspensions and 88% of illicit drug-related expulsions. The number of high school students expelled for an illicit drug-related problem deceased 92% over 2011–2016 (from 38 to 3 expulsions), while the number of high school students suspended for a drug-related problem increased 16% (from 462 to 534 suspensions).

Table 2.19. Trends in Illicit Drug Related Out-of-School Suspensions, Alaska, 2011–2016

	School Year					
	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2011–2016
Elementary School	2	9	3	7	2	23
Middle School	99	124	107	126	110	566
High School	462	498	466	563	534	2523

Source: Department of Education and Early Development, accessed December 12, 2017.

Table 2.20. Trends in Illicit Drug Related School Expulsions, Alaska, 2011–2016

	School Year					
	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2011–2016
Elementary School	0	0	0	0	0	0
Middle School	5	3	0	2	2	12
High School	38	28	13	9	3	91

Source: Department of Education and Early Development, accessed December 12, 2017.

Problem Statement: Tobacco Use Related Consequences

The link between lung cancer and cigarette use has been well established since the mid-1900s[1]. Since then, smoking has been found to harm nearly every organ of the body and tobacco use has been named the leading cause of preventable death in the United States[2]. Despite this, every day more than 2,000 Americans under age 18 try their first cigarette[2]. Tobacco use continues to be a problem in Alaska as well, where an estimated 680 Alaskans die every year due to smoking alone, not including the harm caused by exposure to secondhand smoke[3].

[1] Proctor, RN. The history of the discovery of the cigarette–lung cancer link: evidentiary traditions, corporate denial, global toll. *Tobacco Control* 2012; 21: 87–91. https://tobaccocontrol.bmj.com/content/tobaccocontrol/21/2/87.full.pdf

[2] CDC, Office of Smoking and Health. Smoking and Tobacco Use. Accessed November 9, 2018. Available at https://www.cdc.gov/tobacco/about/osh/index.htm

[3] Alaska Tobacco Prevention and Control Program. FY 2017 Annual Report. Released February 2018. Available at http://dhss.alaska.gov/dph/Chronic/Documents/Tobacco/PDF/TobaccoARFY17.pdf

Data Analysis

Mortality data were provided by the Alaska Health Analytics and Vital Records Section. All rates were calculated per 100,000 persons. All rates were calculated per 100,000 persons and age-adjusted to the 2000 Census population. *Rates based on fewer than 20 events are statistically unreliable and should be used with caution. Rates based on fewer than 6 events are not reported.*

Alaska Health Analytics and Vital Records Section (HAVRS)

http://dhss.alaska.gov/dph/VitalStats/Pages/default.aspx

Definitions of tobacco use related consequences:

Smoking related deaths are defined by deaths that meet either of the following conditions:

a. Tobacco use indicated as a confirmed or probable factor.
b. Nicotine, cotinine, tobacco, or cigarette(s) are cited in the underlying or contributing cause of death description, injury description, or significant conditions literal text fields.

During 2012–2016, the rate of smoking-related death in Alaska was less than half the U.S. rate (121.6 per 100,000 persons compared to 247.8 per 100,000 persons; Table 2.21). However, tobacco use continues to be a substantial public health problem in Alaska. Despite growing emphasis on drug abuse, the rate of smoking-related death in Alaska during 2012–2016 was more than 2.5 times the rate of alcohol-induced deaths, chronic liver disease and cirrhosis deaths, and drug-induced deaths combined (Table 2.21).

As expected, the prevalence of smoking-related death increased with age, with Alaskans 65+ years of age experiencing ten times greater rates of smoking-related death over 2012–2016 than Alaskans aged 25–64 years (652.7 per 100,000 persons compared to 62.4 per 100,000 persons, respectively; Table 2.22). The prevalence of smoking-related death was 55% higher among males than females

(121.6 per 100,000 males compared to 78.2 per 100,000 females) and 45% higher among American Indian/Alaska Native people than Whites (145.5 per 100,000 persons compared to 100.1 per 100,000 persons, respectively; Table 2.22). The greatest prevalence of smoking related-death was among American Indian/Alaska Native males aged 65+ years, who experienced a rate 2–3 times greater than that of 65+ year old males of any other race (Table 2.22).

Malignant neoplasms (cancer) are the leading cause of death among Alaskans. A total of 2,316 Alaskans died during 2012–2016 of the select malignant neoplasms listed in Table 2.23. Approximately 27% of these deaths were related to smoking. Smoking also contributed to 11% of deaths due to select cardiovascular diseases and 38% of deaths due to select respiratory diseases (Table 2.23).

Table 2.21. Comparison of Smoking Related Death Rate to Alcohol Induced, Chronic Liver Disease/Cirrhosis, and Drug Induced Death Rates, Alaska Residents, 2012–2016

	Number	Alaska Age-Adjusted Rates[1]	U.S. Age-Adjusted Rates[1]
Alcohol Induced Deaths	730	18.6	7.6
Chronic Liver Disease and Cirrhosis Deaths	491	12.9	9.4
Drug Induced Deaths	626	16.8	12.9
Smoking Related Deaths	**2229**	**121.6**	**247.8**

[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Table 2.22. Smoking Related Deaths[1] by Age, Gender, and Race, Alaska Residents, 2012–2016

	Age 0–24		Age 25–64		Age 65+		All Ages	
	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]
Female								
Asian/Pacific Islander	0	-	7	13.3*	16	181.5*	23	24.2
Black	0	-	3	**	11	365.2*	14	29.0*
American Indian / Alaska Native	1	**	90	100.5	121	780.6	212	112.4
White	1	**	166	39.6	413	481.7	580	78.7
All Races	2	**	267	45.8	567	501.2	836	78.2
Male								
Asian/Pacific Islander	0	-	10	22.4*	28	457.8	38	43.9
Black	0	-	18	63.1*	20	776.1	38	65.8
American Indian / Alaska Native	0	-	139	154.6	203	1,549.4	342	178.1
White	0	-	318	68.5	650	717.9	968	119.6
All Races	0	-	488	77.8	905	805.4	1,393	121.6
Total								
Asian/Pacific Islander	0	-	17	17.5*	44	293.8	61	33.6
Black	0	-	21	41.8	31	553.0	52	49.1
American Indian / Alaska Native	1	**	229	127.6	324	1,132.6	554	145.5
White	1	**	484	54.8	1,063	602.9	1,548	100.1
All Races	2	**	755	62.4	1,472	652.7	2,229	100.7

1 Events per 100,000 population.
*Rates based on fewer than 20 occurrences are statistically unreliable and should be used with caution.
**Rates based on fewer than 6 occurrences are not reported.

Table 2.23. Smoking Related Mortality by Select Cause of Death, Alaska Residents, 2012–2016

	Deaths	Smoking Related Deaths	Smoking Related Fraction
Select Malignant Neoplasms			
Lip, Oral Cavity, Pharynx	76	19	0.25
Esophagus	162	32	0.2
Stomach	147	19	0.13
Pancreas	337	22	0.07
Larynx	20	9	0.45
Trachea, Lung, Bronchus	1,250	490	0.39
Cervix Uteri	30	2	0.07
Kidney and Renal Pelvis	107	3	0.03
Urinary Bladder	101	27	0.27
Acute Myeloid Leukemia	86	1	0.01
Total	**2,316**	**624**	**0.27**
Select Cardiovascular Diseases			
Ischemic Heart Disease	2,195	283	0.13
Other Heart Disease	1,450	144	0.1
Cerebrovascular Disease	903	63	0.07
Atherosclerosis	22	4	0.18
Aortic Aneurysm	82	14	0.17
Other Arterial Disease	54	14	0.26
Total	**4,706**	**522**	**0.11**
Select Respiratory Diseases			
Pneumonia, Influenza	287	22	0.08
Bronchus, Emphysema	83	50	0.6
Chronic Airways Obstruction	877	397	0.45
Total	**1,247**	**469**	**0.38**
Total Select Causes	**8,269**	**1,615**	**0.2**

Problem Statement: Alcohol- and Drug-Related Transportation Crashes

Approximately 90 people each day in the United States die as a result of a motor vehicle crash, and an estimated one in three crashes involve a drunk driver[1]. In 2016, Alaska ranked 28th out of the fifty states for motor vehicle deaths, with an age-adjusted rate of 11.4 per 100,000 persons[2]. Comparatively, the national rate of motor vehicle deaths in 2016 was 11.6 per 100,000 persons[2].

[1] CDC Vital Signs. Motor Vehicle Crash Deaths. Accessed November 9, 2018. Available at https://www.cdc.gov/vitalsigns/motor-vehicle-safety/index.html

[2] CDC WISQARS Fatal Injury Data Visualization Tool. Accessed November 9, 2018. Available at https://wisqars-viz.cdc.gov:8006/

Data Analysis

Data on alcohol- and drug-related transportation risk behavior and associated fatalities were provided through the YRBS, the BRFSS, the Fatality Analysis Reporting System (FARS), and other morbidity data sets.

Youth Risk Behavior Survey (YRBS)

http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/yrbsst23/YRBSSelection.html and Informed Alaskans Initiative – Interactive maps and data files may be accessed at: http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/yrbss/yrbss_health_profiles.aspx

Definition of activities associated with drinking and driving:

- **Driving After Drinking** was defined as driving a car or other vehicle within the past 30 days when you had been drinking alcohol.
- **Passenger With a Drinking Driver** was defined as riding in a car or another vehicle within the past 30 days that was driven by someone who had been drinking alcohol.

In 2015, approximately 5.7% of male high school students and 5.1% of female high school students in Alaska reported driving a motor vehicle after drinking (Table 2.24). More than double this percentage of male high school students (13.3%) and nearly triple this percentage of female high school students (15.2%) reported riding as a passenger in a motor vehicle after the driver had been drinking. The prevalence of male high school students who rode as a passenger with a drunk driver decreased significantly from 2011 to 2015. The prevalence of other alcohol-related risk behavior in Alaska did not change significantly over time, nor was there a significant difference in the prevalence of these behaviors among males compared to females. While there was no significant difference between Alaska and the U.S. in the prevalence of alcohol-related risk behaviors among female high school students, males high school students in Alaska were less likely to report both drinking after driving and riding as a passenger in a vehicle with a drunk driver than male students nationwide (Table 2.24).

The prevalence of alcohol-related risk behaviors among Alaskan high school students did not differ significantly by grade level. However, Alaskans in Grade 9 were significantly less likely than 9th graders nationwide to report riding as a passenger in a motor vehicle after the driver had been drinking. Alaska did not differ significantly from the U.S. for other grades and measures (Table 2.25).

Table 2.24. Trends in Motor Vehicle Driving After Drinking Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015

	2011 (95% CI)	**2013** (95% CI)	**2015** (95% CI)	**U.S. 2015** (95% CI)
Female				
% Driving After Drinking*	*	3.0 (1.5, 5.9)	5.1 (3.3, 7.7)	6.0 (4.7, 7.7)
% Passenger With a Drinking Driver	18.1 (14.0, 23.1)	12.3 (9.2, 16.1)	15.2 (12.7, 18.1)	20.2 (17.9, 22.8)
Male				
% Driving After Drinking*	*	3.0 (1.5, 5.9)	5.7 (3.9, 8.2)	9.5 (8.3, 10.9)
% Passenger With a Drinking Driver	18.9 (15.9, 22.4)	13.5 (11.0, 16.3)	13.3 (11.2, 15.8)	19.6 (18.2, 21.1)

* Estimate is not available prior to 2013, this YRBS question did not include the answer option, "I did not drive a car or other vehicle during the past 30 days", and thus the subset of students who had driven a car or vehicle cannot be defined.

Table 2.25. Trends in Motor Vehicle Driving After Drinking Among Traditional High School Students, by Grade, Alaska YRBS, 2011–2015

	2011 (95% CI)	2013 (95% CI)	2015 (95% CI)	U.S. 2015 (95% CI)
Grade 9				
% Driving After Drinking	*	1.3 (0.3, 5.3)	4.6 (1.7, 11.8)	5.6 (4.3, 7.4)
% Passenger With a Drinking Driver	19.5 (15.4, 24.3)	15.8 (11.8, 20.9)	13.0 (9.7, 17.1)	20.2 (17.8, 22.7)
Grade 10				
% Driving After Drinking*	*	2.4 (0.6, 9.5)	4.6 (2.8, 7.3)	5.3 (3.9, 7.1)
% Passenger With a Drinking Driver	18.9 (15.0, 23.4)	10.0 (7.1, 13.9)	14.3 (11.4, 18.0)	18.7 (16.3, 21.3)
Grade 11				
% Driving After Drinking	*	2.6 (1.1, 5.8)	5.1 (2.7, 9.4)	8.7 (6.2, 12.1)
% Passenger With a Drinking Driver	19.5 (14.2, 26.3)	10.3 (7.5, 14.0)	14.4 (10.6, 19.3)	20.6 (18.6, 22.7)
Grade 12				
% Driving After Drinking*	*	5.4 (2.5, 11.4)	7.4 (5.1, 10.8)	9.9 (7.9, 12.3)
% Passenger With a Drinking Driver	16.1 (10.9, 23.2)	16.2 (12.3, 21.1)	15.3 (12.2, 18.9)	20.4 (18.2, 22.8)

*Estimate is not available because prior to 2013, this YRBS question did not include the answer option, "I did not drive a car or other vehicle during the past 30 days", and thus the subset of students who had driven a car or vehicle cannot be defined.

Behavioral Risk Factor Surveillance System (BRFSS)

http://dhss.alaska.gov/dph/Chronic/Pages/brfss/default.aspx

Informed Alaskans Initiative – Interactive maps and data files may be accessed at: http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/brfss/brfss_health_profiles.aspx

Definition of activities associated with drinking and driving:

- **Driving After Drinking** was defined as driving a car or other vehicle within the past 30 days when you had been drinking alcohol.

The Alaska BRFSS collects information pertaining to drinking and driving on even years. During 2010–2016, an average of 1.4% of adult females and 3.5% of adult males in Alaska reported driving a motor vehicle after drinking alcohol at least once in the thirty days prior to the survey (Table 2.26). Males reported higher percentages of driving after drinking than females throughout 2010–2016; however, there was no significant difference in the prevalence of this behavior among males compared to females across this period except in 2012, when males were more than eight times more likely to report driving after drinking than females (Table 2.26). The prevalence of drinking and

driving in Alaska did not differ significantly over time from 2010 to 2016 (Table 2.26), nor did the prevalence differ significantly across age group (Table 2.27).

Table 2.26. Trends in Motor Vehicle Driving After Drinking Among Adults, by Gender, Alaska BRFSS, 2010–2016

	2010 (95% CI)	**2012** (95% CI)	**2014** (95% CI)	**2016** (95% CI)
Female				
% Driving After Drinking	1.9 (0.7, 5.3)	0.4 (0.1, 0.9)	1.7 (0.9, 3.2)	1.6 (0.9, 3.0)
Male				
% Driving After Drinking	4.0 (1.9, 8.0)	3.5 (2.4, 5.1)	3.2 (2.2, 4.7)	3.3 (1.8, 5.8)

Table 2.27. Trends in Motor Vehicle Driving After Drinking Among Adults, by Age Group, Alaska BRFSS, 2010–2016

	2010 (95% CI)	**2012** (95% CI)	**2014** (95% CI)	**2016** (95% CI)
% Drinking After Driving				
Ages 18–24	1.6 (0.2, 10.8)	1.0 (0.2, 6.0)	3.0 (1.0, 8.2)	0.9 (0.1, 6.0)
Ages 25–34	3.7 (0.9, 13.7)	1.8 (0.7, 4.5)	1.9 (0.9, 4.1)	2.8 (1.4, 5.8)
Ages 35–44	3.8 (1.6, 8.5)	3.5 (1.8, 6.6)	4.2 (2.1, 8.1)	2.9 (1.1, 7.5)
Ages 45–64	3.8 (1.5, 9.2)	1.9 (1.0, 3.5)	2.4 (1.6, 3.7)	3.1 (1.4, 6.6)
Ages 65+	0.0	2.0 (0.9, 4.5)	0.8 (0.2, 3.1)	1.4 (0.5, 3.6)

Fatality Analysis Reporting System (FARS)

http://www.dot.state.ak.us/highwaysafety/fars.shtml

Data Analysis

National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), Alaska Fatality Statistics available at: http://www.dot.state.ak.us/highwaysafety/fars.shtml and National Highway Traffic Safety Administration, National Center for Statistics and Analysis, Fatality Analysis Reporting System (FARS) Encyclopedia available at: https://www-fars.nhtsa.dot.gov/Main/index.aspx

During 2012–2016, the total number of fatal crashes in Alaska increased 44% from 54 crashes in 2012 to 78 crashes in 2016 (Table 2.28). The percentage of these crashes that involved alcohol increased as well, from 20% of fatal crashes in 2012 involving an intoxicated driver to 41% of fatal crashes in 2016 involving an intoxicated driver. On average, approximately one in three motor vehicle crash fatalities in Alaska during 2012–2016 was due to an alcohol-related crash (Table 2.28; Chart 2.14). Of these crashes, the majority involved drivers with blood alcohol above the legal limit (≥0.08 g/dL; Chart 2.15).

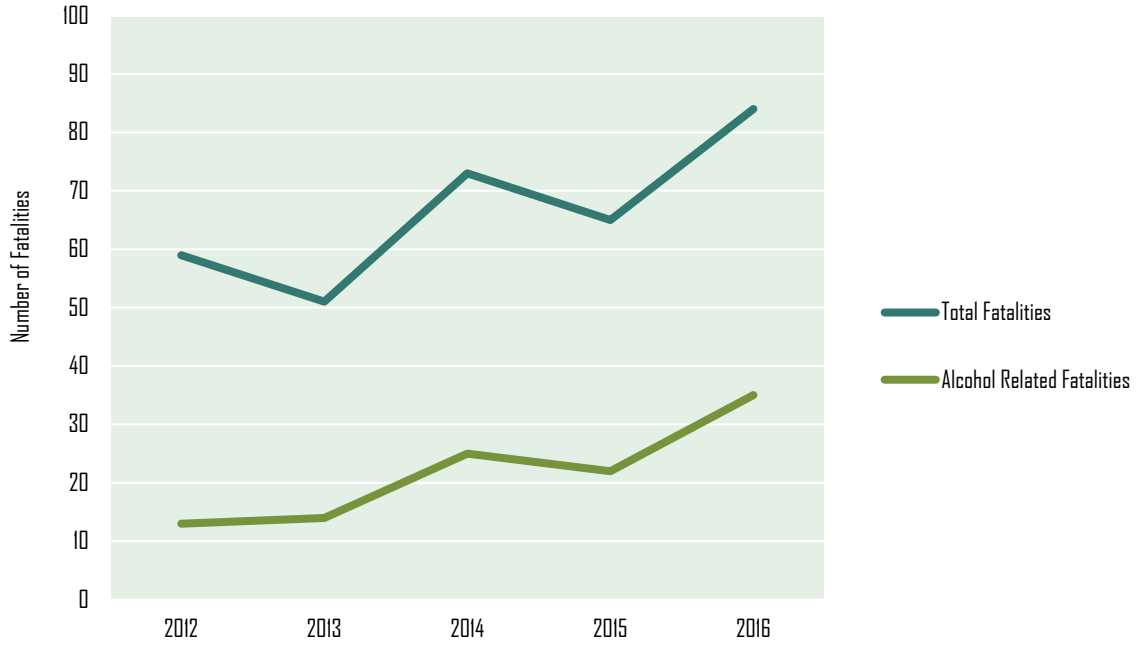
During 2010–2015, a total of 1,638 citations were handed out for alcohol DWI (i.e. driving while intoxicated or impaired; Table 2.29). Approximately half (48%) of these violations occurred in Anchorage, and 9% occurred among drivers who were under the legal age to consume alcohol (21 years of age). The next most common alcohol-related citation given to drivers in motor vehicle crashes during 2010–2015 was for refusing to take a chemical test, for which 66 citations were issued, 21 (32%) in Anchorage and 45 (68%) outside of Anchorage (Table 2.29).

Table 2.28. Fatalities Due to Alcohol-Related[1] Motor Vehicle Crashes, Alaska FARS, 2012–2016

Year	Total Fatal Crashes	Total Fatalities	Alcohol-Related Fatal Crashes	Fatalities Due to Alcohol-Related Crashes	Percent Alcohol Related Crashes	Percent Alcohol Related Fatalities	Total Fatal Crashes
2012	54	59	11	13	20%	22%	54
2013	49	51	13	14	27%	28%	49
2014	68	73	23	25	34%	34%	68
2015	60	65	22	22	37%	34%	60
2016	78	84	32	35	41%	42%	78

[1] 'Alcohol-Related' data are for all drivers with confirmed BAC of .01 or higher

Chart 2.14. Total Motor Vehicle Crash Fatalities Compared to Alcohol-Related[1] Motor Vehicle Crash Fatalities, Alaska FARS, 2012–2016



[1] 'Alcohol-Related' data are for all drivers with confirmed BAC of .01 or higher

Chart 2.15. Trends in Blood Alcohol Concentration (BAC) Collected After Fatal Motor Vehicle Crashes, by Highest Driver BAC in Crash, Alaska FARS, 2012–2016

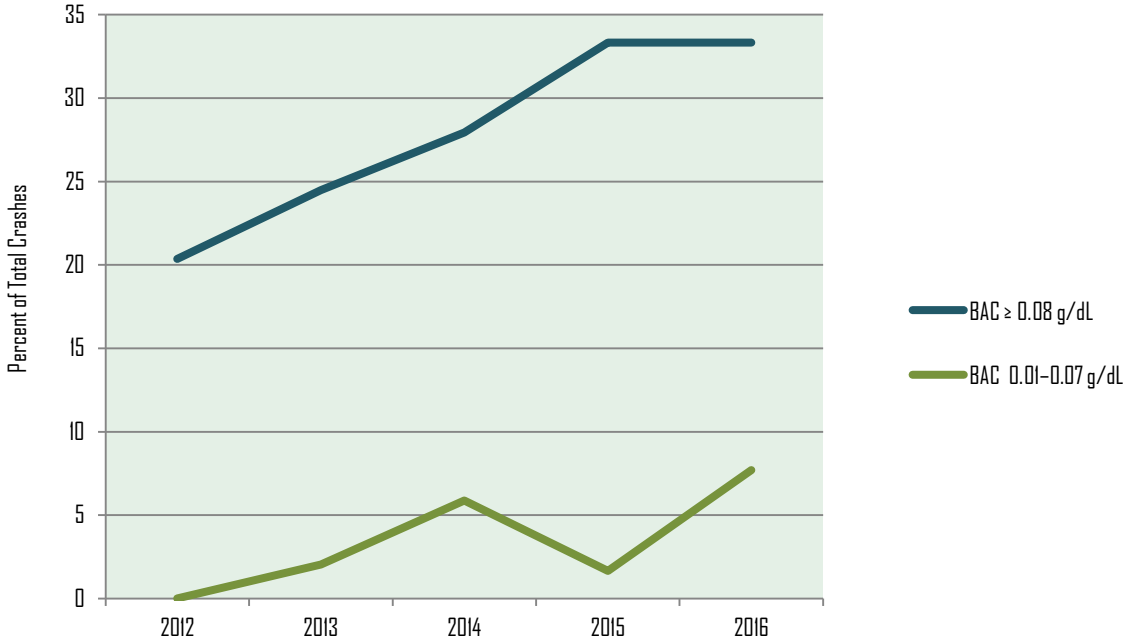


Table 2.29. Citations Issued by Law Enforcement to Motor Vehicle Drivers Involved in Traffic Crashes, by Age Group and Citation, Anchorage and Alaska, 2010–2015

	Age 16–20 Years		Age 21–29 Years		Age 30+ Years		Total
	Number	Percent	Number	Percent	Number	Percent	Number
Anchorage							
Alcohol DWI	54	6.9	330	42.0	402	51.1	786
Intoxicated	0	0.0	1	33.3	2	66.7	3
Refuse Chemical Test	2	9.5	6	28.6	13	61.9	21
Refuse Breathalyzer Test	0	--	0	--	3	100.0	3
Snow Machine Intoxicated	0	--	0	--	0	--	0
Open Alcohol	2	50.0	0	--	2	50.0	4
Minor Operating Vehicle after Consuming Alcohol	6	75.0	2	25.0	0	--	8
Other	2	40.0	0	--	3	60.0	5
Alaska (excluding Anchorage)							
Alcohol DWI	89	10.4	263	30.9	500	58.7	852
Intoxicated	1	100.0	0	--	0	0.0	1
Refuse Chemical Test	2	4.4	12	26.7	31	68.9	45
Refuse Breathalyzer Test	5	18.5	9	33.3	13	48.1	27
Snow Machine Intoxicated	0	--	0	--	0	--	0
Open Alcohol	0	--	5	31.3	11	68.8	16
Minor Operating Vehicle after Consuming Alcohol	38	92.7	3	7.3	0	--	41
Other	0	--	1	25.0	3	75.0	4

Note: The information in Alaska Department of Transportation & Public Facilities is compiled for highway safety planning purposes. Federal law prohibits its discovery or admissibility in litigation against state, tribal or local government that involves a location or locations mentioned in the crash data. 23 U.S.C. § 409; 23 U.S.C. § 148(h)(4); Walden v. DOT, 27 P.3d 297, 304-305 (Alaska 2001). This compilation is derived from crash reports completed by a responding law enforcement officer, or by a citizen, and maintained by DMV. DOT&PF can make no representation about their accuracy.

Drowning and Recreational Boating Fatality Database

Boating under the influence is just as dangerous as drinking and driving, if not more so. Not only are boating accidents accompanied by risk of drowning, recreational boaters often have less experience behind the wheel of a boat than motor vehicle drivers have behind the wheel of a car. The U.S. Coast Guard estimates that alcohol is involved in approximately a third of all recreational boating fatalities[1].

[1] U.S. Coast Guard. "BUI Initiatives". Accessed November 13, 2018. Available at http://www.uscgboating.org/recreational-boaters/boating-under-the-influence.php

Data Analysis

Alaska Department of Natural Resources, Office of Boating Safety at:
http://dnr.alaska.gov/parks/boating

During 2012–2016, a total of 102 recreational boating accidents occurred in Alaska; of these, 47 (46%) were fatal accidents, resulting in a total of 61 fatalities (Chart 2.16, 2.17). Between 2015 and 2016, the number of recreational boating fatalities more than doubled (from 7 deaths in 2015 to 16 deaths in 2016), reaching the highest recreational boating fatality count in Alaska since 2012 (Chart 2.16). In 2016, half of all recreational boating fatalities were related to alcohol use (Chart 2.17, 2.18).

Chart 2.16. Recreational Boating Fatalities, Alaska, 2012–2016

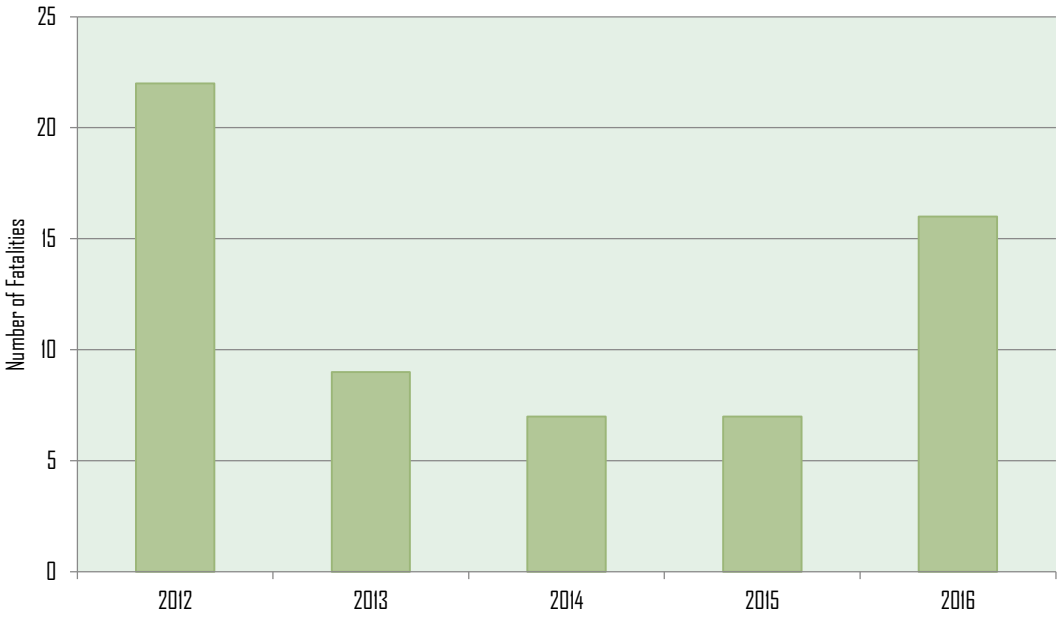


Chart 2.17. Recreational Boating Accidents, Fatal Accidents, and Deaths, Alaska, 2012–2016

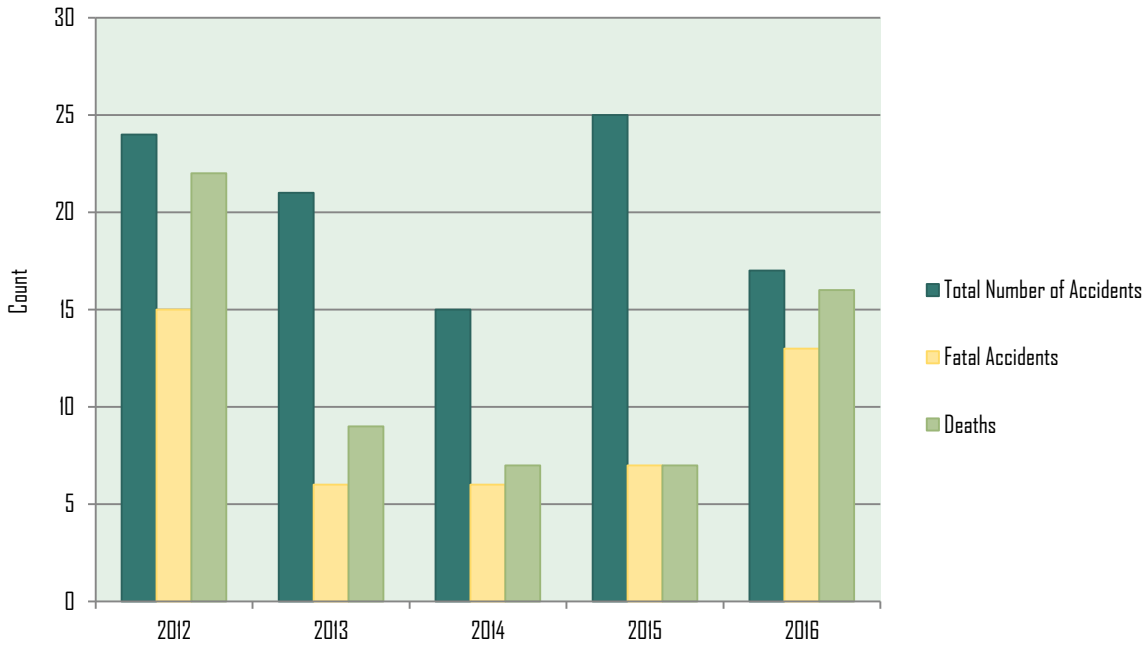
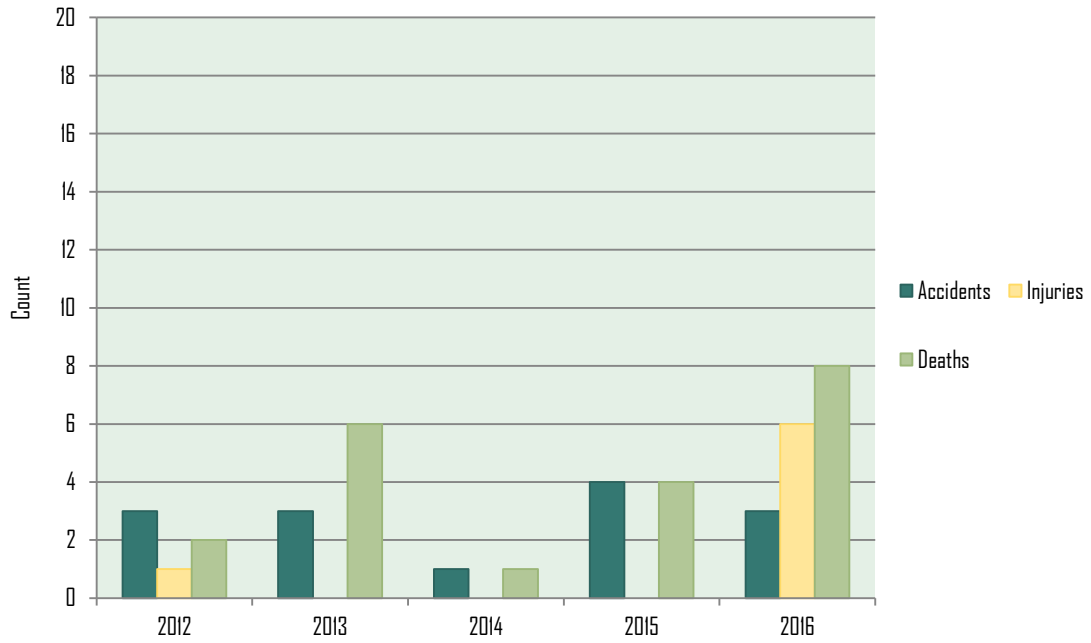


Chart 2.18. Boating Accidents, Injuries and Deaths Related to Alcohol Use, Alaska 2012–2016



Problem Statement: Other Consequences Related to Substance Abuse and Dependency

Substance abuse and dependency is associated with a wide range of consequences beyond those discussed in the previous sections. Alcohol and drug use impairs judgement and lowers inhibitions, making the user more susceptible to risky sexual activity and exposure to sexually transmitted diseases, such as HIV and viral hepatitis. Among adolescents, substance use has been associated with behaviors such as ever having sex, having multiple sex partners, not using a condom, and becoming pregnant before age 15[1]. Substance use is also known to play a role in suicide and other violent deaths and has been associated with increased rates of property crime and other misconduct[2,3].

[1] CDC. "Substance Use and Sexual Risk Behaviors Among Youth". Updated July 2018. Available at https://www.cdc.gov/healthyyouth/substance-use/pdf/dash-substance-use-fact-sheet.pdf

[2] CDC Morbidity and Mortality Weekly Report (MMWR). "Surveillance for Violent Deaths – National Violent Death Reporting System, 18 States, 2014". Released February 2, 2018. Available at https://www.cdc.gov/mmwr/volumes/67/ss/ss6702a1.htm

[3] Alaska State Troopers Statewide Drug Enforcement Unit. "2017 Annual Drug Report". Released September 2018. Available at https://dps.alaska.gov/getmedia/1c42905b-dc16-453e-aad5-cfc99d9bc425/2017-Annual-Drug-Report-Final-083018

Data Analysis

Data on other consequences related to substance abuse and dependency were provided through the following data providers: the Youth Risk Behavior Survey (YRBS), the Alaska Health Analytics and Vital Records Section (HAVRS), the Alaska Violent Death Reporting System (AKVDRS), Alaska Occupational Injury Surveillance (OIS), the Uniform Crime Report (UCR), Alaska Juvenile Justice, and the Alaska Bureau of Investigation Statewide Drug Enforcement Unit (SDEU).

Youth Risk Behavior Survey (YRBS)

http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx

Informed Alaskans Initiative – Interactive maps and data files may be accessed at:
http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/yrbss/yrbss_health_profiles.aspx

Prevalence of teen sexual behavior did not change significantly over 2011–2015, and did not differ significantly among high school students in Alaska compared to students nationwide (Table 2.30). The likelihood of students in Alaska reporting ever having sex, having sex with ≥4 partners, and being currently sexually active increased significantly with increasing grade level. In 2015, the percentage of twelfth grade students reporting ever having sex was more than triple the percentage of ninth grade students reporting the same (56.9% of twelfth grade students compared to 17.0% of ninth grade students; Table 2.30). The percentage of students reporting being currently sexually active nearly doubled between ninth and tenth grade (11.1% among ninth graders and 20.9% among tenth graders), and doubled again between tenth and twelfth grade (20.9% among tenth graders and 43.2% among twelfth graders; Table 2.30). Of twelfth graders who reported being sexually active, 59.6% reported using a condom during their last sexual intercourse.

Table 2.30. Trends in Reported Sexual Behavior Among Traditional High School Students, by Grade, Alaska YRBS

	2011 (95% CI)	**2013** (95% CI)	**2015** (95% CI)	**U.S. 2015** (95% CI)
9th Grade				
% Ever Had Sexual Intercourse	22.4 (17.1, 28.9)	20.0 (15.5, 25.5)	17.0 (12.1, 23.5)	24.1 (20.8, 27.7)
% Had Sex Before Age 13	4.2 (2.7, 6.4)	3.2 (1.6, 6.7)	2.5 (0.9, 6.4)	3.6 (2.6, 4.8)
% Had Sex With ≥4 Partners	4.2 (2.7, 6.3)	4.2 (2.4, 7.2)	2.0 (0.9, 4.7)	4.9 (3.7, 6.5)
% Currently Sexually Active	14.8 (11.0, 19.6)	11.0 (8.0, 14.9)	11.1 (7.9, 15.3)	15.7 (13.5, 18.1)
Among Sexually Active, % Who Used a Condom During Last Sexual Intercourse	*	*	*	60.5 (54.8, 65.9)
10th Grade				
% Ever Had Sexual Intercourse	35.7 (29.3, 42.7)	35.1 (28.3, 42.5)	32.3 (27.4, 37.7)	35.7 (29.9, 42.0)
% Had Sex Before Age 13	6.5 (3.6, 11.3)	7.1 (4.2, 11.7)	3.2 (1.5, 6.9)	4.7 (3.7, 6.1)
% Had Sex With ≥4 Partners	5.7 (3.6, 9.0)	10.1 (6.4, 15.6)	7.3 (5.3, 9.9)	9.0 (7.1, 11.3)
% Currently Sexually Active	20.4 (16.3, 25.2)	23.6 (18.6, 29.4)	20.9 (16.8, 25.7)	25.5 (21.5, 29.9)
Among Sexually Active, % Who Used a Condom During Last Sexual Intercourse	*	*	*	59.9 (54.2, 65.4)
11th Grade				
% Ever Had Sexual Intercourse	47.2 (40.6, 53.8)	43.8 (36.0, 51.8)	40.7 (35.1, 46.5)	49.6 (45.1, 54.1)
% Had Sex Before Age 13	3.7 (2.1, 6.6)	5.1 (3.0, 8.4)	4.9 (2.6, 9.0)	3.2 (2.5, 4.3)
% Had Sex With ≥4 Partners	12.7 (8.9, 17.8)	10.7 (7.4, 15.2)	8.1 (5.1, 12.5)	13.4 (11.3, 15.8)
% Currently Sexually Active	30.7 (25.1, 36.9)	25.7 (19.5, 33.1)	29.3 (24.9, 34.2)	35.5 (31.7, 39.4)
Among Sexually Active, % Who Used a Condom During Last Sexual Intercourse	*	*	*	57.7 (52.9, 62.2)
12th Grade				
% Ever Had Sexual Intercourse	48.8 (38.9, 58.8)	58.9 (52.1, 65.4)	56.9 (49.3, 64.1)	58.1 (53.8, 62.3)
% Had Sex Before Age 13	2.6 (1.1, 6.4)	2.6 (1.1, 5.9)	3.9 (2.4, 6.2)	3.6 (2.7, 4.8)
% Had Sex With ≥4 Partners	16.3 (12.6, 20.7)	18.0 (13.9, 22.9)	18.7 (13.7, 25.0)	19.2 (16.2, 22.6)
% Currently Sexually Active	35.7 (27.9, 44.3)	40.7 (32.5, 49.5)	43.2 (36.2, 50.5)	46.0 (42.3, 49.7)
Among Sexually Active, % Who Used a Condom During Last Sexual Intercourse	*	56.5 (48.8, 64.0)	59.6 (48.1, 70.2)	52.9 (48.7, 57.1)

*Data were suppressed because 1) the sample size is ≤100 students, 2) the observed number of events could be used to calculate the number in a cell that has been suppressed, or 3) the relative standard error is greater than 50% or can't be determined.

Intentional Injury Associated with Substance Use

In 2016, injury intentional due to intentional self-harm (suicide) was the tenth leading cause of death in the U.S. overall and the second leading cause of death for Americans aged 10–34 years[1]. Intentional injury caused by another individual (assault) was the third leading cause of death (homicide) for Americans aged 15–34 years and the fourth leading cause for children aged 1–14 years. In Alaska, suicide is the fifth leading cause of death and homicide is the tenth leading cause of death.[2] Intentional injury deaths account for more years of potential life lost than any other cause of death[2]. Substance use is known to increase the risk of intentional injury, and some studies suggest that 25% or more of drug overdoses are actual incidents of self-harm.[3]

[1] National Vital Statistics System, National Center for Health Statistics, CDC. 10 Leading Causes of Death by Age Group, United States – 2016. Available at: https://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_age_group_2016_1056w814h.gif

[2] State of Alaska, Department of Health and Social Services. Alaska Vital Statistics 2017 Annual Report. October 2018. Available at http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/VitalStatistics_Annualreport_2017.pdf

[3] Rockett IRH, Hobbs GR, Wu D et al. Variable Classification of Drug-Intoxication Suicides across US States: A Partial Artifact of Forensics? *PLoS ONE* 2015;10(8):e0135296

Alaska Health Analytics and Vital Records

http://dhss.alaska.gov/dph/VitalStats/Pages/default.aspx

Data Analysis

Mortality data were provided by the Alaska Health Analytics and Vital Records Section. Injury and other consequence data were provided by the Alaska Trauma Registry and the Alaska Department of Education and Early Development.

All rates were calculated per 100,000 persons and age-adjusted to the 2000 Census population. *Rates based on fewer than 20 events are statistically unreliable and should be used with caution. Rates based on fewer than 6 events are not reported.*

During 2012–2016, approximately three Alaskans died of suicide for every one Alaskan who died of homicide (Table 2.31). The homicide rate in Alaska during 2012–2016 was slightly higher than the national homicide rate (6.2 per 100,000 Alaskans compared to 5.4 per 100,000 persons nationwide). The suicide rate in Alaska was nearly double the national suicide rate (24.2 per 100,000 Alaskans compared to 13.4 per 100,000 persons nationwide; Table 2.31).

The suicide rate among Alaskan males during 2012–2016 was more than three times the rate among females (37.2 per 100,000 males compared to 10.3 per 100,000 females; Table 2.32). The suicide rate among American Indian/Alaska Native (AI/AN) people was more than twice the rate among Whites and Blacks, and more than four times the rate among Asian/Pacific Islanders. Suicide was more prevalent among Alaskans aged 25–64 years than Alaskans of other age groups, and the highest prevalence of suicide of any group during 2012–2016 was among AI/AN males aged 25–64 years (Table 2.32).

Kusilvak/Wade Hampton experienced the highest suicide rate by borough/census area with a rate of 126.5 per 100,000 persons, more than five times the statewide rate of 24.2 per 100,000 persons (Chart 2.19). The Y-K Delta region experienced the highest suicide rate by behavioral health region with a rate of 67.7 per 100,000 persons, nearly three times the statewide rate (Chart 2.20). The Other Southeast – Southern region experienced the lowest suicide rate by behavioral health region with a rate of 13.4 per 100,000 persons, approximately half the statewide rate (Chart 2.20)

Table 2.31. Comparison of Violent Death Rates, Alaska and the U.S., 2012–2016

	Alaska Age-Adjusted Rate[1]	U.S. Age Adjusted-Rate[1]
Homicides	6.2	5.4
Suicides	24.2	13.4

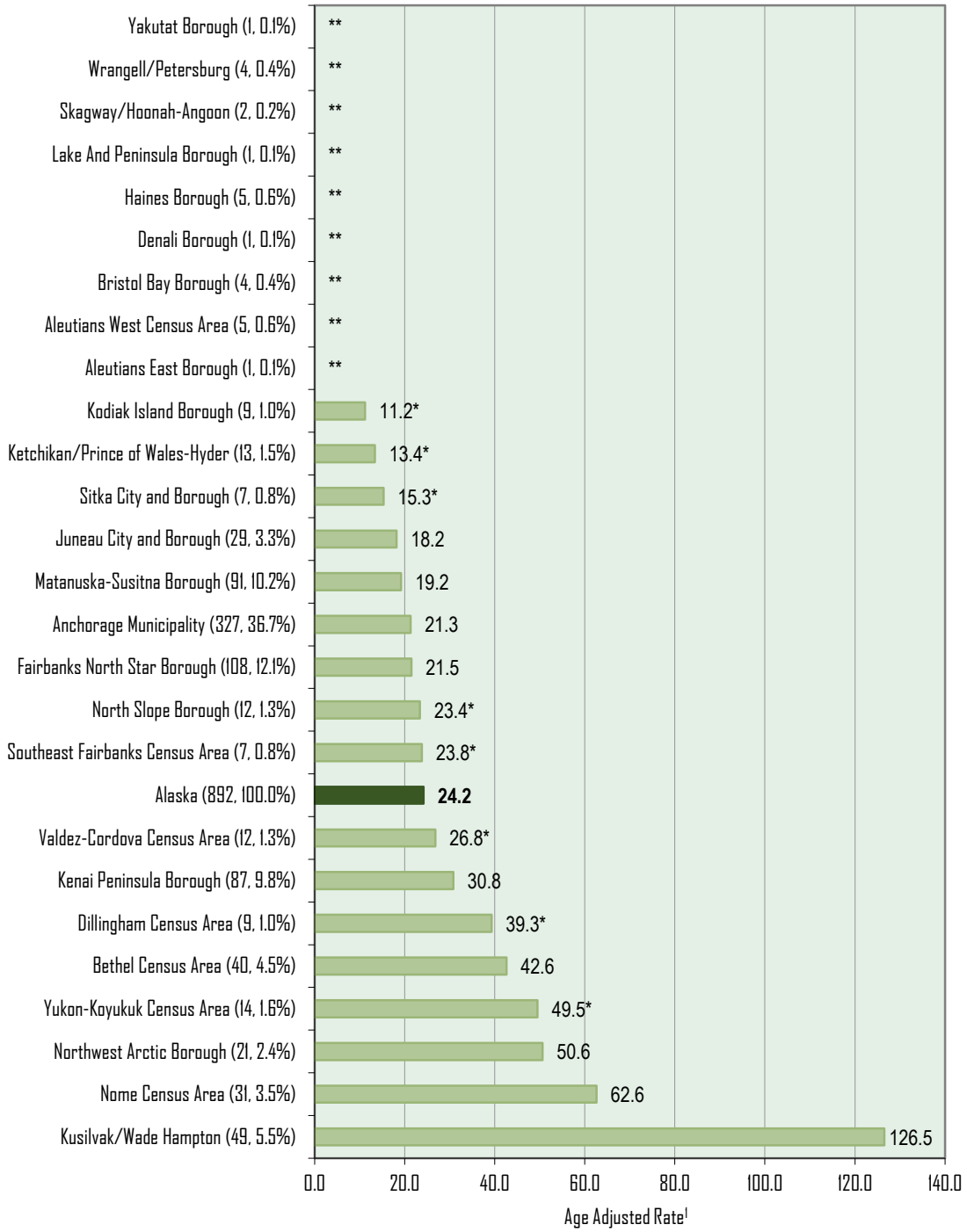
[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population.

Table 2.32. Suicide Deaths by Age, Gender, and Race, Alaska, 2012–2016

	Age 0–24		Age 25–64		Age 65+		All Ages	
	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]	Deaths	Rate[1]
Female								
Asian/Pacific Islander	1	**	3	**	0	**	4	**
Black	6	15.4*	3	**	0	**	9	11.3*
American Indian / Alaska Native	23	16.4	32	21.8	1	**	56	18.0
White	13	3.3*	91	12.9	7	5.1*	111	9.0
All Races	43	6.9	132	13.6	8	4.5*	183	10.3
Male								
Asian/Pacific Islander	7	12.1*	16	22.1*	0	**	23	16.5
Black	5	**	17	36.2*	0	**	22	23.1
American Indian / Alaska Native	91	61.2	121	82.0	3	**	215	67.9
White	83	19.3	304	39.0	47	32.9	434	32.1
All Races	189	27.8	469	44.8	50	28.3	709	37.2
Total								
Asian/Pacific Islander	8	7.1*	19	12.1*	0	**	27	9.2
Black	11	13.2*	20	24.2	0	**	31	17.7
American Indian / Alaska Native	114	39.5	153	52.0	4	**	271	43.1
White	96	11.7	395	26.6	54	19.4	545	21.1
All Races	232	17.8	601	29.8	58	16.3	892	24.2

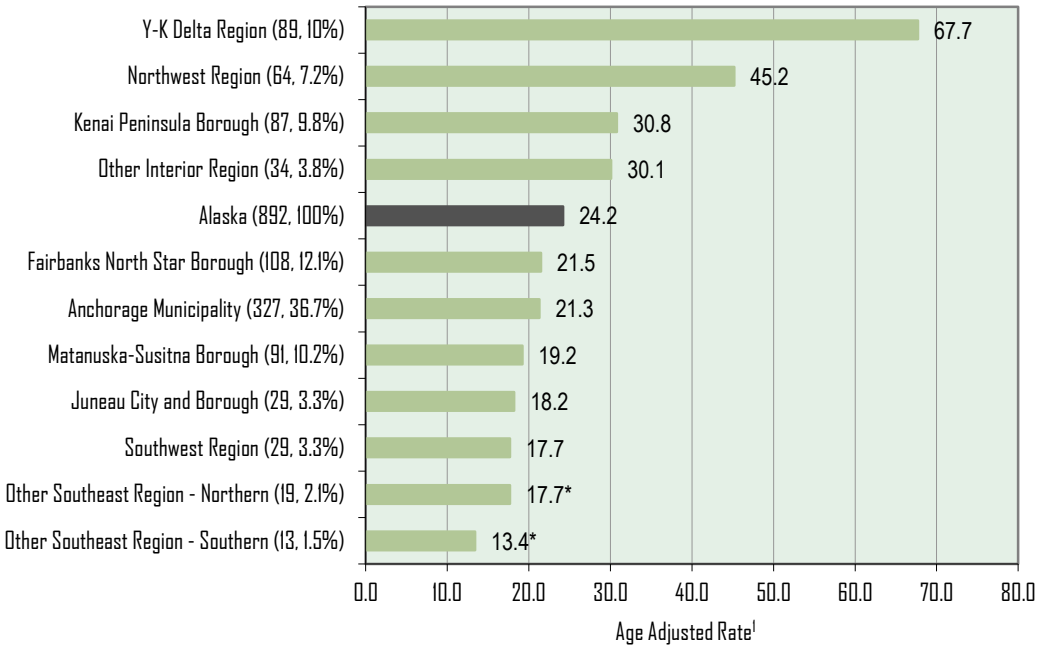
[1] Events per 100,000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.19. Suicide Deaths and Rates by Borough/Census Area, Alaska, 2012–2016
Borough/Census Area (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population..
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Chart 2.20. Suicide Deaths and Rates by Behavioral Health Regions, Alaska Residents, 2012–2016 (NEW)
Region (# of death, % of statewide total)



[1] Events per 100,000 population; age-adjusted rates calculated using Census 2000 population..
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Alaska Violent Death Reporting System (AKVDRS)

http://dhss.alaska.gov/dph/Epi/injury/Pages/akvdrs/default.aspx

The Alaska Violent Death Reporting System (AKVDRS) is Alaska's component of the Centers for Disease Control and Prevention (CDC) National Violent Death Reporting System (NVDRS) is a state-based surveillance system that links data on violent deaths from multiple sources, including death certificates, medical examiner reports, toxicology reports (including prescription medications (licit) and illicit drugs), and law enforcement reports. AKVDRS collects data on all deaths occurring in Alaska regardless of state residence. The data is entered into the NVDRS database that links information from the aforementioned documents to overcome limitations of conducting analyses of the separate data sources. Some of these limitations include:

- Vital statistics data do not include important information about the circumstances under which suicides occur or the offender-victim relationship in homicide-suicide cases;
- Vital statistics data are victim-based and provide no method of linking multiple victim incidents (e.g., circumstances associated with anniversary dates, crisis factors);
- Vital statistics data provides very few details about the characteristics of the method/weapon and environmental factors preceding these events (e.g., mental health diagnosis, previous suicide attempts, history of substance use, and prescription information and pill count).

Data Analysis

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/yrbsst23/YRBSSelection.html and Centers for Disease Control and Prevention, Web-based Injury Statistics Query and Reporting System, National Violent Death Reporting System available at: https://www.cdc.gov/injury/wisqars/nvdrs.html

Definition of a Violent Death:

- A death that results from the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community.

In 2015, postmortem toxicology testing of all suicide decedents in Alaska was initiated as part of the Alaska Suicide Toxicology Project to better understand the role of substance use in suicide. As a result, the percentage of violent death decedents who were tested for alcohol and drugs rose from a range of 36–47% during 2012–2014 to a range of 89–97% during 2015–2016 (Table 2.33). However, among those decedents on whom toxicology testing was performed, the percentage of decedents testing positive remained fairly consistent across 2012–2016. On average, 74% of decedents were positive for either alcohol or drugs, 21% were positive for both alcohol and drugs, and 29% were positive for drugs alone (Table 2.33).

Information on unintentional poisoning deaths is also collected using the AKVDRS platform, although these deaths fall outside the definition of violent death. During 2012–2016, a total of 574 unintentional poisoning deaths were captured in the AKVDRS (Table 2.34). The percentage of unintentional poisoning decedents testing positive for both alcohol and drugs declined from 33% to 25% while the percentage of decedents testing positive for drugs alone increased from 53% to 64% (Table 2.34).

In light of the current opioid epidemic, trends in unintentional poisoning deaths associated with opioid use are described in Table 2.35. Of the 574 unintentional poisoning deaths that occurred in Alaska during 2012–2016, 368 (64%) deaths involved opioids (Table 2.35). In 2016, 26% of opioid-associated death decedents tested positive for both alcohol and drugs, while 74% of opioid-associated death decedents tested positive for drugs alone (Table 2.35).

Table 2.33. Trends in Violent Death Associated with Substance Abuse, Alaska VDRS, 2012–2016

Year	2012	2013	2014	2015[1]	2016[1]
Total Number of Victims Identified	239	230	236	302	287
Number of Victims Suspected of Alcohol Use	98	103	96	101	91
Number of Victims Tested for Alcohol and/or Drugs	100	83	112	270	277
Percent of Victims Tested for Alcohol and/or Drugs[4]	42%	36%	47%	89%	97%
Number of Victims Positive for Alcohol and/or Drugs	76	60	85	200	199
Percent of Victims Positive for Alcohol and/or Drugs[4]	76%	72%	76%	74%	72%
Number of Victims Positive for Alcohol and Drugs	16	23	25	52	51
Percent of Victims Positive for Alcohol and Drugs[4]	17%	28%	23%	20%	19%
Number of Victims Positive for Only Drugs (Alcohol Negative)	27	16	37	77	92
Percent of Victims Positive for Only Drugs (Alcohol Negative)[4]	28%	20%	34%	29%	33%

[1] Beginning in 2015, the Alaska Suicide Toxicology Project tested all samples collected by the State Medical Examiners
[2] Denominators based on number of tests performed for alcohol, drugs, or both alcohol and drugs.

Table 2.34. Trends in Unintentional Poisoning Deaths (Not Classified as Violent Death), Alaska VDRS, 2012–2016 (NEW)

Year	2012	2013	2014	2015[2]	2016[2]
Total Number of Victims Identified	109	103	100	136	126
Number of Victims Suspected of Alcohol Use	38	37	44	59	48
Number of Victims Tested for Alcohol and/or Drugs[3]	103	100	98	129	125
Percent of Victims Tested for Alcohol and/or Drugs[4]	94%	97%	98%	95%	99%
Number of Victims Positive for Alcohol and Drugs	33	32	42	42	30
Percent of Victims Positive for Alcohol and Drugs[4]	33%	33%	43%	33%	25%
Number of Victims Positive for Only Drugs (Alcohol Negative)	64	56	52	67	76
Percent of Victims Positive for Only Drugs (Alcohol Negative)[4]	64%	57%	54%	53%	64%

[1] Beginning in 2015, the Alaska Suicide Toxicology Project tested all samples collected by the State Medical Examiners
[2] Denominators based on number of tests performed for alcohol, drugs, or both alcohol and drugs.

Table 2.35. Trends in Opioid Associated Deaths (Not Classified as Violent Death), Alaska VDRS, 2012–2016 (NEW)

Year	2012	2013	2014	2015[2]	2016[2]
Total Number of Victims Identified	72	68	64	80	84
Number of Victims Suspected of Alcohol Use	23	23	30	26	25
Number of Victims Positive for Alcohol and Drugs[3]	23	23	30	25	21
Percent of Victims Positive for Alcohol and Drugs[4]	35%	36%	48%	34%	26%
Number of Victims Positive for Only Drugs (Alcohol Negative)	42	40	33	49	59
Percent of Victims Positive for Only Drugs (Alcohol Negative)[4]	65%	63%	52%	66%	74%

[1] Beginning in 2015, the Alaska Suicide Toxicology Project tested all samples collected by the State Medical Examiners
[2] Denominators based on number of tests performed for alcohol, drugs, or both alcohol and drugs.

Alaska Occupational Injury Surveillance (OIS)

http://dhss.alaska.gov/dph/Epi/injury/Pages/occupation_injury/default.aspx

The Alaska Occupational Injury Surveillance (OIS), Fatality Assessment and Control Evaluation (FACE) Program is a state-based surveillance system that links data on work-related injury deaths from multiple sources, including death certificates, medical examiner reports, toxicology reports (including prescription medications (licit) and illicit drugs), law enforcement reports, and occupation safety and health investigation reports. OIS collects data on all work-related deaths occurring in Alaska regardless of state residence. The data is entered into the FACE First Report database that links information from the aforementioned documents to overcome limitations of conducting analyses of the separate data sources. Some of these limitations include:

- Vital statistics data do not include important information about the circumstances under which work-related deaths occur;
- Vital statistics data are victim-based and provide no method of linking multiple victim incidents (e.g., circumstances associated multiple deaths in one incident);
- Vital statistics data provides very few details about the characteristics of the external factors, personnel policies, and environmental factors preceding these events.

Data Analysis

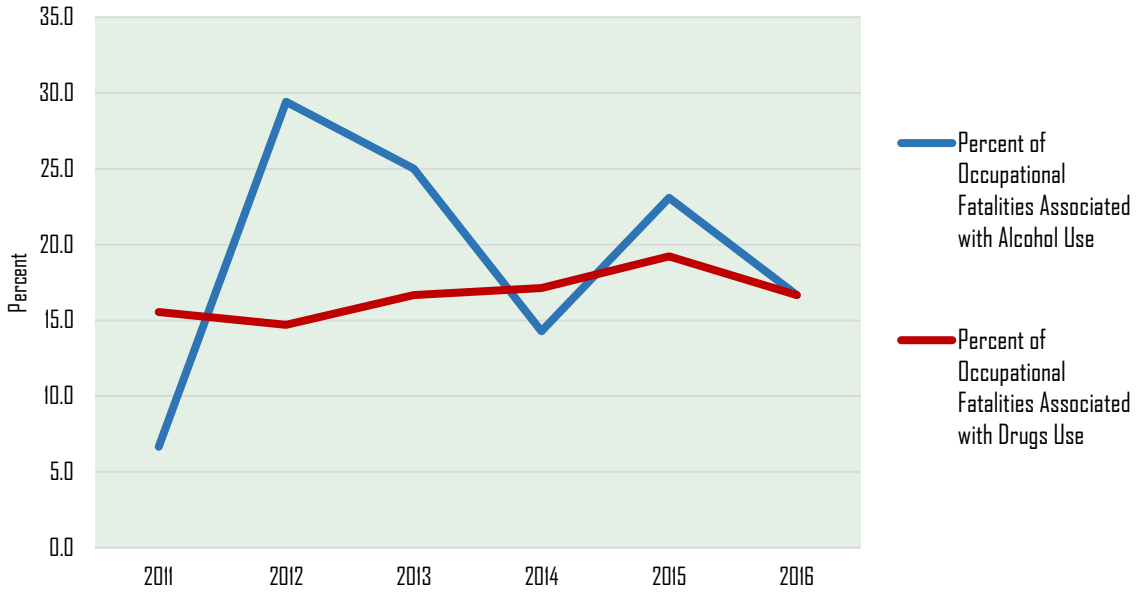
Mortality data were provided by the Alaska Health Analytics and Vital Records Section. Injury and other consequence data were provided by the Alaska Trauma Registry and the Alaska Department of Education and Early Development.

Definitions of associated alcohol and/or drug use prior to occupation-related death:

- **Positive toxicology results** for alcohol and/or drug use or investigation report noting evidence of alcohol and/or drug use prior to death

During 2011–2016, the percentage of occupational fatalities associated with alcohol use increased from 6.7% in 2011 to 16.7% in 2016. During this time, the percentage of occupational fatalities involving alcohol was variable, with the lowest percentage (6.7%) occurring in 2011 and the highest (29.4%) occurring in 2012. Comparatively, the percentage of occupational fatalities associated with drug use remained fairly constant over 2011–2016, ranging from 14.7% in 2012 to 19.2% in 2015 (Chart 2.21).

Chart 2.21. Trends in Occupational Fatalities Associated with Alcohol and/or Drug Use, Alaska OIS, 2011–2016



Alaska Uniform Crime Report (UCR)

https://dps.alaska.gov/statewide/r-i/ucr

There is a strong association between substance use and crime. Dependency and abuse are known to have a profound effect on a drug user's behavior, making the user more likely to engage in violence and other illegal activity. The Uniform Crime Reporting (UCR) Program is a nationwide effort by federal, state, local, and tribal law enforcement agencies to report data on crimes that occur within their jurisdiction. Law enforcement agencies in Alaska are required by Alaska Statute 12.62.130 to report data on crimes committed within their jurisdiction to the Alaska Department of Public Safety (DPS). In 2016, 32 agencies reported crime data to DPS; the population served by these agencies accounts for 99.6% of the state's total population.

Definition of crime index and crime rate:

- **Crime index** is defined as a measure of the fluctuation in the number of offenses reported to law enforcement.
- **Crime rate** is defined as a measure of the incidence of offenses in relation to the total reporting agency population, defined as the number of offenses per 100,000 population.

Reported crimes associated with substance abuse are based on crime index offenses that can be monitored over time. Illicit and prescription drugs have been linked to homicide, assault, prescription fraud, home invasion thefts, and pharmacy robberies. People who are addicted to prescription drugs often facilitate their addition by committing other crimes, including doctor shopping, pharmacy shopping, forgery, and purchasing the drugs via the Internet.

Definition of violent and property crimes:

- All violent crime involves force or threat of force.
- Property crime is the taking of money or property without force or threat of harm.

From 2015 to 2016, the total crime rate in Alaska increased 17.0% and the violent crime rate increased 10.1% (Table 2.36). Of all violent and property crimes, only homicide showed a decrease in crime index and crime rate. The number of homicide arrests decreased 11.9% from 59 arrests in 2015 to 52 arrests in 2016; however, prior to this decrease, the annual number of homicides had nearly doubled between 2012 and 2015, increasing from 30 homicides in 2012 to 59 homicides in 2015 (Chart 2.22). In 2016, aggravated assault occurred almost four times more often than forcible rape (3,992 aggravated assault offenses reported in 2016 compared to 1,049 forcible rape offenses; Chart 2.22). Forcible rape occurred more than twenty times more often than homicide (1,049 forcible rape offenses reported in 2016 compared to 52 homicides; Chart 2.22).

Like violent crime, property crime in Alaska increased across 2012–2016 (Table 2.36; Chart 2.23). Larceny/theft accounted for 69% of all property crimes committed in Alaska in 2016, and the rate of larceny/theft increased 16.1% from 2015 to 2016. Burglary, motor vehicle theft, and robbery accounted for 16%, 12%, and 3% of property crimes in 2016, respectively, and also showed increases in crime rates from 2015 to 2016.

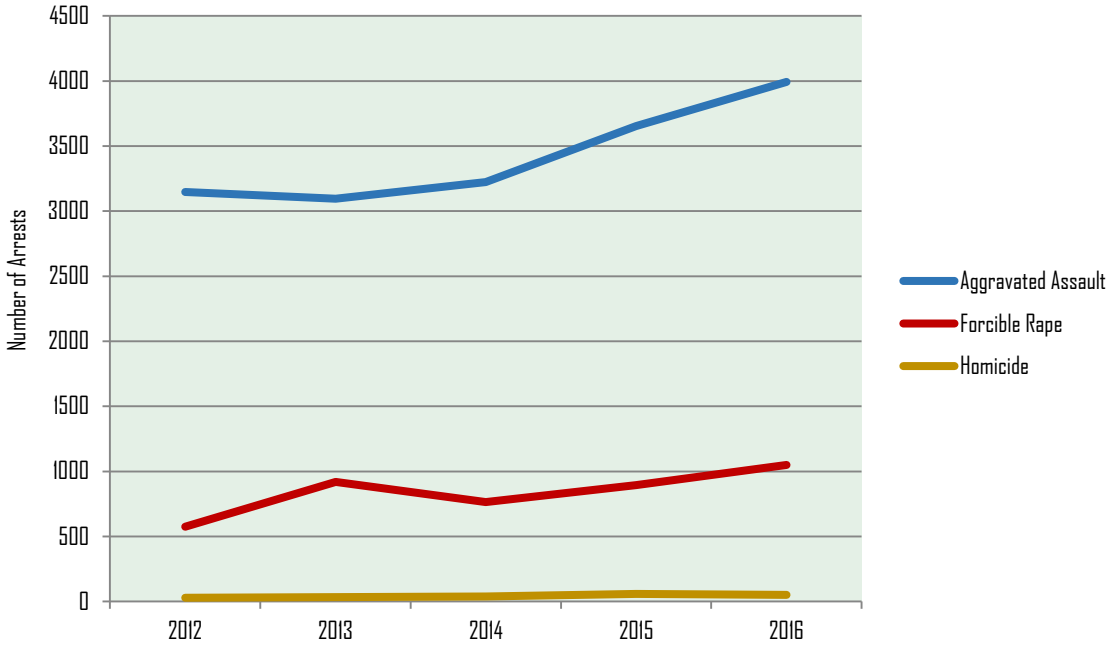
During 2012–2016, the number of arrests related to drug sales/manufacturing among Alaskan adults (aged 18 years and older) decreased almost 40%, from 319 arrests in 2012 to 196 arrests in 2016 (Chart 2.24). The number of arrests related to drug possession among Alaskan adults also decreased nearly 40%, from 956 arrests in 2012 to 603 arrests in 2016 (Chart 2.24). Arrests for both drug sales/manufacturing and drug possession were 2–3 times more common among males than females (Table 2.37). Similar patterns were observed in drug arrests among Alaskans aged 17 years and younger (Chart 2.25, Table 2.38).

Table 2.36. Crime Index and Rate Variance, Alaska UCR, 2015–2016

	Population	Total Offenses	Violent Crimes	Aggravated Assault	Homicide	Burglary	Larceny-Theft	Forcible Rape	Robbery
Crime Index	0.3%*	17.6%	10.7%	9.3%	-11.9%	15.4%	16.7%	17.2%	11.7%
Crime Rate		17.0%	10.1%	8.7%	-12.3%	14.8%	16.1%	16.6%	11.2%

*Change in population is no longer reported in the Uniform Crime Report. This value was calculated using population estimates from the Alaska Department of Labor and Workforce Development.
Note: Negative numbers relate to decrease in crime.

Chart 2.22. Trends in Violent Crime Associated with Substance Abuse, Alaska UCR, 2012–2016



Note: Revised definition of Rape implemented in 2013 now allows for female and male victims; prior year definition was limited to female population numbers. Due to the significant difference between the revised definition for 2013 compared to the legacy definition for 2012 and earlier, the increased rate in 2013 and on should be noted with an acknowledgement of that difference.

Chart 2.23. Trends in Property Crime Associated with Substance Abuse, Alaska UCR, 2012–2016

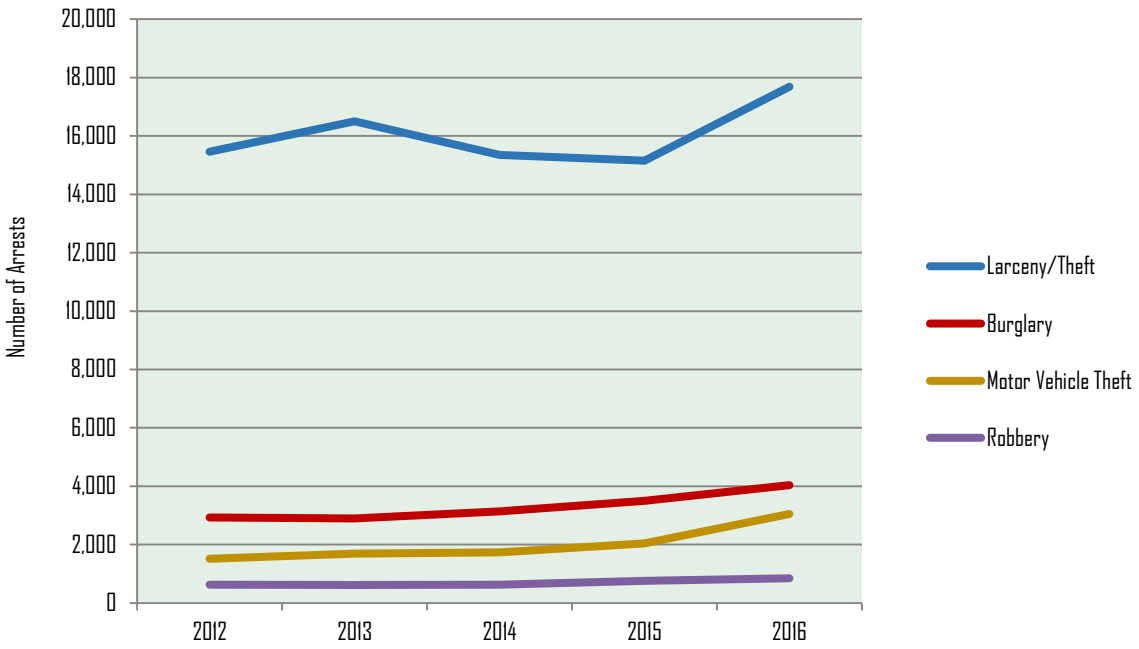


Chart 2.24. Trends in Drug Offenses, Adults 18 Years of Age and Older, Alaska UCR, 2012–2016

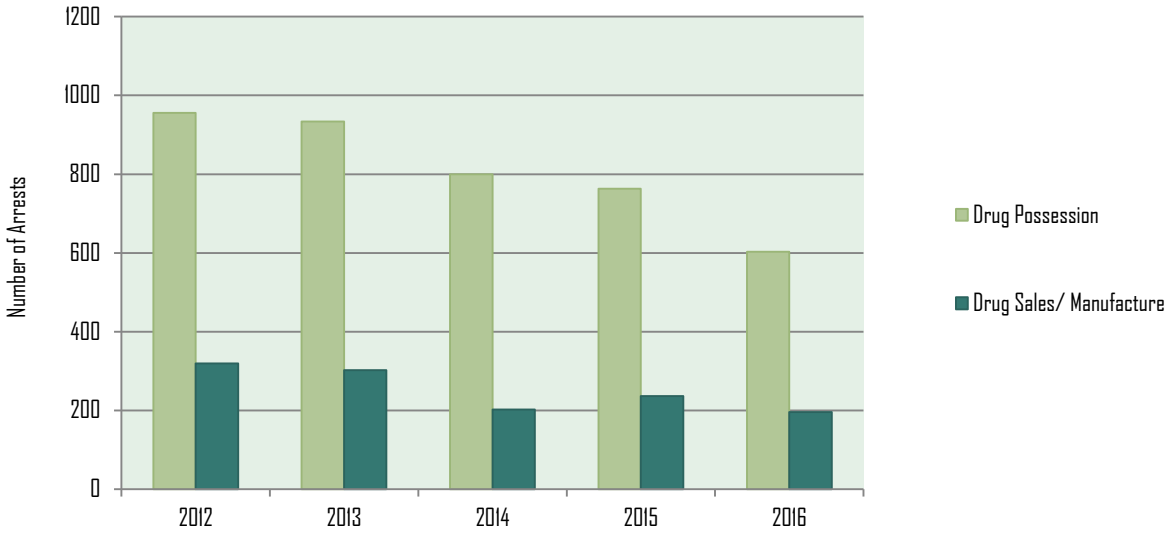


Table 2.37. Trends in Drug Arrests, Adults 18 Years of Age and Older, by Gender, Alaska UCR, 2012–2016

	2012	2013	2014	2015	2016	2012–2016
Sales/Manufacturing						
Females	82	87	60	69	59	357
Males	237	215	142	167	137	898
Possession						
Females	214	230	208	206	192	1,050
Males	742	704	592	557	411	3,006

Chart 2.25. Trends in Drug Offenses, Youth 17 Years of Age and Younger, Alaska UCR, 2012–2016

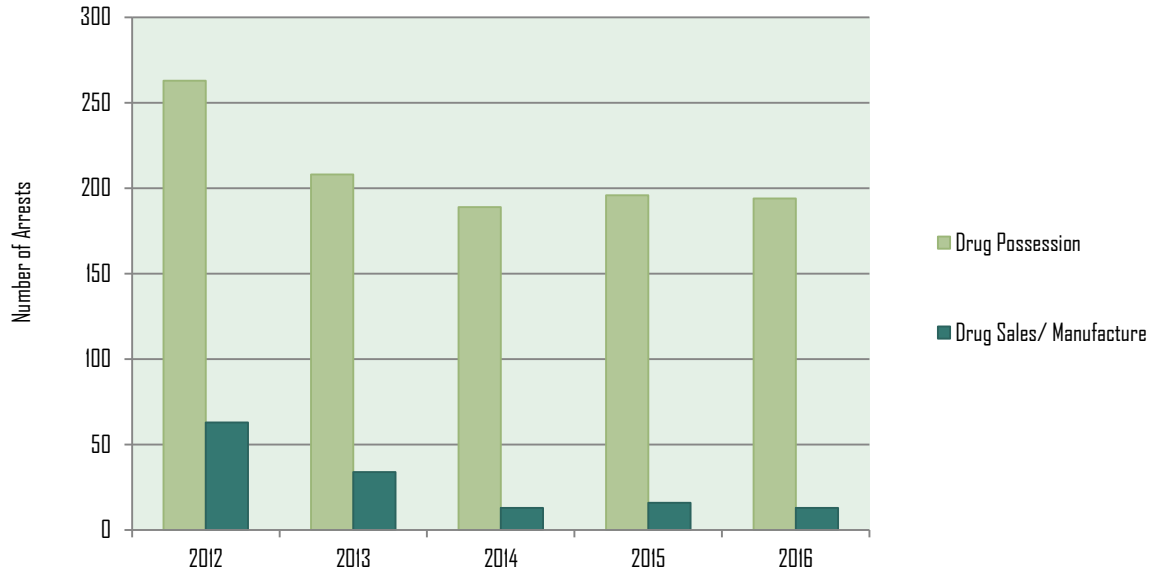


Table 2.38. Trends in Drug Arrests, Youth 17 Years of Age and Younger, by Gender, Alaska UCR, 2012–2016

	2012	2013	2014	2015	2016	2012–2016
Sales/Manufacturing						
Females	17	5	5	3	5	35
Males	46	29	8	13	8	104
Possession						
Females	70	50	50	73	73	316
Males	193	158	139	123	121	734

Juvenile Justice

http://dhss.alaska.gov/djj/Pages/default.aspx

The Division of Juvenile Justice (DJJ) is a restorative justice agency that operates within the Alaska Department of Health and Social Services. Its mission is to hold juvenile offenders accountable for their behavior, promote the safety and restoration of victims and communities, and assist juvenile offenders and their families in developing skills to prevent crimes. The DJJ oversees seven youth facilities across the state, which offer secure detention facilities for youth awaiting court decisions, bail processing, and/or placement. These facilities also offer short-term individual, group, and family counseling; substance abuse education; life-skills competency building; and other services.

Definitions of delinquent and delinquency referral:

- **Delinquent** was defined as a child who violates the criminal law, or who commits a status offense; also, a person subject to juvenile court proceedings because a statutorily defined event caused by the person was alleged to have occurred while his or her age was below the statutory.
- **Referral** was defined as a request by a law enforcement agency for a response from the DJJ following the arrest of a juvenile or as a result of the submission of a police investigation report alleging the commission of a crime or violation of a court order. A referral is counted as a single episode or event and may include multiple charges.

In 2016, a total of 320 juveniles were reported to the DJJ by law enforcement for drug- or alcohol-related offenses (Table 2.40). Juveniles can be referred multiple times and referrals can include multiple offenses, so these juveniles accounted for a total of 336 referrals and 381 offenses. The number of juveniles reported to the DJJ declined over 30% during 2013–2016, from 464 juveniles in 2013 to 320 juveniles in 2016 (Table 2.40). The percentage of these juveniles that were male also declined over 2013–2016, with males accounting for 71.3% of referred juveniles in 2013 and 61.3% of referred juveniles in 2016 (Table 2.41). Marijuana was the most common substance cited in drug- or alcohol-related referrals in 2016 (cited in 74.1% of referrals), followed by prescription drugs (cited in 7.8% of referrals), alcohol (cited in 5.5% of referrals), and methamphetamine (cited in 3.3% of referrals; Table 2.39). Substances were cited in referrals 487 times in 2016 for an average of 1.4 cited substances per referral (Table 2.39).

Table 2.39. Substances Used by Referred Juveniles While "Under the Influence" Per Referral and Intake Data, Alaska DJJ, Fiscal Year 2016

Substance Present/Suspected	# of times cited	% of instances
Alcohol	27	5.5%
Amphetamines	11	2.3%
Cocaine	7	1.4%
Heroin	1	0.2%
Inhalants	3	0.6%
Marijuana	361	74.1%
Methamphetamine	16	3.3%
Opiates	12	2.5%
Over The Counter	8	1.6%
Prescription	38	7.8%
Synthetic cannabis	3	0.6%
Total Cited Substances	487	100.0%

Table 2.40. Alcohol and Drug (A&D) Referrals and Offenses for Juvenile Offenders, Alaska DJJ, Fiscal Year 2013–2016

	Unduplicated Juveniles	Unduplicated A&D Referrals	Drug Offenses	Alcohol Offenses	Total A&D Offenses	Average # of A&D Offenses per juvenile
FY2013	464	488	448	70	518	1.12
FY2014	403	420	422	44	466	1.16
FY2015	365	385	397	18	415	1.14
FY2016	320	336	354	27	381	1.19

Table 2.41. Drug and Alcohol Referrals for Juvenile Offenders, by Gender, Alaska DJJ, Fiscal Year 2013–2016

	FEMALE	% FEMALE	MALE	% MALE	TOTAL
FY2013	140	28.7%	348	71.3%	488
FY2014	131	31.2%	289	68.8%	420
FY2015	122	31.7%	263	68.3%	385
FY2016	130	38.7%	206	61.3%	336

Alaska Bureau of Investigation Statewide Drug Enforcement Unit (SDEU)

https://dps.alaska.gov/AST/SDEU/Home

The Statewide Drug Enforcement Unit (SDEU) is a State Statute mandated enforcement unit within the Alaska State Troopers that works with federal, state, and municipal partners to confront Alaska's drug and alcohol problem, recognizing that no one agency can address the problem alone. According to the SDEU, the substances most frequency abused in Alaska in 2016 were alcohol, heroin, methamphetamine, cocaine, prescription drugs, and marijuana.[1] From 2012 to 2016, the number of charges/arrests related to cocaine, marijuana, and methamphetamine decreased 65%, 81%, and 20%, respectively (Table 2.42). The legalization of personal non-medical marijuana use and possession in Alaska in February 2015 likely contributed to the steep decline in marijuana-related charges/arrests[2]. Heroin-related charges/arrests increased 60% over 2012–2015 before decreasing 33% from 2015 to 2016 (Table 2.42).

The quantity of cocaine, marijuana, and methamphetamine seized decreased across 2012–2016, paralleling trends in arrests for each drug (Table 2.42). The number of meth labs shut down also decreased during this time; however, meth trafficking into Alaska from Mexico and the Lower 48 increased exponentially.[1] The quantity of hydrocodone seized was variable over 2012–2016, with 1,311 dosage units seized in 2013 and only 16 seized in 2016 (Chart 2.26). Likewise, the quantity of Oxycodone/OxyContin seized varied, ranging from 255 dosage units seized in 2015 to 4,552 dosage units seized in 2016 (Chart 2.26). The quantity of heroin seized decreased 78% during 2014–2016, from 22.42 pounds in 2014 to 4.91 pounds in 2016 (Chart 2.27).

[1] Alaska State Troopers Statewide Drug Enforcement Unit. "2016 Annual Drug Report". Available at https://dps.alaska.gov/getmedia/f259530b-5277-408e-9d45-4999958fe530/2016-Annual-Drug-Report-6-28-17final

[2] The Alaska State Legislature. Alaska Statute Section 17, Chapter 38. The Regulation of Marijuana. Available at http://www.legis.state.ak.us/basis/statutes.asp#17.37.080

Table 2.42. Trends in Illicit Drug Related Arrests/Charges, Alaska SDEU, 2012–2016

	2012	2013	2014	2015	2016
Cocaine Related Charges/Arrests	74	37	31	20	26
Cocaine Seized (pounds)	56.00	14.58	31.36	6.40	27.06
Heroin Related Charges/Arrests	146	151	209	233	155
Heroin Seized (pounds)	4.93	55.12	22.42	6.67	4.91
Marijuana Related Charges/Arrests	817	669	716	290	155
Processed Marijuana Seized (pounds)	407.03	295.79	169.65	119.28	235.80
Meth Related Charges/Arrests	182	187	232	225	145
Methamphetamine Seized (pounds)	35.19	11.53	31.15	33.73	11.98
Meth Labs Shut Down	3	5	0	3	1

Chart 2.26. Trends in Prescription Medication Seizures, by Dosage Unit, Alaska SDEU, 2012–2016

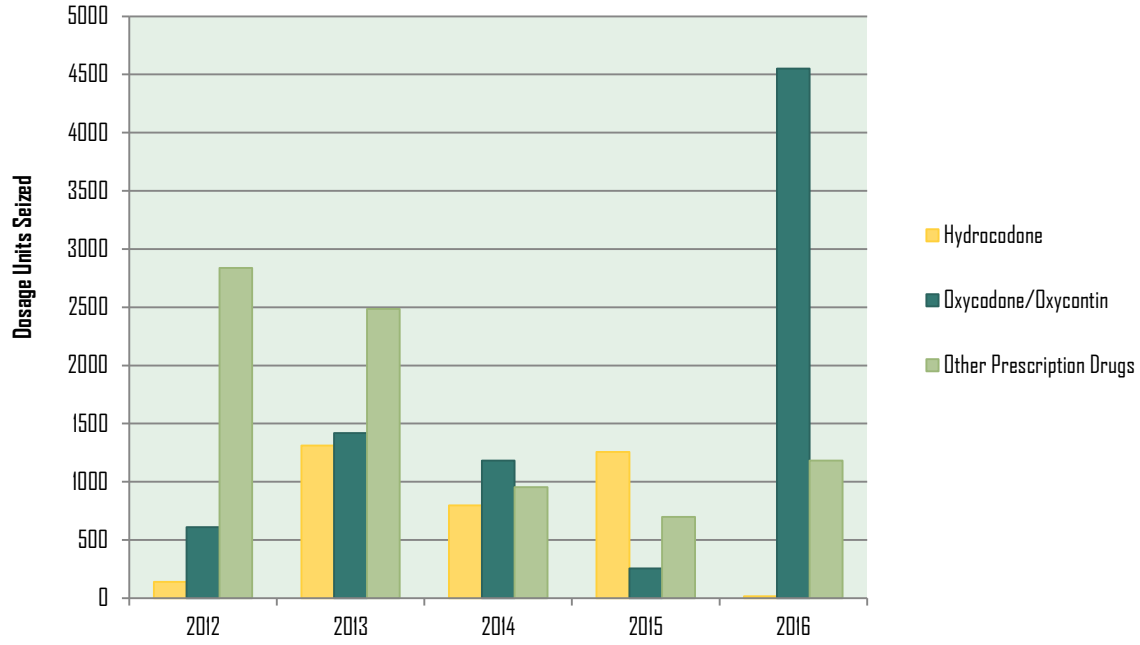
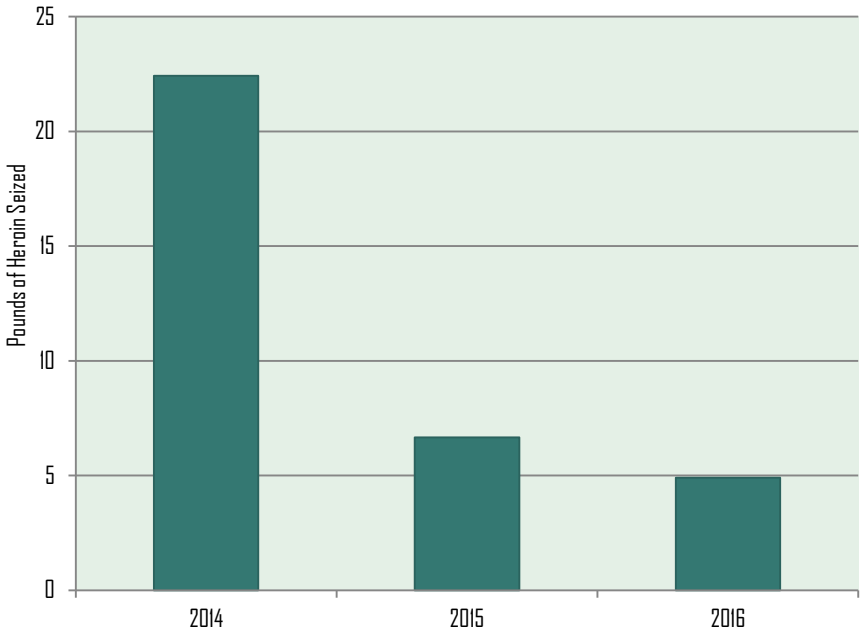


Chart 2.27. Trends in Heroin Seizures, Alaska SDEU, 2014–2016



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SECTION 3

INFLUENCES

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Problem Statement: Influences

For more than fifty years extensive national research focusing on adolescence has demonstrated a strong association between specific conditions, personal experiences, and the use of tobacco, alcohol, and other drugs. While most public health agencies monitor substance use (e.g., binge use, every use, current use) or the consequences of use (e.g., hospital visits associated with use or misuse, school suspensions), monitoring influences that impact substance use, such as protective factors and risk factors, can provide insight into the implementation of factors than may prevent substance use and subsequent abuse.

Studies in behavioral health demonstrate that certain risk factors can contribute both to mental illness and substance use disorders. Further, substance use disorders commonly occurs in tandem with other mental illnesses and it can be difficult to determine which came first and what influence they may have on each other. For example, mental illness can contribute to the development of substance use disorder and vice versa. As a result, substance use co-morbidities should be monitored to understand how targeting these factors may aid in prevention of substance use and abuse.

This section is under development and only tables and charts are provided at this time. Information will be updated as it becomes available.

Data Analysis

Data on alcohol sales and consumption were provided through the Alcohol Epidemiologic Data System (AEDS), the Youth Risk Behavior Survey (YRBS), the Behavioral Risk Factor Surveillance System (BRFSS), and the National Survey on Drug Use and Health (NSDUH).

Youth Risk Behavior Survey (YRBS)

Alaska Indicator-Based Information System (AK-IBIS) – Interactive query modules available at: http://ibis.dhss.alaska.gov/query/selection/yrbsst23/YRBSSelection.html and YRBS: Youth Risk Behavior Survey – Statewide (Traditional) and Statewide (Alternative). (See http://ibis.dhss.alaska.gov/query/Introduction.html)

Chart 3.1. Percentage of Students Whose Parent Talks with Them About School Nearly Every Day, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

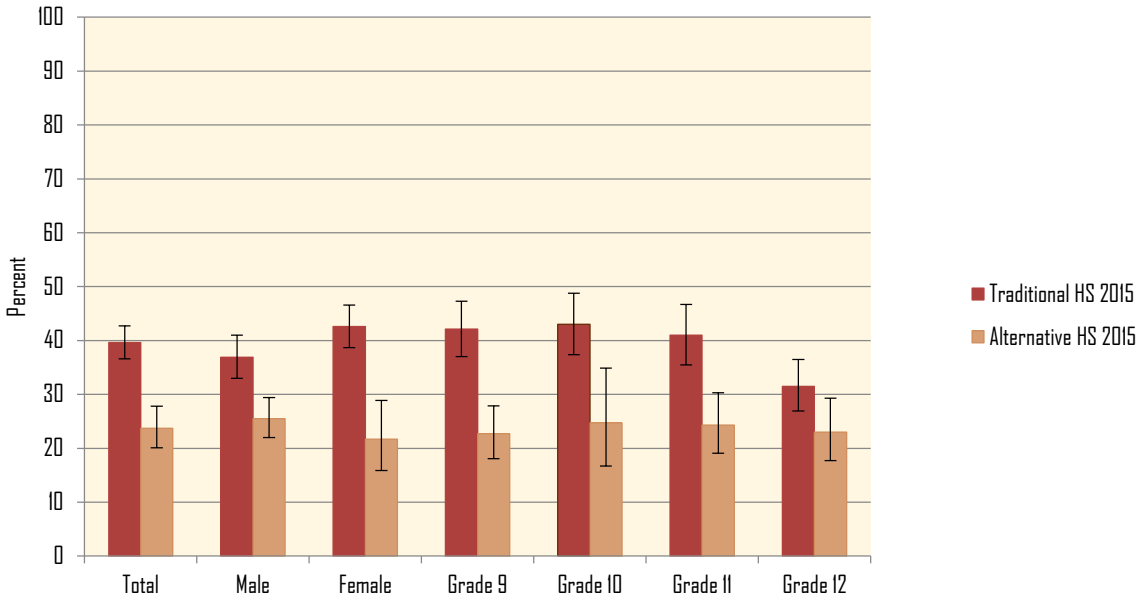


Chart 3.2. Percentage of Students Who Strongly Agree or Agree That Their Teachers Really Care About Them and Give Them a Lot of Encouragement, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

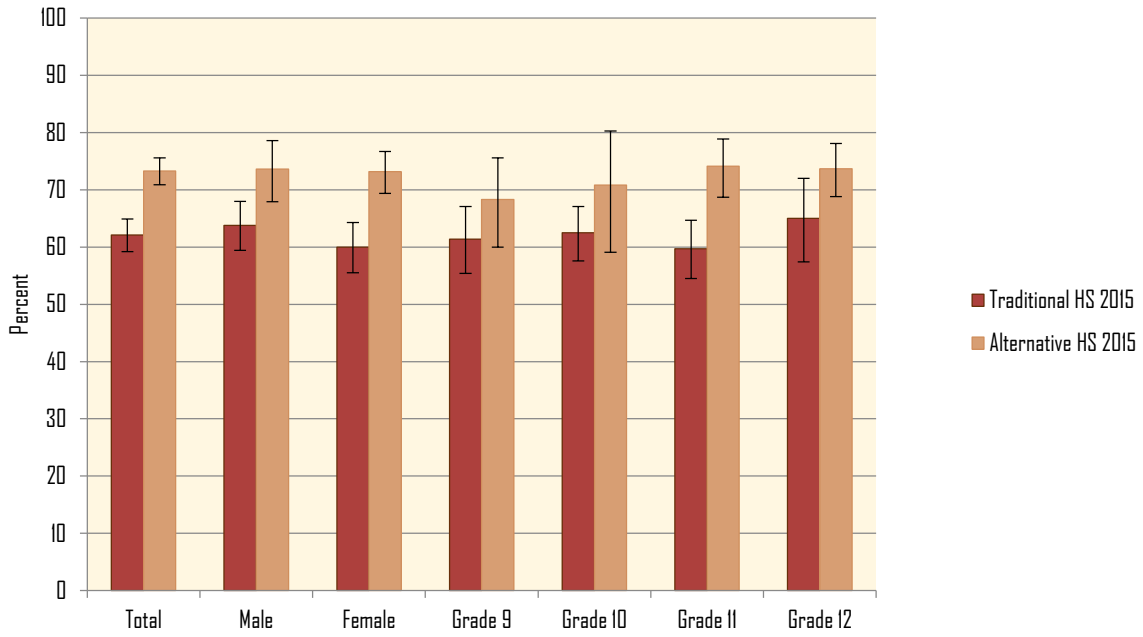


Chart 3.3. Percentage of Students Who Did Not Go To School on One or More of the Past 30 Days Because They Felt They Would Be Unsafe at School or On Their Way To or From School, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

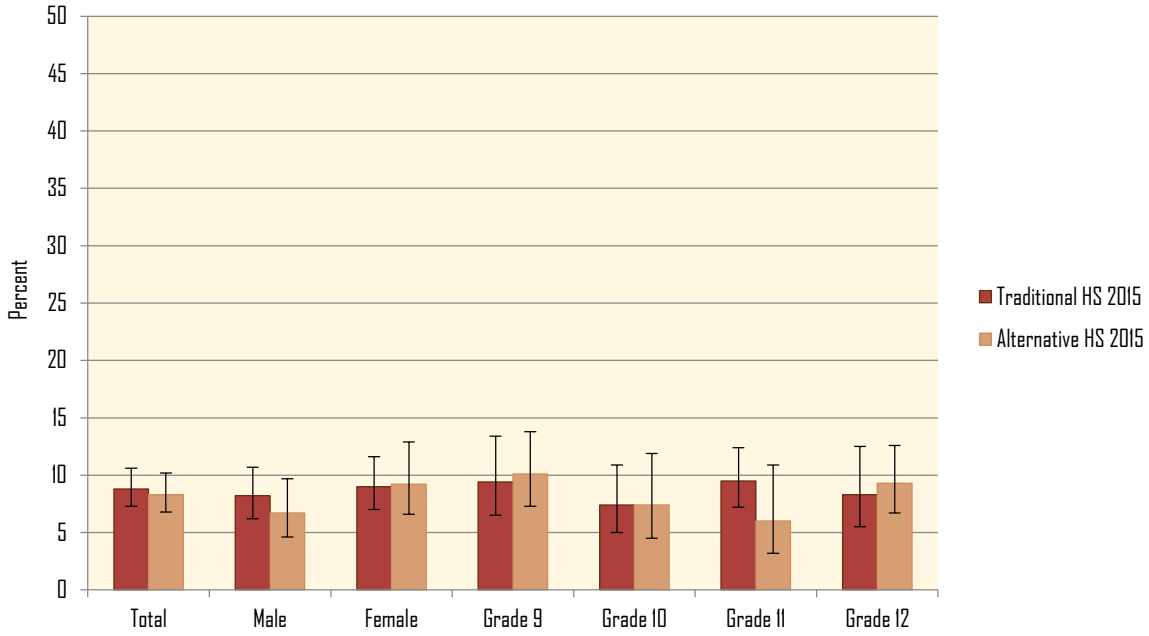
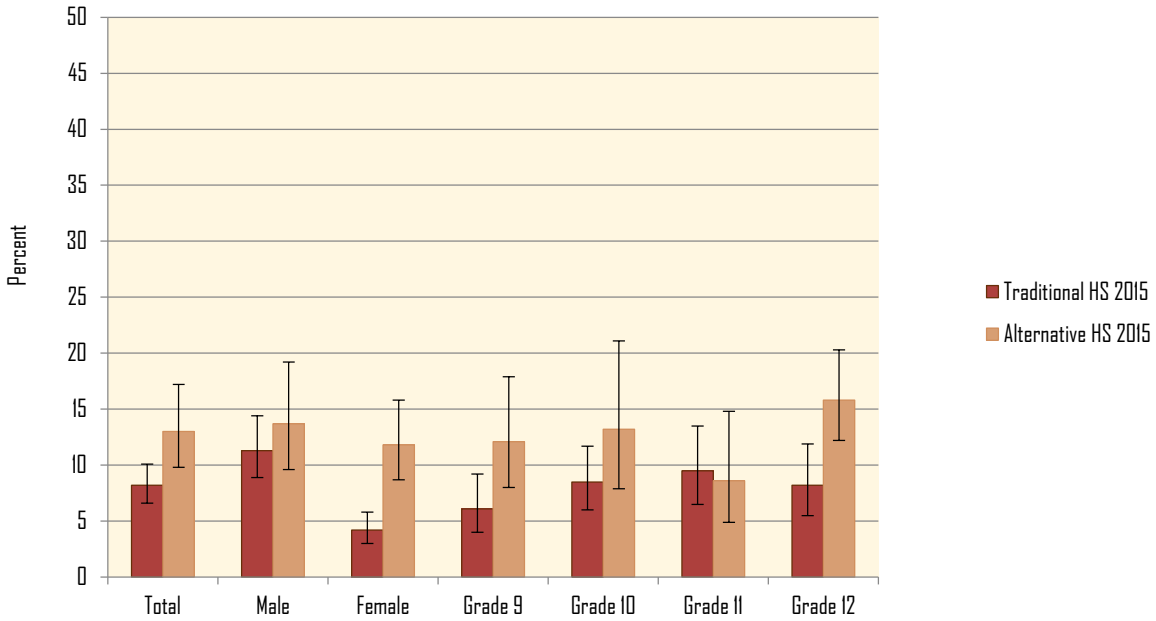


Chart 3.4. Percentage of Students Who Carried a Weapon Such as a Gun, Knife, or Club on School Property on One or More of the Past 30 Days, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015



Note: This chart replaced the previous chart, 'Percentage of Students Who Had Been Threatened or Injured with a Weapon Such as a Gun, Knife, or Club on School Property One or More Times During the Past 12 Months', as this question is no longer asked on the Alaska YRBS

Chart 3.5. Percentage of Students Who Were in a Physical Fight One or More Times During the Past 12 Months, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

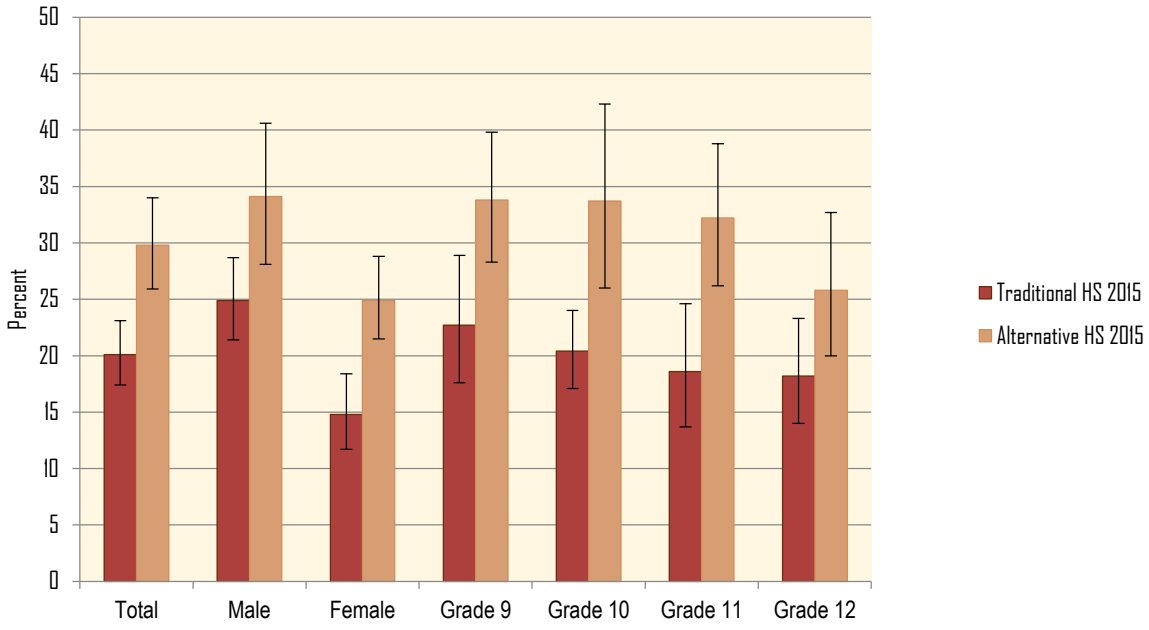


Chart 3.6. Percentage of Students Who Had Ever Been Physically Forced to Have Sexual Intercourse When They Did Not Want To, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

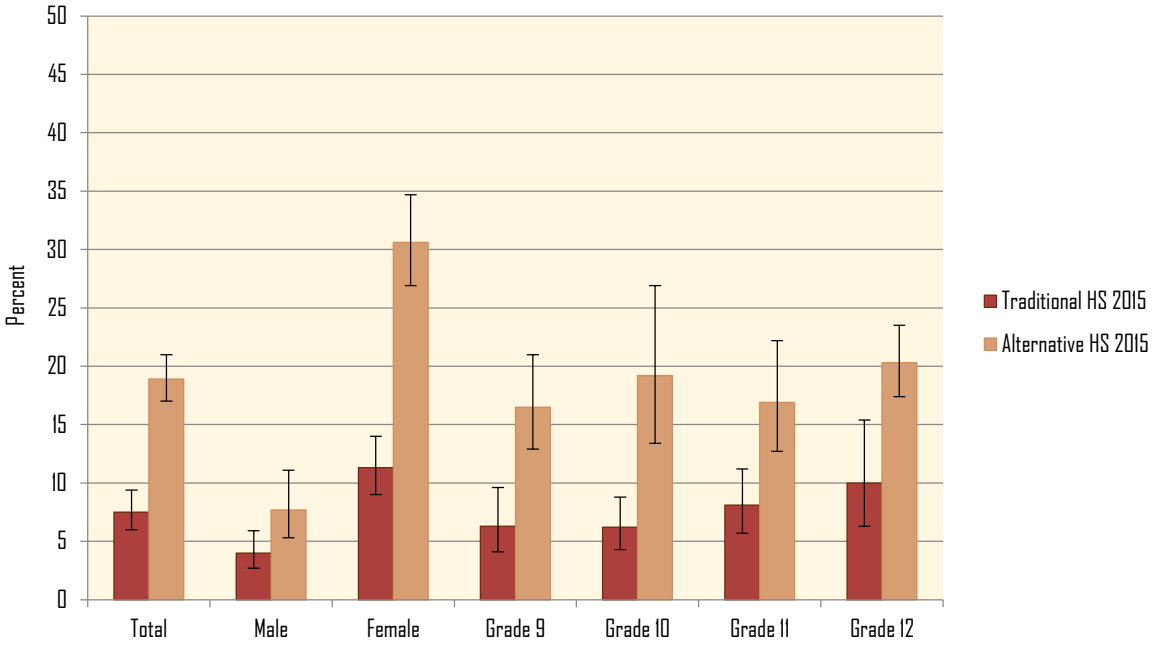


Chart 3.7. Percentage of Students Who Seriously Considered Attempting Suicide During the Past 12 Months, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

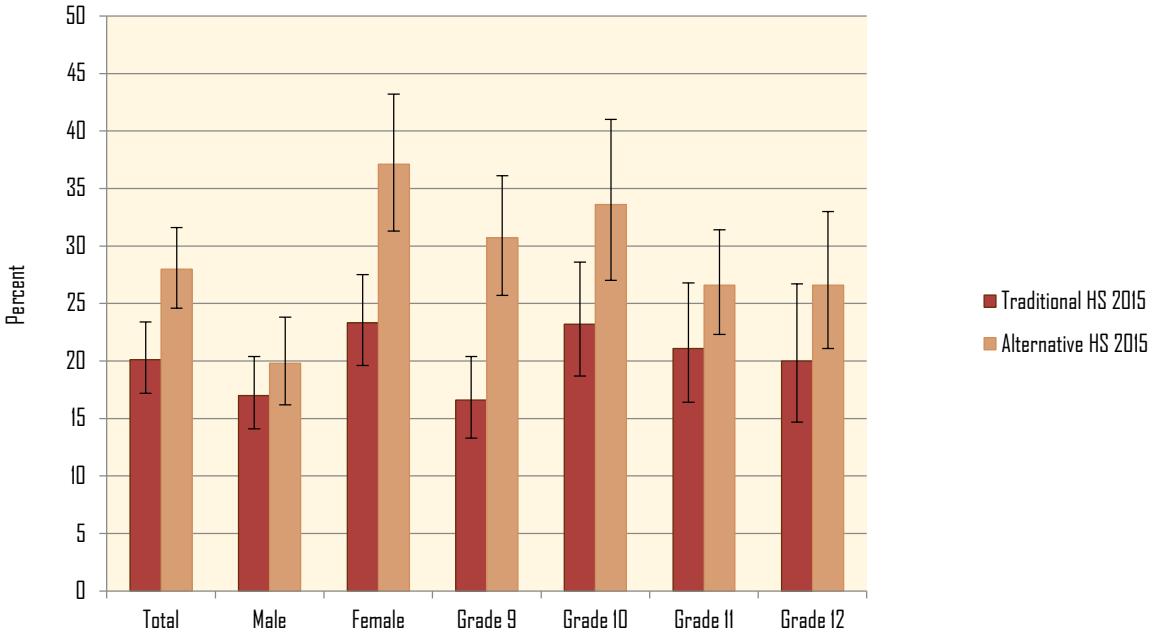


Chart 3.8. Percentage of Students Who Do Not Take Part in Organized After School, Evening, or Weekend Activities (such as School Clubs; Community Center Groups; Music, Art, or Dance Lessons; Drama; Church; or Cultural or Other Supervised Activities) on Any Days During an Average Week, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

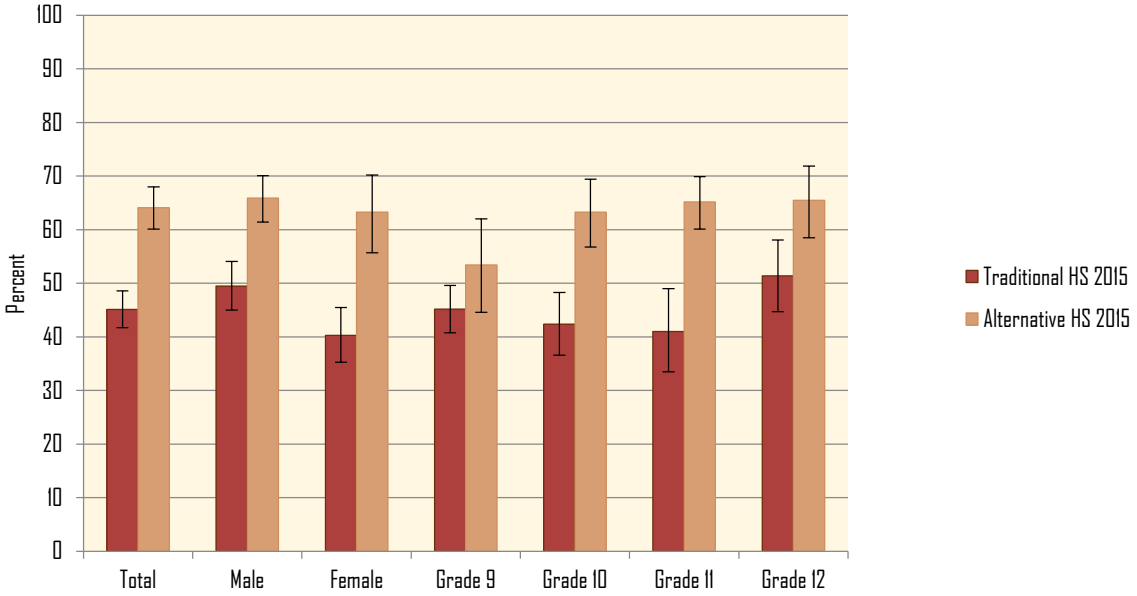


Chart 3.9. Percentage of Students Who Said Their Parents Feel Their Child Drinking Alcohol Regularly is Either a Little Bit Wrong or Not Wrong At All, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015

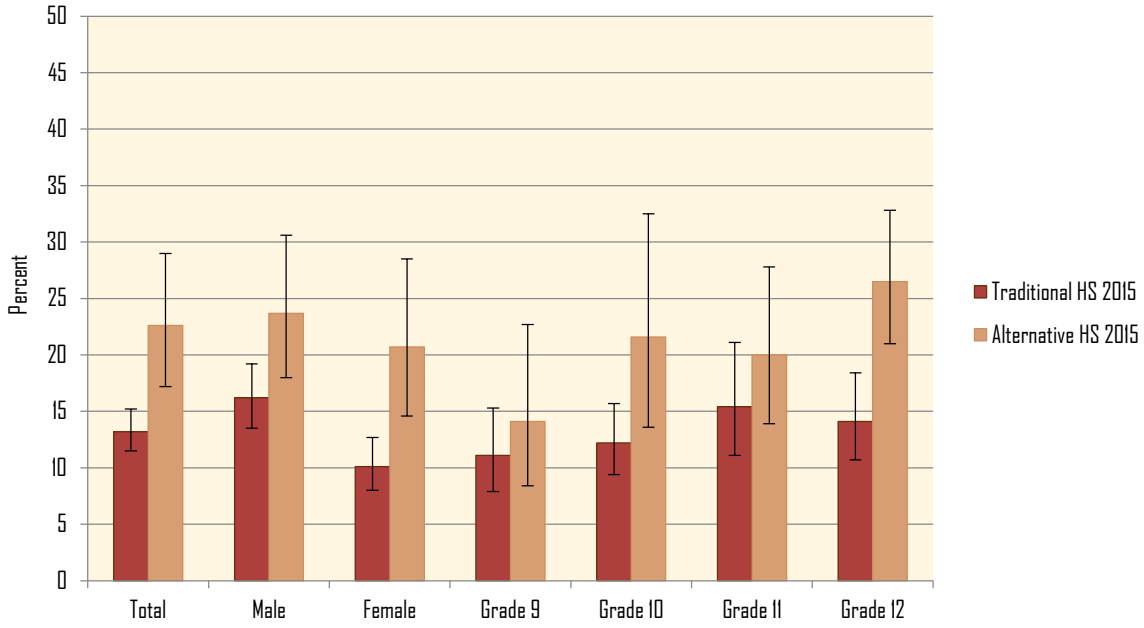
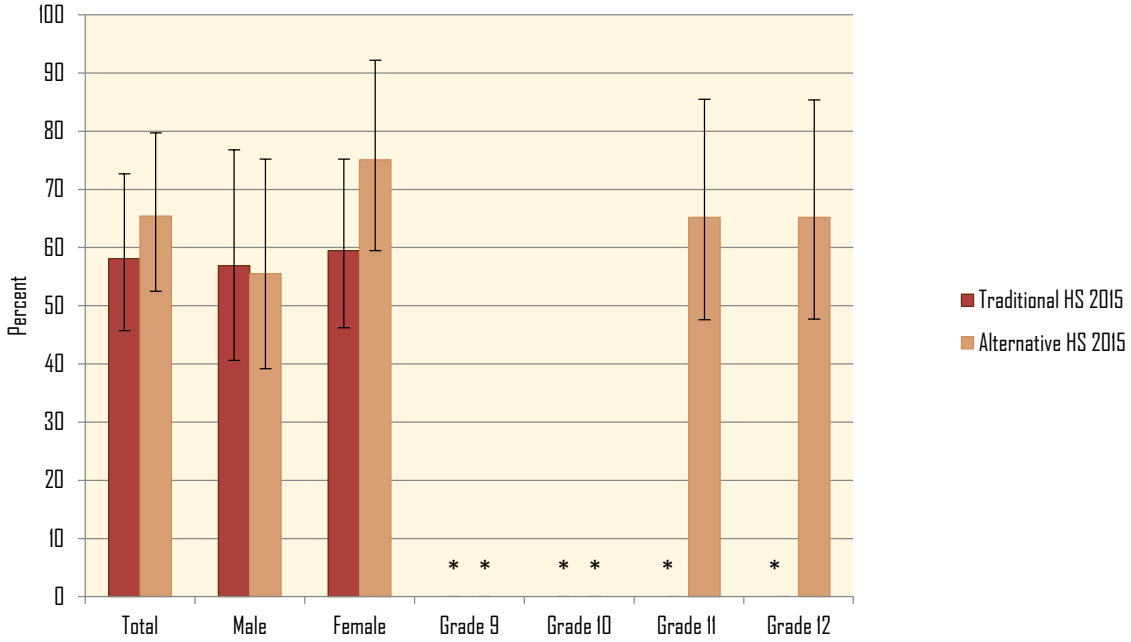


Chart 3.10. Percentage of Students Who Usually Got the Alcohol They Drank During the Past 30 Days from Someone Else to Whom They Gave Money to Buy It for Them or from a Family Member or Someone Else Giving It to Them, Comparing Traditional and Alternative High Schools (HS), Alaska YRBS, 2015



*Data were suppressed because 1) the sample size is ≤100 students, 2) the observed number of events could be used to calculate the number in a cell that has been suppressed, or 3) the relative standard error is greater than 50% or can't be determined.

Pregnancy Risk Assessment Monitoring System (PRAMS)

AK-IBIS Query Module – PRAMS: Pregnancy Risk Assessment Monitoring System. Available at: http://ibis.dhss.alaska.gov/query/selection/prams23/PRAMSSelection.html

Table 3.1. Trends in Prenatal Care – Health Care Workers Advising Women Not to Drink Alcohol While Pregnant, by Age Group, Alaska PRAMS, 2010–2015 (NEW)

	2010 (95% CI)	2011 (95% CI)	2012 (95% CI)	2013 (95% CI)	2014 (95% CI)	2015 (95% CI)
% All Ages	82.2 (79.0, 84.9)	80.6 (77.4, 83.4)	82.8 (79.6, 85.6)	77.1 (73.9, 79.9)	81.0 (77.9, 83.8)	79.8 (76.7, 82.6)
% Age < 20 years	90.1 (78.4, 95.8)	95.9 (90.1, 98.3)	91.5 (82.4, 96.1)	85.6 (73.8, 92.6)	92.1 (81.7, 96.8)	84.9 (72.7, 92.3)
% Age 20–24 years	86.6 (80.7, 91.0)	90.7 (85.2, 94.2)	90.0 (84.1, 93.9)	79.2 (72.2, 84.8)	84.3 (77.8, 89.1)	81.9 (75.5, 87.0)
% Age 25–34 years	79.2 (74.6, 83.1)	75.9 (71.4, 79.9)	80.1 (75.5, 84.0)	76.6 (72.3, 80.4)	80.5 (76.3, 84.1)	79.9 (75.6, 83.6)
% Age 35 + years	78.4 (67.5, 86.3)	73.8 (62.7, 82.5)	74.0 (63.5, 82.4)	69.9 (60.2, 78.1)	71.0 (60.2, 79.8)	73.4 (63.6, 81.4)

National Survey on Drug Use and Health (NSDUH)

https://www.samhsa.gov

Substance Abuse and Mental Health Services Administration, SMAHSA Data and Dissemination available at: https://www.samhsa.gov/data/ and NSDUH State-specific Tables available at: https://www.samhsa.gov/data/all-reports?sort=field_date_printed_on_report&order=desc&items_per_page=15

Definitions of mental illness:

- **Past Year Any Mental Illness** was defined as a mental, behavioral, or emotional disorder (excluding developmental and substance use disorders); diagnosable currently or within the past year; of sufficient duration to meet diagnostic criteria specified within the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV); and, resulting in varying impact, ranging from no impairment to mild, moderate, and even severe impairment.
- **Past Year Serious Mental Illness** was defined as a mental, behavioral, or emotional disorder (excluding developmental and substance use disorders); diagnosable currently or within the past year; of sufficient duration to meet diagnostic criteria specified within the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV); and, resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities.

Table 3.2. Trends in Reported Mental Illness in the Past Year, by Age Group, Alaska NSDUH, 2011–2016

	2011-2012 (95% CI)	**2013-2014** (95% CI)	**2015–2016** (95% CI)	**U.S. 2015–2016** (95% CI)
Ages 18 and over				
% Past Year Serious Mental Illness	4.15*	3.90 (3.2, 4.8)	4.5 (3.7, 5.5)	4.1 (4.0, 4.3)
% Past Year Any Mental Illness	19.2*	18.1 (16.1, 20.3)	20.0 (18.1, 22.0)	18.1 (17.7, 18.4)
Ages 18–25				
% Past Year Serious Mental Illness	4.5*	4.6 (3.6, 5.8)	7.2 (5.7, 9.0)	5.5 (5.1, 5.8)
% Past Year Any Mental Illness	21.7*	20.3 (17.6, 23.4)	27.2 (23.9, 30.7)	21.9 (21.3, 22.5)
Ages 26 and over				
% Past Year Serious Mental Illness	4.1*	3.8 (3.0, 4.8)	4.0 (3.2, 5.1)	3.9 (3.7, 4.1)
% Past Year Any Mental Illness	18.8*	17.7 (15.4, 20.2)	18.7 (16.6, 20.9)	17.4 (17.0, 17.8)

* 95% confidence intervals not available.

RECOMMENDATIONS

Recommendations to improve knowledge of substance use, dependency, and abuse and its involvement in injuries and fatalities in Alaska

While alcohol remains the most heavily used and abused substance in Alaska, other substances including but not limited to illicit drugs are emerging. The SEW process provides an avenue for epidemiologists, research analysts, and data managers to consolidate surveillance information to examine a myriad of health, social, and economic factors and other consequential issues stemming from initial substance use through abuse and dependency and to evaluate current strategies and interventions targeting high risk populations. In order to assess outcomes of prevention programs and identify and track emerging issues, the following recommendations should be implemented—

- SEW process should be continued to ensure the collection and analysis of information pertaining to substance abuse in a timely fashion and related factors are broadly distributed to healthcare providers, public health officials, policymakers, and community advocates

- To improve access to state, regional, and community health data, data stewards and data providers should be encouraged to participate in the Informed Alaskans Initiative supporting Alaska's Indicator-Based Information System and InstantAtlas™ geographic information system.

- As part of an on-going quality assurance process, state indicators should be evaluated annually and data quality and relevance should be systematically on a regular basis, not to exceed 5-year intervals, to assure that the most comprehensive information available is used.

- Continue to identify and assess data gaps, particularly for prescription drug abuse, and work with prescription drug monitoring programs in order to improve information for health care providers, program managers, and policymakers.

- A drug and alcohol screening should be performed on all intentional and unintentional injury cases processed by the Medical Examiner's office. The screen should include the most commonly abused drugs in Alaska, especially those of greatest public health concern.

- The Medical Examiner's office should routinely analyze information in their database that includes demographic and quantitative results for all toxicology tests for use by public and mental health specialists to help evaluate prevention programs and intervention services.

- Toxicology data from the Alaska State Troopers, municipal police departments, the Alaska Department of Corrections, the State Medical Examiner's office and Poison Control should be combined in a comprehensive database to provide the most complete picture of drug abuse information.

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APPENDICES

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Appendix B: Data and Data Sources Considered

Division of Behavioral Health (internal):

- Alaska's Automated Information Management System (AK AIMS) – for client status review (CSR); Alaska Screening Tool; Client Episode Data; DSM IV
- Medicaid Claims data
- Quarterly grantee reports (prevention and treatment)
- Synar tobacco sales enforcement data
- Alcohol Safety Action Program data (DUI/MC assessments and monitoring data)
- Alcohol Drug Information Schools data
- FASD data
- FAS Knowledge, Attitudes, Beliefs & Behaviors (KABB) Survey
- Treatment Episode Data Set (TEDS)

Division of Behavioral Health (external):

- National Survey for Drug Use and Health (NSDUH)
- Uniformed Reporting System (URS)
- Treatment Episodes Data Set (TEDS)
- Alcohol and tobacco sales data (revenue)
- Rural Patient Management System (RPMS)—Indian Health Services

Division of Public Health:

- Youth Risk Behavior Survey (YRBS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Pregnancy Risk Assessment Monitoring System (PRAMS)
- Alaska Birth Defects Registry (ABDR)/Fetal Alcohol Syndrome Surveillance
- Hospital Discharge data
- Pre-hospitalization/EMS
- Poison Control (inhalants, drugs, alcohol)
- Alaska Occupational Injury Surveillance (OIS)
- Alaska Trauma Registry (ATR)
- Alaska Violent Death Reporting System (AKVDRS)
- Maternal Infant Mortality Review-Child Death Review (MIMR-CDR)
- Child Fatality Review Team (CFRT)
- Vital Statistics (ICD-10 coding, birth certificate information, etc.)

Alaska Court System:

- Court Reporting Systems—Legacy (rural) and Courtview (urban)
- Number of people charged with alcohol/drug-related crimes
- Charge at time of conviction
- Therapeutic Court data
- Substance abuse-related crimes
- University of Alaska (UAA) Justice Center—number of arrestees ordered to alcohol assessment
- Judicial Council

Department of Corrections:

- Title 47 holds (involuntary/protective holds)
- Trust beneficiaries receiving services in DOC
- Women's treatment needs study
- Sex offender data
- Inmate Profile study
- Jail diversion data

Department of Public Safety:

- Alaska Public Safety Information Network (APSIN) data
- Driving under the influence (DUI) arrests
- Alcohol/drug-related arrests
- Fatality Analysis Reporting System (FARS)

Department of Education and Early Development:

- Graduation rates
- School/Student Profiles (every other year)
- Suspensions, Expulsions and Truancy related to alcohol, tobacco, drugs and violence

Division of Juvenile Justice:

- Juvenile Offender Management Information System (JOMIS), since 2002
- DSM IV diagnoses
- Youth attending substance abuse classes/treatment
- Alcohol/drug related offenses (by community, demographics)

Office of Children's Services:

- Online Resources for the Children of Alaska (ORCA)
- Child Protective Service (CPS) cases/requests involving Substance Abuse
- Child Advocacy Center (CAC) data

Miscellaneous Data Sources:

- Veteran's Administration Information
- Veteran's Services caseloads
- Vocational Rehabilitation – services by diagnosis
- Private treatment providers
- National Council on Alcoholism and Drug Dependence (NCADD) # of referrals to outside providers
- Alaska Action Research Committee
- State Suicide Prevention Council/Vital Statistics
- National Co-Morbidity Study (completed every 10 years)
- Anchorage Municipality data sets—safe cities; detoxification; substance abuse arrests, etc.
- Government Performances and Results Act (GPRA) data
- Alaska Injury Prevention Center (suicide follow-back study)
- National Highway Traffic Safety Administration (DUIs, Underage Drinking, etc.)
- Crisis Lines – Careline Crisis Intervention (Fairbanks) and Providence (Anchorage)
- Hospital discharge data – suicide attempts, discharge data, emergency treatment
- Screening, Brief Intervention, Referral and Treatment (SBIRT) – Cook Inlet Tribal Council and Southcentral Foundation
- Agency specific client services and outcome data (Akeela, SEARHC, YKHC, etc.)

- Head Start data
- School Climate & Connectedness Survey (AK Association of School Boards-AASB)
- Grading Grown-ups (AASB, with thanks to Becky Judd)
- Profiles of Student Life, since 1995 by schools (AASB)
- Domestic Violence Program data
- University of Alaska Program data (e.g. Justice Center, Center for Human Development, Institute for Circumpolar Health, Center for Substance Abuse)

Appendix C: Alaska Epidemiological Outcomes Indicators Considered

ALCOHOL CONSUMPTION INDICATORS	SOURCE
Percent of youth lifetime alcohol use	YRBS
Percent reporting 30-Day alcohol use	YRBS BRFSS NSDUH
Percent of youth first alcohol before age 13	YRBS
Percent of youth alcohol on school property	YRBS
Percent of youth age of first use of alcohol	YRBS
Percent reporting binge alcohol use	YRBS BRFSS NSDUH
Percent of youth alcohol or drug use before last sexual intercourse	YRBS
Percent reporting alcohol dependency or abuse	NSDUH
Percent reporting unmet need of alcohol treatment during the past year	NSDUH
Percent of adults reporting heavy alcohol use	BRFSS
Percent of adults reporting “too much to drink” before driving	BRFSS
Percent reporting alcohol use during pregnancy	PRAMS
Percent reporting alcohol use before pregnancy	PRAMS
Percent reporting binge alcohol use during pregnancy	PRAMS
Percent reporting binge alcohol use before pregnancy	PRAMS
Percent of adults reporting daily alcohol use	BRFSS
Number of case sales	DOR
Per capita consumption of all beverages	AEDS
Per capita consumption of ethanol	AEDS
Number of communities with alcohol restrictions	AEDS
Number of alcohol distribution centers	AEDS
Number of sales of alcohol to minors	Alcohol Board
Quantity of alcohol transported to rural Alaska	DOR
Seized amounts of alcohol illegally transported/sold (bootlegged)	DO Public Safety

ILLICIT DRUG CONSUMPTION INDICATORS	SOURCE
Percent of youth reporting lifetime cocaine use	YRBS
Percent of youth reporting lifetime inhalant use	YRBS
Percent reporting 30-Day inhalant use	YRBS
Percent of youth reporting lifetime marijuana use	YRBS
Percent reporting 30-day marijuana use	YRBS NSDUH
Percent reporting 30-day any illicit drug use other than marijuana	NSDUH
Percent of youth reporting marijuana before age 13	YRBS
Percent of youth reporting lifetime heroin use	YRBS
Percent of youth reporting lifetime methamphetamine use	YRBS
Percent of youth reporting lifetime ecstasy use	YRBS
Percent of youth reporting lifetime injecting drugs	YRBS
Percent of youth reporting lifetime steroid use	YRBS
Percent reporting drug dependency or abuse	NSDUH
Percent reporting need drug treatment in the past year	NSDUH
Percent reporting marijuana use during pregnancy	PRAMS

TOBACCO CONSUMPTION INDICATORS	SOURCE
Percent of youth reporting lifetime cigarette use	YRBS
Percent of youth reporting first cigarette before age 13	YRBS
Percent of youth reporting 30-Day cigarette use	YRBS BRFSS NSDUH
Percent reporting daily cigarette use	YRBS BRFSS
Percent of youth reporting 30-Day frequent cigarette use	YRBS
Percent of youth reporting cigarette use on school property	YRBS

Percent of youth reporting 30-Day cigar use	YRBS
Percent of youth reporting 30-Day smokeless tobacco use	YRBS
Percent of youth reporting smokeless tobacco use on school property	YRBS
Percent of youth reporting smoker who have tried to quit	YRBS
Percent of youth reporting 30-Day heavy cigarette use	YRBS
Percent reporting lifetime cigarette use	BRFSS
Percent reporting 30-Day tobacco use	NSDUH
Percent reporting cigarette use during pregnancy	PRAMS
Percent reporting cigarette use before pregnancy	PRAMS
Percent reporting smokeless tobacco use during pregnancy	PRAMS
Number of cigarette sales per capita	SETD
Number of sales of smokeless tobacco	ATS
Number of sales of nicotine replacement products	ATS
Percent reporting greater than 100 cigarettes smoked	ATS
Adult Tobacco Survey (ATS)	ATS
Percent reporting age of first use of cigarettes	ATS
Percent reporting cigarettes per day smoked	ATS
Percent reporting 30-Day smoking frequency assessment	ATS
Percent reporting cigarettes per day smoked	ATS
Number of clean indoor air acts initiated and passed in Alaska	ATS

CONSEQUENCE INDICATORS	**SOURCE**
Number/rate per 100,000 of alcohol induced deaths	HAVRS
Number/rate per 100,000 of chronic liver disease / cirrhosis deaths	HAVRS
Number/rate per 100,000 of vehicle and traffic deaths	HAVRS
Number/rate per 100,000 of deaths due to motor vehicle crashes among children aged 14 and younger	HAVRS
Number/rate per 100,000 of injuries due to motor vehicle crashes among children aged 14 and younger	ATR
Number/rate per 100,000 of unintentional injury death	HAVRS
Number/rate per 100,000 of intentional injury death (homicide, suicide)	HAVRS
Number/rate of infant death (under 1 year of age) per 1,000 live births	HAVRS
Number/rate per 100,000 of homicide deaths	HAVRS
Number/rate per 100,000 of suicide deaths	HAVRS
Number/rate per 100,000 of undetermined deaths	HAVRS
Number/rate per 100,000 of smoking attributable death	HAVRS
Number/rate per 100,000 of lung cancer deaths	HAVRS
Number/rate per 100,000 of chronic lower respiratory diseases	HAVRS
Number/rate per 100,000 of cardiovascular deaths	HAVRS
Number/rate per 100,000 of drugs Induced death	HAVRS
Number/rate per 100,000 of viral hepatitis death	HAVRS
Number/rate per 100,000 of HIV deaths	HAVRS
Number/rate per 100,000 of malnutrition deaths	HAVRS
Number/rate per 100,000 of accidental firearm deaths	HAVRS
Rate of unintentional injuries	ATR
Number of hospitalized injuries associated with alcohol	ATR
Number of hospitalized injuries associated with drug use	ATR
Number/rate of alcohol related school suspensions	ADEED
Number/rate of alcohol related school expulsions	ADEED
Number/rate of drug related school suspensions	ADEED
Number/rate of drug related school expulsions	ADEED
Percent reporting driving under the influence of alcohol	YRBS BRFSS
Percent of youth reporting as passenger with a driver under the influence of alcohol	YRBS
Number/rate of deaths due to alcohol-related motor vehicle crashes	FARS

Number of deaths due motor vehicle crashes	FARS
Number of fatal motor vehicle crashes	FARS
Number/rate per 100,000 of alcohol related fatal motor vehicle crashes	FARS
Number/rate per 100,000 of alcohol related vehicle deaths	FARS
Number/rate per 100,000 of deaths caused by motor vehicle accidents (incl. pedestrians)	FARS
Percent of alcohol involved drivers in fatal crashes	FARS
Number/percent of injury crashes that are alcohol-related	DOT
Number/percent of non-fatal injuries that are alcohol-related	DOT
Percent of property damage that is alcohol-related	DOT
Number of non-fatal injuries caused by motor vehicle crashes	DOT
Number of DUI citations	DOT
Percent of persons aged 12 and older meeting DSM_IV criteria for alcohol abuse or dependence	TEDS
Number of persons receiving treatment for alcohol dependency or alcohol-related & drug dependence disorders from state funded treatment facilities	TEDS
Percent of live births weighing less than 2,500g	HAVRS
Percent of singleton births weighing less than 2,500g	HAVRS
Percent of births weighing less than 1,500g	HAVRS
Percent of singleton births weighting less than 1,500g	HAVRS
Percent of adults reporting that they have been told they currently have asthma	BRFSS
Percent of adults reporting that ever been told they have asthma	BRFSS
Number of federal drug seizures - marijuana	DEA
Number of federal drug seizures - cocaine	DEA
Number of federal drug seizures - methamphetamine	DEA
DEA drug violation arrests	DEA
Number of EMS medical response - drug overdose	EMS
Number of EMS medical response - alcohol	EMS
Number of reported AIDs cases 13 years of age and older and annual rates per 100,000	HIV
Number of reported AIDs cases and annual rates per 100,000	HIV
Number of alcoholic psychoses diagnoses	HFDR ED
Number of alcoholic dependence diagnoses	HFDR ED
Number of alcohol related injuries	HFDR ED
Number of illicit drug related psychosis diagnoses	HFDR ED
Number of illicit drug related dependence diagnoses	HFDR ED
Number of illicit drug related injuries in ER populations	HFDR ED
Number of FASD - Alaska Birth Defects Registry	ABDR
Number of alcohol related arrests and seizures	SDEU
Number of controlled substance arrests/charges - cocaine	SDEU
Number of controlled substance seizures/purchases - cocaine	SDEU
Number of controlled substance arrests/charges - heroin	SDEU
Number of controlled substance seizures/purchases - heroin	SDEU
Number of controlled substance arrests/charges - marijuana	SDEU
Number of controlled substance seizures/purchases - marijuana	SDEU
Number of controlled substance arrests/charges - methamphetamine	SDEU
Number of controlled substance seizures/purchases - methamphetamine	SDEU
Number of controlled substance seizures/purchases - clandestine labs	SDEU
Number/rate per 100,000 of drug related vehicle deaths	FARS
Number of recreational boating accidents per year	USCG
Number of recreational boating injuries per year	USCG
Number of recreational boating injuries with alcohol involvement	USCG
Number of recreational boating accidents with alcohol involvement	USCG

Number of recreational boating accidents with drug involvement	USCG
Number of fatal recreational boating accidents per year	USCG
Number of fatal recreational boating accidents with alcohol involvement	USCG
Number of fatal recreational boating accidents with drug involvement	USCG
Number of treatment facilities in Alaska	AKAIMS
Number of treatment beds funded by Alaska	AKAIMS
Number of referral of treatment for illicit drugs	AKAIMS
Number of referral of treatment for alcohol	AKAIMS
Number of referred treatment completion for illicit drugs	AKAIMS
Number of referred treatment completion for alcohol	AKAIMS
Number of court ordered compliance with treatment for alcohol	ASAP
Number of court ordered compliance with treatment for illicit drugs	ASAP
Number of alcoholic psychoses diagnoses - Tribal	RPMS
Number of alcoholic dependence diagnoses - Tribal	RPMS
Number of alcohol related injuries in ER populations - Tribal	RPMS
Number of illicit drug related psychosis diagnoses - Tribal	RPMS
Number of illicit drug related dependence diagnoses - Tribal	RPMS
Number of illicit drug related injuries in ER populations - Tribal	RPMS
Medicaid paid treatment for alcohol	Medicaid
Number of Medicaid paid treatment for drug use	Medicaid
Occupational fatalities associated with alcohol use	OIS
Occupational fatalities associated with drug use	OIS
Violent death associated with substance abuse	VDRS
Unintentional poisoning deaths (not classified as violent deaths)	VDRS
Opioid-associated deaths (not classified as violent deaths)	VDRS

OTHER CONSUMPTION OR CONSEQUENCE ASSOCIATED INDICATORS	**SOURCE**
Number/rate per 100,000 of ten leading causes of mortality in Alaska	HAVRS
Number/rate per 100,000 of all death in Alaska	HAVRS
Number/rate per 100,000 of child death (under 18 years of age)	HAVRS
Number of adoptions of children with public child welfare agency involvement	HAVRS
Number/rate of teen births 18-19	HAVRS
Number/rate of teen births 15-19	HAVRS
Number/rate of teen births 15-17	HAVRS
Neonatal mortality rate per 1,000 live births	HAVRS, WCFH
Post-neonatal mortality rate per 1,000 live births	HAVRS, WCFH
Perinatal mortality rate per 1,000 live births plus fetal deaths	HAVRS, WCFH
Number of violent crimes reported	UCR
Number of property crimes reported	UCR
Number of larcenies reported	UCR
Number of rapes reported	UCR
Number of burglaries reported	UCR
Number of motor vehicle thefts reported	UCR
Number of murder, manslaughter reported	UCR
Number of robberies reported	UCR
Number of aggravated assaults reported	UCR
Number of rapes arrests	UCR
Number of robberies arrests	UCR
Number of aggravated assaults arrests	UCR
Number of drug manufacture violations	UCR
Number of drug possession violations	UCR
Number of alcohol charges for juvenile offenders	DJJ
Number of drug charges for juvenile offenders	DJJ

Number of alcohol referrals for juvenile offenders	DJJ
Number of drug referrals for juvenile offenders	DJJ
Persons incarcerated in juvenile detention facilities: rate per 100,000	DJJ
Number of substantiated allegations of abuse	DJJ, DOL
Percent of students who had sexual intercourse	YRBS
Percent of students who had sexual intercourse before age 13	YRBS
Percent of students who had sexual intercourse with four or more people during their life	YRBS
Percent of students who had sexual intercourse with one or more people during the last three months	YRBS
Of students who had sexual intercourse, percent who used a condom during last sexual intercourse	YRBS
Of students who had sexual intercourse, percent who used birth control pills during last sexual intercourse	YRBS
Percent of students who received grades mostly of D's and F's during the past 12 months	YRBS
Percent of children in foster care maltreated by foster care provider	OCS
Number of children with substantiated allegations of abuse	OCS
Number of children reported as abused and neglected and referred for investigation per 100,000 children in population	OCS
Number of child abuse and neglect facilities	OCS
Number of children that witness DV	OCS
Number of children that are maltreated	OCS, DSDS
Rate of children per 100,000 population who received preventive services	DHSS
Number of offenses against family and children	APSIN
Percent of high school dropouts	ASB

INFLUENCE INDICATORS	**SOURCE**
Percent of students whose parent talks with them about school nearly every day	YRBS
Percent of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement	YRBS
Percent of students who did not go to school on one or more of the past 30 days because they felt they would be unsafe at school or on their way to or from school	YRBS
Percent of students who carried a weapon such as a gun, knife, or club on school property on one or more of the past 30 days	YRBS
Percent of students who were in a physical fight one or more times during the past 12 months	YRBS
Percent of students who had ever been physically forced to have sexual intercourse when they did not want to	YRBS
Percent of students who seriously considered attempting suicide during the past 12 months	YRBS
Percent of students who do not take part in organized after school, evening, or weekend activities on any days during an average week	YRBS
Percent of students who said their parents feel their child drinking alcohol regularly is either a little bit wrong or not wrong at all	YRBS
Percent of students who usually got the alcohol they drank during the past 30 days from someone else to whom they gave money to buy it for them or from a family member or someone else giving it to them	YRBS
Percent of women advised by health care workers not to drink alcohol while pregnant	YRBS
Percent of adults reporting serious mental illness in the past year	NSDUH
Percent of adults reporting any mental illness in the past year	NSDUH

DATA GAPS

Daily drug use for Alaska
Lifetime injecting drugs for adults
Percent of persons aged 16+ reporting driving after having smoked marijuana or using other illicit drugs in the past month
Percent of women reporting the use of illicit drugs other than marijuana during pregnancy
Number of single nighttime crashes per 100,000 populations aged 16 and older
Number of persons discharged from hospital ER for alcohol related injuries (as per ICD-10 codes) per 100,000 population
Number of persons discharged from hospital for drug poisoning
Number of persons discharged from hospitals for drug poisoning
Alcohol related personnel actions per 100,000 employees
Drug-related personnel actions per 100,000 employees
Number of persons discharged from hospitals for conditions related to tobacco use (as per ICD-10 codes) per 100,000 populations
Number of deaths from each specific cause that is at least fractionally attributable to tobacco, per 100,000 population aged 15+

Appendix D: ICD-10 Codes for Causes of Death Associated with Substance Abuse

Cause of Death	ICD-10 Codes
Unintentional Injury	V01-X59, Y85-Y86
Suicide	U03, X60-X84, Y870
Homicide	U01-U02, X85-Y09, Y871
Chronic Liver Disease & Cirrhosis	K70, K73-K74
Alcohol-Induced	E244, F10, G312, G621, G721, I426, K292, K70, K860, R780, X45, X65, Y15
Drug-Induced	D521, D590, D592, D611, D642, E064, E160, E231, E242, E273, E661, F110-F115, F117-F119, F120-F125, F127-F129, F130-F135, F137-F139, F140-F145, F147-F149, F150-F155, F157-F159, F160-F165, F167-F169, F170-F175, F177-F179, F180-F185, F187-F189, F190-F195, F197-F199, G211, G240, G251, G254, G256, G444, G620, G720, I952, J702-J704, L105, L270-L271, M102, M320, M804, M814, M835, M871, R781, R782-R785, X40-X44, X60-X64, X85, Y10-Y14

Appendix E: Alaska Population Data

Table 1. Annual Components of Population Change, Alaska, 2000-2011

July 1-June 30	End of Period Population	Population Change	Average Annual Rate of Change	Births	Deaths	Natural Increase	Net Migrants
2010-11	722,159	8,254	1.15	11,694	3,844	7,850	404
2011-12	730,603	8,444	1.16	11,100	3,853	7,247	1,197
2012-13	736,071	5,468	0.75	11,312	3,980	7,332	-1,864
2013-14	736,423	352	0.05	11,439	3,968	7,471	-7,119
2014-15	737,022	599	0.08	11,332	4,294	7,038	-6,439
2015-16	739,676	2,654	0.36	11,287	4,451	6,836	-4,182
2016-17	737,847	-1,829	-0.25	10,760	4,424	6,336	-8,165

Source: Alaska Department of labor and Workforce Development, Research and Analysis Section. Vintage 2018

Table 2. Profile of General Population and Housing Characteristics, 2016

SEX AND AGE		
Total population	**739,676**	**100.0**
Under 5 years	52,970	7.2
5 to 9 years	54,713	7.4
10 to 14 years	51,238	6.9
15 to 19 years	48,093	6.5
20 to 24 years	50,603	6.8
25 to 29 years	57,872	7.8
30 to 34 years	57,677	7.8
35 to 39 years	49,616	6.7
40 to 44 years	42,774	5.8
45 to 49 years	44,906	6.1
50 to 54 years	50,254	6.8
55 to 59 years	53,068	7.2
60 to 64 years	46,895	6.3
65 to 69 years	33,645	4.5
70 to 74 years	20,031	2.7
75 to 79 years	11,815	1.6
80 to 84 years	7,220	1.0
85 years and over	6,286	0.8

Median age (years)	34.7	(X)
16 years and over	570,531	77.1
18 years and over	550,391	74.4
21 years and over	523,560	70.8
62 years and over	105,682	14.3
65 years and over	78,997	10.7
Male population	**382,091**	**51.7**
Under 5 years	27,065	**3.7**
5 to 9 years	28,255	**3.8**
10 to 14 years	26,287	**3.6**
15 to 19 years	25,321	**3.4**
20 to 24 years	27,266	**3.7**
25 to 29 years	30,195	**4.1**
30 to 34 years	29,816	**4.0**
35 to 39 years	25,658	**3.5**
40 to 44 years	22,062	**3.0**
45 to 49 years	23,139	**3.1**
50 to 54 years	26,038	**3.5**
55 to 59 years	27,349	**3.7**
60 to 64 years	24,264	**3.3**
65 to 69 years	17,721	**2.4**
70 to 74 years	10,169	**1.4**
75 to 79 years	5,852	**0.8**
80 to 84 years	3,269	**0.4**
85 years and over	2,365	**0.3**
Median age (years)	34.4	(X)
16 years and over	295,183	39.9
18 years and over	284,559	38.5
21 years and over	270,213	36.5
62 years and over	53,220	7.2
65 years and over	39,376	5.3
Female population	**357,585**	**48.3**
Under 5 years	25,905	3.5
5 to 9 years	26,458	3.6
10 to 14 years	24,951	3.4
15 to 19 years	22,772	3.1
20 to 24 years	23,337	3.2
25 to 29 years	27,677	3.7
30 to 34 years	27,861	3.8

35 to 39 years	23,958	3.2
40 to 44 years	20,712	2.8
45 to 49 years	21,767	2.9
50 to 54 years	24,216	3.3
55 to 59 years	25,719	3.5
60 to 64 years	22,631	3.1
65 to 69 years	15,924	2.2
70 to 74 years	9,862	1.3
75 to 79 years	5,963	0.8
80 to 84 years	3,951	0.5
85 years and over	3,921	0.5
Median age (years)	35.0	(X)
16 years and over	275,348	37.2
18 years and over	265,832	35.9
21 years and over	253,347	34.3
62 years and over	52,462	7.1
65 years and over	39,621	5.4
RACE		
Total population	**736,855**	**100.0**
One Race	**674,515**	**91.5**
White	483,518	65.6
Black or African American	24,443	3.3
American Indian and Alaska Native	103,574	14.1
Asian	44,218	6.0
Asian Indian	835	0.1
Chinese	2,122	0.3
Filipino	24,824	3.4
Japanese	1,485	0.2
Korean	4,697	0.6
Vietnamese	1,134	0.2
Other Asian [1]	9,121	1.2
Native Hawaiian and Other Pacific Islander	8,862	1.2
Native Hawaiian	1,548	0.2
Guamanian or Chamorro	481	0.1
Samoan	5,104	0.7
Other Pacific Islander [2]	1,729	0.2
Some Other Race	9,900	1.3
Two or More Races	**62,340**	**8.5**
White; American Indian and Alaska Native [3]	32,356	4.4
White; Asian [3]	7,883	1.1

White; Black or African American [3]	7,319	1.0
White; Some Other Race [3]	7,893	1.1
Race alone or in combination with one or more other races [4]		
White	538,969	73.1
Black or African American	37,800	5.1
American Indian and Alaska Native	143,587	19.5
Asian	58,279	7.9
Native Hawaiian and Other Pacific Islander	13,301	1.8
Some Other Race	13,314	1.8
HISPANIC OR LATINO		
Total population	**736,855**	**100.0**
Hispanic or Latino (of any race)	49,031	6.7
Mexican	26,187	3.6
Puerto Rican	7,061	1.0
Cuban	822	0.1
Other Hispanic or Latino [5]	14,961	2.0
Not Hispanic or Latino	687,824	93.3
HISPANIC OR LATINO AND RACE		
Total population	**736,855**	**100.0**
Hispanic or Latino	49,031	6.7
White alone	26,943	3.7
Black or African American alone	1,435	0.2
American Indian and Alaska Native alone	2,955	0.4
Asian alone	839	0.1
Native Hawaiian and Other Pacific Islander alone	278	0.0
Some Other Race alone	8,661	1.2
Two or More Races	7,920	1.1
Not Hispanic or Latino	687,824	93.3
White alone	456,575	62.0
Black or African American alone	23,008	3.1
American Indian and Alaska Native alone	100,619	13.7
Asian alone	43,379	5.9
Native Hawaiian and Other Pacific Islander alone	8,584	1.2
Some Other Race alone	1,239	0.2
Two or More Races	54,420	7.4
RELATIONSHIP		
Total population	**736,855**	**100.0**
In households	709,094	96.2
Householder	250,235	34.0
Spouse [6]	124,596	16.9

Child	230,546	31.3
Other relatives	48,872	6.6
Nonrelatives	54,845	7.4
Unmarried partner	20,166	2.7
HOUSEHOLDS BY TYPE		
Total households	250,235	100.0
Family households (families) [7]	166,629	66.6
With own children under 18 years	79,715	31.9
Married-couple family	124,720	49.8
With own children under 18 years	54,651	21.8
Male householder, no wife present	14,542	5.8
With own children under 18 years	8,148	3.3
Female householder, no husband present	27,367	10.9
With own children under 18 years	16,916	6.8
Nonfamily households [7]	83,606	33.4
Householder living alone	64,301	25.7
65 years and over	16,105	6.4
Households with individuals under 18 years	88,062	35.2
Households with individuals 65 years and over	48,375	19.3
Average household size	2.83	(X)
Average family size [7]	3.42	(X)
HOUSING OCCUPANCY		
Total housing units	309,171	100.0
Occupied housing units	250,235	80.9
Vacant housing units	58,936	19.1
Homeowner vacancy rate (percent) [8]	1.9	(X)
Rental vacancy rate (percent) [9]	6.1	(X)
HOUSING TENURE		
Occupied housing units	250,235	100.0
Owner-occupied housing units	159,313	63.7
Average household size of owner-occupied units	2.93	(X)
Renter-occupied housing units	90,922	36.3
Average household size of renter-occupied units	2.66	(X)

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section and U.S. Census Bureau

Note: Alaska Department of Labor and Workforce Development (AKDOLWD), Vintage 2018 population estimates were used wherever possible. Where AKDOLWD population estimates were not available at the level of specificity needed (i.e. Race and Housing estimates), U.S. Census Data were used. Total population estimates may differ between these data sources.

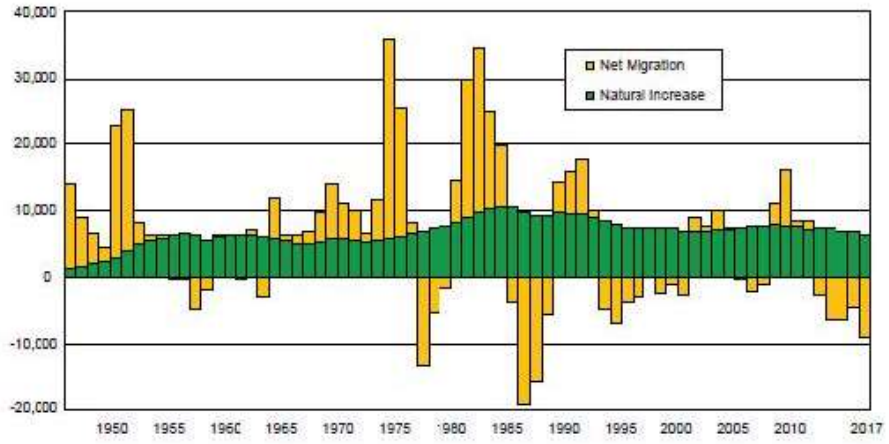
Table 3. Annual Labor force, Employment, and Unemployment for Alaska 2010-2017

Calendar Year	AK Labor Force	Employment	Unemployment	Unemployment Rate	US Unemployment Rate
2010	361,913	333,416	28,497	7.9%	9.6%
2011	365,913	338,161	27,752	7.6%	8.9%
2012	365,519	339,474	26,045	7.1%	8.1%
2013	365,292	339,801	25,491	7.0%	7.4%
2014	365,704	340,585	25,119	6.9%	6.2%
2015	363,872	340,132	23,740	6.5%	5.3%
2016	363,047	337,947	25,100	6.9%	4.9%
2017	362,783	336,806	25,977	7.2%	4.4%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section. Vintage 2018.

Appendix F: About Alaska

Figure 1. Components of Population Change for Alaska



Alaska Department of Labor and Workforce Development, Research and Analysis Section

Geography

- Alaska, the largest State in the Nation, is approximately one-fifth the size of the contiguous United States. Land area within the State comprises 586,412 square miles; water area comprises 86,051 square miles.
- The State is separated from the contiguous 48 states by 500 miles of Canadian territory; the closest point is in the State of Washington. Alaska is one of the two U.S. States not bordered by another state, Hawaii being the other. Alaska is thus an exclave of the U.S. that is part of the continental U.S. but is not part of the contiguous U.S.
- When superimposed over the 48 contiguous states, Alaska overlaps Texas, Oklahoma, Kansas, New Mexico, and Colorado; Alaska's westernmost to easternmost points would stretch from San Francisco, California, to Jacksonville, Florida.
- Distributed across the State are 297 villages, towns, cities with fewer than 2,500 persons, or outside any community; two-thirds of the communities have no road access to other communities or to the State's limited highway network (2100 miles).
- Alaska is administratively divided into "boroughs," as opposed to "counties." Whereas some states use a three-tiered system, state/county/township, Alaska only uses two tiers, state/borough. The function is the same. Owing to the state's low population density, most of the land is located in unorganized boroughs which, as the name implies, has no intermediate borough government of its own, but is administered directly by the state government. These unorganized boroughs were divided into 11 census areas beginning in the 1970.

Climate

- Alaska has unique climate conditions and seasonal daylight changes. Temperatures can range from as high as 100°F to as low as -80°F.
- Seasonal daylight in northern communities includes 24 hours of daylight in the summer months to no more than the edge of twilight in the winter.

Population

- While the State population has increased six-fold since 1946 (Figure 1), Alaska population density (excluding Anchorage) is slightly more than one person per square mile.

- As of July 1, 2016, Alaska has an estimated population of 739,709, which is approximately 0.2% of the national population. Alaska's population has increased 2,242, or 0.30%, from the prior year and an increase of 17,321, or 2.0%, since the year July 1, 2011. The population distribution reflects that approximately 40% of Alaskans reside in Anchorage (the State's largest city), followed by Fairbanks and Juneau. These urban areas house approximately 57% of the State's population.
- As of July 1, 2016, the Alaska median age was 34.7 years (34.4 years for Alaska males and 35.0 years for Alaska females), which is less than the national median age of 37 years. Of all states, Alaska has the smallest proportion of persons 65 years and over (10.7%). The percentage of the population aged 18 years and over was 74.4%.
- In 2011, the population comprises several racial groups: 65.6% White; 14.1% Alaska Native/American Indian; 6.0% Asian; 3.3% Black, 1.2%Hawaiian/Pacific Islander, and 8.5% Two or more races. Hispanic ethnicity represents 6.7% of the overall state population.

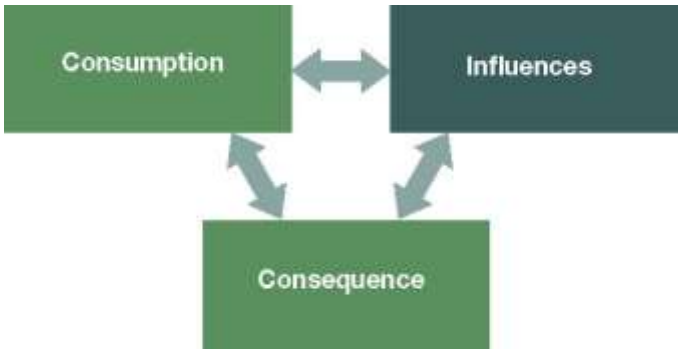
Appendix G: Selection Process for Indicators

The importance of having a comprehensive and integrated compilation of data across disciplines is the foundation for determining key constructs that truly show the impact of alcohol, illicit drug use, and tobacco in Alaska. The SPF relationship diagram (Figure 2) illustrates the sequence of events from substance-related problems to the development of public policies, practices, and programs for prevention.

Figure 2. SPF Relationship Diagram

As a data driven process for prevention, the first and most critical step is identification of all pertinent information and assessment of its relevance to substance use issues in order to expand our understanding and to clarify contributing factors. While CSAP recommends that the prioritization process focus predominantly on consumption and consequences related to substance abuse, influences are included in the profile, thus covering the three overarching constructs represented by the SPF (Figure 3).

Figure 3. Diagram Illustrating the Relationship between Constructs



Consumption refers to the use patterns of alcohol, illicit drugs, and tobacco such as current, episodic and/or lifetime use. For example, key constructs for consumption must detail drinking behavior (i.e., lifetime, initial age, daily/monthly habits) or describe the prevalence of other behavioral risk factors (i.e., driving after drinking, sexual activity while under the influence of alcohol or illicit drugs). Economic data regarding sales, transport, and geographic restrictions for purchase and/or possession is also used to conceptualize consumer patterns and the extent of the problem.

Consequences of substance use includes mortality, morbidity, and other undesirable events such as social problems, unprotected sex, violence, motor vehicle crashes, physical dependencies, and psychological addiction. Alcohol-induced mortality, drug-induced mortality, and tobacco use related mortality are examples of consequences as a result of substance use.

Influences associated with substance use are based on factors leading to initial and chronic substance abuse (pre-, early, chronic, and post-abuse cycles). Influences affecting productivity, security, social connectedness and health could manifest within family and community environments

preceding, during, and following substance use. This construct focuses on extensive research that demonstrates a strong association between life domain influences and substance consumption and consequences issues. Factors such as parental modeling, interpersonal interaction, and psychosocial and socioeconomic conditions contribute to substance use and other risk-taking behaviors, and, if not included, limit strategic planning and prevention measures. Thus, the influences data is an important part of the SPF process. A data subcommittee was tasked to:
1) identify and prioritize the contributing factors that influence substance use and abuse, and 2) identify existing and recommended new indicators to monitor over time. Information on influences that had strong association with substance consumption or consequences were presented to the advisory group for inclusion in their prioritization deliberations and will be included in future revisions of the epidemiologic profile.

Having already identified a broad scope of state-level data across multiple professional disciplines pertaining to alcohol, illicit drug, tobacco use and outcomes highly associated with substance use and abuse, the SEW as a whole reviewed all sources of information either previously used in the epidemiologic profile or identified as a potential future source of information from national and state agencies and other unique data reserves (Appendix B). The purpose of the exercise helped to 1) ensure the continued availability of datasets and 2) evaluate longevity of the measures as useful indicators of substance abuse and prevention activities. The SEW also assessed case definitions for each data indicator as a quality improvement activity to provide best practice recommendations for current and future surveillance.

The SEW members then self-assigned themselves to one or more of these three data subcommittees based on professional experience—either being directly responsible for collection and analysis of targeted data or being highly familiar with data collection processes and analysis. The subcommittees were tasked with reviewing potential data sources and data indicators (Appendix C); or contacting appropriate source agencies/organizations familiar with the data and requesting updated analysis reports or data subsets for analysis by the SEW support staff. The subcommittees were also tasked with identifying any new information not previously available or excluded due to quality issues. Data providers not currently participating with the SEW were invited to scheduled meetings to describe the data collection process(es), analysis practices and protocols, and any trends and patterns.

In addition to identification of potential data sources, the subcommittees updated a data directory (originally developed 2006 by the SEOW) to function as a roadmap for future program planning in research needs. The directory entries included—

- Time span; initiation of surveillance
- Consistency of data collection
- Data definitions
- Population specificity
- Long-term retention plan for data
- Short-term “snapshot”
- Barriers/restrictions to data access

Data Assessment and Prioritization Process for Consumption and Consequences Indicators

The SEW developed a three-step procedure to assess data availability and quality in order to select

indicators of greatest need and importance. Step One eliminated any dataset without sufficient scope, i.e., provide generalizable information for Alaska's population for at least 5 years. Step Two evaluated the data relevance and usefulness in order to measure change within at-risk populations. These first two processes provided a refined and robust set of information for statewide prioritization for strategic planning. The third and final step determined the order of prioritization relative to the ability to foster long-term change and improve physical and mental health of Alaska populace.

Step One: Data Availability and Quality Evaluation

Each indicator within a dataset was scored on a scale of 0 to 2 (Table 1a) for each of five data quality factors: availability, validity, timeliness, consistency, and sensitivity (Table 1b). The sum of these 5 scores, which ranged from 0 to 10, were then averaged. A high score indicated datasets that provided the highest quality information for each of the constructs. Low scores indicated datasets that were not usable to track consumption and consequence issues at a statewide level. Since scores were subjective, standard deviation was calculated for each set of data indicator scores as part of the evaluation process in order to assess consensus among subcommittee members. Average scores under 7 were deemed of low quality. Average scores of ≥7 plus a standard deviation of <2 were subsequently evaluated for relevance to substance use, abuse, dependency, and treatment issues.

Table 1a. Scoring Scale for Phase One: Data Quality

0	Absence of desired quality
1	Lack of quality
2	High level of quality

Table 1b. Data Indicator Quality Scoring Criteria

Availability	• The data should be readily available and accessible. The measure must be available in disaggregated form at the age/gender/race level. • Is the data available through 2008 or 2009? • Is the data currently available for past 5 years or from 2004-2008?
Validity	• The measure must meet basic criteria for validity. There must be research-based evidence that the indicator accurately measures the specific construct and yields a true snapshot of the phenomenon at the time of the assessment. • Does this indicator provide a true representation of what is actually occurring in our population (state-level)?
Timeliness	• Are we able to get the information in a reasonable amount of time? • Are there sporadic delays for getting the information? • Are we able to analyze the information in a reasonable amount of time?
Consistency	• The measure must be consistent. The method or means of collecting and organizing data should be relatively unchanged over time, such that the method of measurement is the same from time i to i+1. Alternatively, if the method of measure has changed, sound data should exist that determine and allow adjustment for differences resulting from data collection changes. • Is the question asked the same way over a period of years? • Is the indicator collected the same way over a period of time?
Sensitivity	• The measure must be sufficiently sensitive to detect change over time that might be associated with changes in alcohol, illicit drug, or tobacco use. • If we collect this information, will we see a change over the five year period of our grant in the indicator?

It is important to note that decisions at this stage were based primarily on professional experience of state data managers and other professionals who work with the data on a regularly basis. However, this assessment made it possible to recognize data issues such as (e.g., data collection lapses, gaps in surveillance, definition changes) impacting the overall quality of the datasets. To truly show the impact of substance use and abuse on the overall health of Alaska, comprehensive information composed of accurate, timely and relevant data is key. The importance of having an integrated compilation of data across disciplines will foster a better understanding of substance use characteristics and circumstances and ensuing advocacy for resources to continue the work of preventing, intervening, treating and providing long-term recovery services.

Step Two: Data Relevance

During Step 2, individual indicators were scored as low, medium, or high (1, 2, or 3) (Table 2a), based on four relevance factors: severity, magnitude, cultural sensitivity, and changeability (Table 2b).

Table 2a. Scoring Scale for Phase Two-Data Relevance

1	Low level of relevance or mostly lacking
2	Moderate level of relevance
3	High level of relevance factor

Table 2b. Data Relevance Scoring Criteria

Severity	• The measure must examine the potential impact or level of outcomes on individuals or society that are associated with substance abuse. • How serious is the nature/extent of outcomes associated with substance abuse compared to those of other problems? • Is the measure available to quantify severity, such as Years of Potential Life Lost, Quality-Adjusted Life Years, or Disability-Adjusted Life Years?
Magnitude	• The measure must be described in terms of absolute number (e.g., total number of cases, frequency of occurrence (e.g., percents), or rates (e.g., number of cases per some standard unit). • Are incidence and prevalence rates adjusted for population variations (per 100,000 people)?
Cultural Sensitivity	• Assessment of cultural sensitivity addresses the difference of the individual, family, or community culture and values and understanding the range of dynamics that result from the interaction of people from different cultures. • Is there an ability to adapt individual interventions and programs to fit the cultural context of the individual, family, or community?
Changeability	• Assessment of the changeability of substance abuse problems should focus on the feasibility to prevent or control the problem or the consequence(s). • Can potential change be measureable in 5 years? • Are there opportunities that may affect present or future burden of the measure? • Is there scientific evidence about effectiveness of interventions?

Scores for each indicator were then placed into the following formula:

Relevance Score = (Severity + Magnitude + Cultural Sensitivity) x Changeability

This formula allowed each factor to be weighted, of which the last and most critical of all factors was the ability to effect change. It was important to recognize that the effectiveness of an intervention

may be null or economically or legally unfeasible. If changeability = 0, then the product of the equation equaled zero; the data indicator was eliminated from further evaluation regardless of the score given to the other three relevance factors.

The scoring system was adopted and modified from the Wyoming SPF and was similar to the Centers for Disease Control and Prevention's "Guide for Establishing Public health Priorities."

Step Three: Prioritization

Prioritization was a discovery process involving both the SEW and the Alaska SPF SIG Advisory Council. Following a presentation of the SEW's findings and numeric ranking of data indicators, the Advisory Council provided their collective recommendations on prioritizing substance use constructs. The finalized assessment and prioritization was incorporated into the State's SPF SIC Strategic Plan, submitted to CSAP. A copy Alaska's approved SPF SIG Strategic Plan for the prevention of substance abuse is available at http://dhss.alaska.gov/dbh/Pages/Prevention/programs/substanceabuse/default.aspx

Appendix H: Risk and Protective Factor Definitions and their Indicators

Indicators of Protection

Parent and Family connectedness (bonding) - Family connectedness has several components. Connectedness refers to the feelings of warmth, love and caring children get from their parents. Children who feel support and connection report a high degree of closeness, feelings of being understood, loved, and wanted. A parental presence is related to connection; it refers to a parent being present during key times: before school, after school, dinner, bedtime and doing activities together. A "positive parenting style" involves high expectations, clear family rules, fair and consistent discipline practices and age appropriate supervision and monitoring of behavior, friends and whereabouts. The Add-Health study found this to be one of the strongest protective factors against all risk behaviors.[1,4,6,8,7,8,11,15,21,25]

Connection to School - Students feel "connected" (attached or bonded) to their school based on their feelings about the people at school, both staff and other students. School connectedness is closely related to a caring positive school climate. School connectedness protects adolescents against many health risks, including smoking, alcohol, drug use, and early sexual initiation. Positive school climate and connectedness have been shown to contribute positively to academic achievement.[1,6,8,9,10,15,22,26]

Positive Connection to Other Adults - This factor refers to the student's perception that they receive support and caring in relationships with adults, other than family members i.e. neighbors, coaches, teachers, mentors or ministers. As children grow, they become involved in an expanded network of significant relationships. This enlarged network includes many adults who can provide regular contact, mentoring, support, and guidance. [1,3,4,5,9,10,11,13a,14, 21,25]

Engagement in Meaningful Activities - This refers to activities involving volunteering and helping others in community or peer-based programs, or service-learning projects. This protective factor is associated with the reduction of several risk-taking behaviors (alcohol, tobacco or drug use, delinquency, anti-social behaviors, teen pregnancy, school suspensions or school dropout). Programs increase skills and positive development when youth are involved in all phases: planning, organizing, implementation and evaluation. [2,3,4,6,7,6,8,9,11,15, 25, 28, 27,29]

Social, Emotional and Employability Skills - This refers to the abilities that equip young people to make positive choices, maintain healthy relationships and succeed in life; the skills include: communication, conflict resolution, empathy, resistance, problem solving/decision making and cultural competence. [3,4,5,8,9,11]

Indicators of Risk

Experienced Child Abuse (neglect, physical, sexual) or other family violence - Research suggests that children or youth who have been physically abused or neglected are more likely than others to commit violent crimes and/or become pregnant. Exposure to high levels of marital and family discord or conflict also appears to increase risk, as does antisocial or delinquent behavior by siblings and peers. [1,6,11,17,20]

Early Initiation of the Problem Behavior - The earlier young people begin using drugs, committing crimes, engaging in violent activity, dropping out of school and becoming sexually active,

the greater the likelihood that they will have problems with these behaviors later on. For example, research shows that young people who initiate drug use before the age of 15 are at twice the risk of having drug problems as those who wait until after the age of 19. [6,8,18]

Availability of Alcohol and other Drugs - The more available alcohol and other drugs are in a community, the higher the risk that young people will use and abuse these substances. The perceived availability of drugs is also associated with greater risk of use. In schools where students believe drugs are more available, a higher rate of drug use occurs. [8,12,18]

Family history of suicide or attempts – Youth who have a suicide among any family member in the past 12 months are at greater risk for attempting suicide. [1,7,11]

Community Laws and Norms Favorable Toward Alcohol and Drug Use - Community norms (the attitudes and policies a community holds about alcohol/drug use) are communicated in a variety of ways: through laws and written policies, informal social practices, and through the expectations parents and community members have of young people. (e.g. alcohol taxes, local option or drunk driving laws, perceptions of disapproval). [8,11,12,18]

Preservation or Loss of Cultural Identity - Alaska Native and American Indian people may face additional risks associated with alcohol and other drug use. The increased vulnerability may be due to marginalization, stigmatization, and loss or devaluation of language, culture, spiritual and traditional healing practices, and subsistence living. Another problem may be lack of access to culturally appropriate health care. Alaska Native and American Indian communities also experience higher levels of stress due to historical trauma and rapid cultural change. Other ethnic persons or groups may experience similar risk factors. [14,16,19,21]

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Appendix I: Overview of Changes to Table/Chart Numbering

In light of new data available on substance abuse, several new tables and charts were added to this update of the Epi Profile. Additionally, several tables and charts were removed or modified with this update due to changes in data collection (i.e. if a survey question asked in previous years is no longer asked) or a lack of comprehensive statewide data on certain conditions. Tables and charts were re-numbered following these changes and as a result, the numbering of tables and charts in this Profile differs from that of past Profiles.

Please refer to the Renumbering Matrix below for an overview of changes made to table/chart numbering. New tables and charts added to the Profile in this update are highlighted in blue and tables and charts removed from the Profile are highlighted in grey. In cases where tables and charts were removed, an explanation is provided alongside the title of the table/chart.

Number (Past Profiles)	Number (Current Profile)	Title
Tables		
Table 1.1 – Table 1.6: No change in numbering		
N/A – New	Table 1.7	Trends in Maternal Drinking, by Age Group, Alaska PRAMS, 2010–2015
Table 1.7	Table 1.8	Trends in Illicit Drug Use Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015
Table 1.8	Table 1.9	Trends in Illicit Drug Use Among Traditional High School Students, by Grade, Alaska YRBS, 2011–2015
Table 1.9	Table 1.10	Trends in Reported Illicit Drug Use, by Age Group, Alaska NSDUH, 2013–2016
Table 1.16	Table 1.11	Trends in Prenatal Marijuana Use for Alaska Native and White Women, Alaska PRAMS, 2010–2015 *(Moved from Tobacco section to Illicit Drugs section of Profile)*
Table 1.10	N/A – Removed	Trends in Annual Cigarette Sales per Capita, Alaska *(Removed because Chart 1.22, which provides more comprehensive data, was added in its place)*
Table 1.11	Table 1.12	Trends in Cigarette Use Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015
Table 1.12	Table 1.13	Trends in Cigarette Use Among Adults, by Gender, Alaska BRFSS, 2012–2016
Table 1.13	Table 1.14	Trends in Cigarette Use Among Adults, by Race and Ethnicity, Alaska BRFSS, 2012–2016
Table 1.14	Table 1.15	Trends in Reported Cigarette and Tobacco Products Use, by Age Group, Alaska NSDUH, 2013–2016
Table 1.15	Table 1.16	Trends in Maternal Smoking, by Age Group, Alaska PRAMS, 2010–2015
N/A – New	Table 1.17	Trends in Prenatal Smokeless Tobacco Use for Alaska Native and White Women, Alaska PRAMS, 2010–2015
Table 2.1 – Table 2.18: No change in numbering		
Table 2.19	N/A – Removed	Top Five Hospitalized Injury Causes Associated with Drug Use, Occurrence in Alaska, by Gender, ATR, 2012–2016 *(Removed because the Alaska Trauma Registry (ATR) discontinued data collection on adult poisonings, with the exception of work-related and non-intentional inhalation poisonings, on January 1, 2011. Health Facilities Data Reporting (HFDR) Program data are being reviewed to fill this data gap.)*
Table 2.20	N/A – Removed	Hospitalized Injury Associated with Drug Use, Alaska Residents, by Race and Ethnicity, ATR, 2012–2016 *(Removed – see note on Table 2.19 above)*
Table 2.21	N/A – Removed	Hospitalized Injury Associated with Drug Use, Alaska Residents, by Region, ATR, 2012–2016 *(Removed – see note on Table 2.19 above)*
Table 2.22	Table 2.19	Trends in Illicit Drug Related Out-of-School Suspensions, Alaska, 2011–2016
Table 2.23	Table 2.20	Trends in Illicit Drug Related School Expulsions, Alaska, 2011–2016
Table 2.24	Table 2.21	Comparison of Smoking Related Death Rate to Alcohol Induced, Chronic Liver Disease/Cirrhosis, and Drug Induced Death Rates, Alaska, 2012–2016
Table 2.25	Table 2.22	Smoking Related Deaths by Age, Gender, and Race, Alaska, 2012–2016
Table 2.26	Table 2.23	Smoking Related and Smoking Attributable Mortality by Select Cause of Death, Alaska Residents, 2012–2016
Table 2.27	Table 2.24	Trends in Motor Vehicle Driving After Drinking Among Traditional High School Students, by Gender, Alaska YRBS, 2011–2015

Table 2.28	Table 2.25	Trends in Motor Vehicle Driving After Drinking Among Traditional High School Students, by Grade, Alaska YRBS, 2011–2015
Table 2.29	Table 2.26	Trends in Motor Vehicle Driving After Drinking Among Adults, by Gender, Alaska BRFSS, 2010–2016
Table 2.30	Table 2.27	Trends in Motor Vehicle Driving After Drinking Among Adults, by Age Group, Alaska BRFSS, 2010–2016
Table 2.31	Table 2.28	Fatalities Due to Alcohol-Related Motor Vehicle Crashes, Alaska FARS, 2012–2016
Table 2.32	Table 2.29	Citations Issued by Law Enforcement to Motor Vehicle Drivers Involved in Traffic Crashes, by Age Group and Citation, Anchorage and Alaska, 2010–2015
Table 2.33	Table 2.30	Trends in Reported Sexual Behavior Among Traditional High School Students, by Grade, Alaska YRBS, 2011–2015
Table 2.34	Table 2.31	Comparison of Violent Death Rates, Alaska and the U.S., 2012–2016
Table 2.35	Table 2.32	Suicide Deaths by Age, Gender, and Race, Alaska, 2012–2016
Table 2.36	Table 2.33	Trends in Violent Death Associated with Substance Abuse, Alaska VDRS, 2012–2016
N/A – New	Table 2.34	Trends in Unintentional Poisoning Deaths (Not Classified as Violent Death), Alaska VDRS, 2012–2016
N/A – New	Table 2.35	Trends in Opioid Associated Deaths (Not Classified as Violent Death), Alaska VDRS, 2012–2016
Table 2.37	Table 2.36	Crime Index and Rate Variance, Alaska UCR, 2015–2016
Table 2.38	Table 2.37	Trends in Drug Arrests, Adults 18 Years of Age and Older, by Gender, Alaska UCR, 2012–2016
Table 2.39	Table 2.38	Trends in Drug Arrests, Youth 17 Years of Age and Younger, by Gender, Alaska UCR, 2012–2016
Table 2.40	Table 2.39	Substances Used by Referred Juveniles While "Under the Influence" per Referral and Intake Data, Alaska DJJ, Fiscal Year 2016
Table 2.41	Table 2.40	Alcohol and Drug (A&D) Referrals and Offenses for Juvenile Offenders, Alaska DJJ, Fiscal Year 2013–2016
Table 2.42	Table 2.41	Drug and Alcohol Referrals for Juvenile Offenders, by Gender, Alaska DJJ, Fiscal Year 2013–2016
Table 2.43	Table 2.42	Trends in Illicit Drug Related Arrests/Charges, Alaska SDEU, 2012–2016
N/A – New	Table 3.1	Trends in Prenatal Care – Health Care Workers Advising Women Not to Drink Alcohol While Pregnant, by Age Group, Alaska PRAMS, 2010–2015
Charts		
Chart 1.1 – Chart 1.19: No change in numbering		
Chart 1.20	N/A – Removed	Percentage of Students Who Were Offered, Sold, or Given an Illegal Drug by Someone on School Property During the Past 12 Months, Comparing Traditional and Alternative Schools, Alaska YRBS *(Reporting on this indicator was discontinued; this question has not been asked on the Alaska YRBS since 2011)*
Chart 1.21	Chart 1.20	Reported Illicit Drug Use, Dependency or Abuse, by Age Groups, Alaska NSDUH, 2015–2016
Chart 1.22	Chart 1.21	Misuse of Prescription Pain Relievers in the Past Year Among Persons Aged 12 or Older, by Age Group, Alaska NSDUH, 2015–2016
N/A – New	Chart 1.22	Annual Per Adult Sales of Cigarette Packs, By Fiscal Year, Alaska and U.S. (minus Alaska), 1996–2014 *(Added in place of Table 1.10 "Trends in Annual Cigarette Sales per Capita, Alaska")*
Chart 1.23 – Chart 1.30, Chart 2.1: No change in numbering		
N/A – New	Chart 2.2	All Causes of Death and Rates by Borough/Census Area, Alaska, 2012–2016
N/A – New	Chart 2.3	All Causes of Death and Rates by Behavioral Health Regions, Alaska, 2012–2016
Chart 2.2	Chart 2.4	Comparison of Number of Alcohol Induced Deaths to Unintentional Injury, Intentional Self-Harm, and Chronic Liver Disease and Cirrhosis Deaths, by Public Health Region, Alaska, 2012–2016
Chart 2.3	Chart 2.5	Alcohol Induced Death and Rates by Borough/Census Area, Alaska, 2012–2016
N/A – New	Chart 2.6	Alcohol Induced Death and Rates by Behavioral Health Regions, Alaska, 2012–2016
Chart 2.4	Chart 2.7	Chronic Liver Disease and Cirrhosis Death and Rates by Borough/Census Area, Alaska, 2012–2016
N/A – New	Chart 2.8	Chronic Liver Disease and Cirrhosis Death and Rates by Behavioral Health Regions, Alaska, 2012–2016
Chart 2.5	Chart 2.9	Unintentional Injury Death and Rates by Borough/Census Area, Alaska, 2012–2016
N/A – New	Chart 2.10	Unintentional Injury Death and Rates by Behavioral Health Regions, Alaska, 2012–2016
Chart 2.6	N/A – Removed	Prevalence of Specific Fetal Alcohol Spectrum Disorders (FASD), Alaska *(Removed due to the lack of comprehensive statewide data on FASD)*
Chart 2.7	Chart 2.11	Drug Induced Death and Rates by Borough/Census Area, Alaska, 2012–2016
N/A – New	Chart 2.12	Drug Induced Death and Rates by Behavioral Health Regions, Alaska, 2012–2016

N/A – New	Chart 2.13	Alaska Overdose Mortality, Age-Adjusted Rates, 2005–2016 (preliminary)
Chart 2.8	Chart 2.14	Total Motor Vehicle Crash Fatalities Compared to Alcohol-Related Motor Vehicle Crash Fatalities, Alaska FARS, 2012–2016
Chart 2.9	Chart 2.15	Trends in Blood Alcohol Concentration (BAC) Collected After Fatal Motor Vehicle Crashes, by Highest Driver BAC in Crash, Alaska FARS, 2012–2016
Chart 2.10	Chart 2.16	Recreational Boating Fatalities, Alaska, 2012–2016
Chart 2.11	Chart 2.17	Recreational Boating Accidents, Fatal Accidents, and Deaths, Alaska, 2012–2016
Chart 2.12	Chart 2.18	Boating Accidents, Injuries, and Deaths Related to Alcohol Use, Alaska, 2012–2016
Chart 2.13	Chart 2.19	Suicide Deaths and Rates by Borough/Census Area, Alaska, 2012–2016
N/A – New	Chart 2.20	Suicide Deaths and Rates by Behavioral Health Regions, Alaska, 2012–2016
Chart 2.14	Chart 2.21	Trends in Occupational Fatalities Associated with Alcohol and/or Drug Use, Alaska OIS, 2011–2016
Chart 2.15	Chart 2.22	Trends in Violent Crime Associated with Substance Abuse, Alaska UCR, 2012–2016
Chart 2.16	Chart 2.23	Trends in Property Crime Associated with Substance Abuse, Alaska UCR, 2012–2016
Chart 2.17	Chart 2.24	Trends in Drug Offenses, Adults 18 Years of Age and Older, Alaska UCR, 2012–2016
Chart 2.18	Chart 2.25	Trends in Drug Offenses, Youth 17 Years of Age and Younger, Alaska UCR, 2012–2016
Chart 2.19	Chart 2.26	Trends in Prescription Medication Seizures, by Dosage Unit, Alaska SDEU, 2012–2016
Chart 2.20	Chart 2.27	Trends in Heroin Seizures, Alaska SDEU, 2014–2016
Chart 3.1 – Chart 3.10: No change in numbering		

Appendix J: Common Acronyms

Acronym	Name
AAHC	Alaska Association of Homes for Children
AANHS	Alaska Area Native Health Services
AAPA	Alaska Addiction Professionals Association
AARS	Nugen's Ranch (Alaska Addiction Rehabilitation Services, Inc.)
AASB	Alaska Association of School Boards
ABADA	Advisory Board on Alcoholism and Drug Abuse
ABADE	Alaska Bureau of Alcohol and Drug Enforcement *(changed to the Statewide Drug Enforcement Unit – SDEU)*
ABC / ABCB	Alcoholic Beverage Control Board
ABDAA	Alaska Before Drugs And Alcohol
ABDR	Alaska Birth Defects Registry
ABHA	Alaska Behavioral Health Association
ABI	Alaska Bureau of Investigation
ACBHC	Alaska Commission for Behavioral Health Certification
ACCESS	Access Alaska
ACMHS	Anchorage Community Mental Health Services
ACS	Alaska Children's Services *(see AKCF – AK Child & Family)*
AEDS	Alcohol Epidemiologic Data System
AFS	Alaska Family Services
AHRQ	Agency for Healthcare Research and Quality
AICS	Alaska Island Community Services
AKVDRS	Alaska Violent Death Reporting System
AKAIMS	Alaska's Automated Information Management System
AKCF	AK Child & Family *(formerly ACS - Alaska Children's Services)*
Akeela	Akeela, Inc.
AMCO	Alcohol and Marijuana Control Office
AMHB	Alaska Mental Health Board
AMHCW	Alaska Mental Health Consumer Web
AMHTA	Alaska Mental Health Trust Authority
ANHB	Alaska Native Health Board
ANMC	Alaska Native Medical Center
ANTHC	Alaska Native Tribal Health Consortium
API	Alaska Psychiatric Institute
APIA	Aleutian/Pribilof Islands Association
APSIN	Alaska Public Safety Information Network
ARC	ARC of Anchorage

ARO	Anchorage Regional Office
ASAM	American Society of Addiction Medicine
ASAP	Alcohol Safety Action Program
ASHNHA	Alaska State Hospital and Nursing Home Association
ASHP	American Society of Health-Systems Pharmacists
ASMA	Alaska State Medical Association
AST	Alaska State Troopers
AST	Alaska Survey Tool
ATHS	Alaska Tribal Health System
ATR	Alaska Trauma Registry
ATSDR	Agency for Toxic Substances and Disease Registry
AYFN	Alaska Youth and Family Network
AYI	Alaska Youth Initiative - discontinued
BAC	Blood Alcohol Concentration
BBAHC	Bristol Bay Area Health Corporation
BBNA	Bristol Bay Native Association
BGHA	Boys and Girls Home of Alaska
BHC	Behavioral Health Center
BHCS	Behavioral Health Consumer Survey
Booth	Salvation Army (Booth Memorial Home)
BRFSS	Behavioral Risk Factor Surveillance System (National and Alaska)
BVS	Alaska Bureau of Vital Statistics *(now HAVRS – Health Analytics and Vital Records Section)*
CAASA	Community Action Against Substance Abuse
CBHC	Community Behavioral Health Center
CBHTR	Community Behavioral Health Treatment and Recovery
CBHPEI	Community Behavioral Health Prevention & Early Intervention
CC	Community Connections
CCMC	Sound Alternatives (Cordova Community Medical Clinic)
CCS	Catholic Community Services
CDC	Centers for Disease Control and Prevention
CDV	Criminal Domestic Violence
CDVSA	Council on Domestic Violence and Sexual Assault
CHA/P	Community Health Aide/Practitioner
CHAP	Community Health Aide Program
CICADA	Cook Inlet Council on Alcohol & Drug Abuse
CIMHP	Comprehensive Integrated Mental Health Plan
CISM	Critical Incident Stress Management
CITC	Cook Inlet Tribal Council
Clitheroe	Salvation Army Clitheroe Center

CMHC	Community Mental Health Center
CMI	Chronic Mental Illness
CODI	Compassionate Directions *(formerly Co-Occurring Disorders Institute)*
CPGH	Central Peninsula General Hospital
CRC	Crisis Respite Center
CRNA	Copper River Native Association
CSAP	Center for Substance Abuse Prevention
CSAT	Center for Substance Abuse Treatment
CSR	Client Status Review
CTC	Communities That Care
CTFK	Campaign for Tobacco Free Kids
CY	Calendar Year
DAWN	Drug Abuse Warning Network
DBH	DHSS Division of Behavioral Health
DCCED	Department of Commerce, Community and Economic Development
DCI	Division of Criminal Investigation *(see ABI – Alaska Bureau of Investigation)*
DEA	Drug Enforcement Administration
DEED	Alaska Department of Education and Early Development
DES	Designated Evaluation and Crisis Stabilization
DES/T	Designated Evaluation, Crisis Stabilization and Treatment
DET	Designated Evaluation & Treatment
DFS	Denali Family Services
DHHS	(US) Department of Health and Human Services
DHSS	Alaska Department of Health and Social Services
DIG	Data Infrastructure Grant
DJJ	Alaska Division of Juvenile Justice
DMVA	Alaska Department of Military and Veterans' Affairs
DOC	Alaska Department of Corrections
DOL	Alaska Department of Labor and Workforce Development
DOL&WD	Alaska Department of Labor and Workforce Development
DOL&WD-RA	Alaska Department of Labor and Workforce Development - Research and Analysis Section
DOR	Alaska Department of Revenue
DOT	Alaska Department of Transportation
DOT&PF	Alaska Department of Transportation and Public Facilities
DPH	Alaska DHSS Division of Public Health
DPS	Alaska Department of Public Safety
DSDS	Alaska DHSS Division of Senior and Disabilities Services
DSH	Disproportionate Share Hospital

EAT	Eastern Aleutian Tribes
EDI	Electronic Data Interchange *(for providers who are not part of AKAIMS)*
EED	Alaska Department of Education and Early Development
EPI	Section of Epidemiology (DHSS DPH)
ERT	Emergency Response Team
EST	Emergency Support Team
FACE	Fatality Assessment and Control Evaluation
FAE	Fetal Alcohol Effects
FARS	Fatality Analysis Reporting System (NHTSA)
FAS	Fetal Alcohol Syndrome
FASD	Fetal Alcohol Spectrum Disorder
FCMHS	Fairbanks Community Mental Health Services
FCS	Frontier Community Services
FCSA	Family Centered Services of Alaska
FEMA	Federal Emergency Management Agency
FNA	Fairbanks Native Association
FPL	Federal Poverty Level
FRA	Fairbanks Resource Agency
FY	Fiscal Year
GATEWAY	Gateway Center for Human Services (Akeela, Inc.)
GCDSE	Governor's Council on Disabilities and Special Education
GHS	Gastineau Human Services
GIS	Geographical Information System
HAVRS	Alaska Health Analytics and Vital Records Section *(formerly the Bureau of Vital Statistics)*
HCBS	Home and Community-Based Service
HCPS	Health Care Provider Survey
HCUP	Healthcare Cost and Utilization Project
HDD	Hospital Discharge Data
HDDS	Hospital Discharge Data Set *(now Health Facilities Data Reporting Program)*
HFDR	Alaska Health Facilities Data Reporting Program *(formerly Hospital Discharge Data Set)*
HSS	Health and Social Services (Alaska)
HIPAA	Health Insurance Portability Accountability Act
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
Hope	Hope Community Resources
HRSA	Health Resources and Services Administration
HSIS	Health Sciences Information Services (Alaska)
HHS	Health and Human Services (US)
IAA	Interior AIDS Association

IHS	Indian Health Service
IMD	Medicaid Institutions for Mental Diseases (IMD) exclusion
IMPACT	Improving Mood - Promoting Access to Collaborative Treatment
ISA	Individualized Service Agreement (funds)
ISP	Alaska Injury Surveillance Program
JAMHI	Juneau Alliance for Mental Health, Inc.
JCAHO	Joint Commission for the Accreditation of Healthcare Organizations
JYS	Juneau Youth Services
KANA	Kodiak Area Native Association
KC	Kids Count (AK DEED)
KIC	Ketchikan Indian Community
KICTCH	Ketchikan Indian Community Tribal Health Clinic
KIT	Kenaitze Indian Tribe
KPCCC	Kenai Peninsula Community Care Center
LCBHC / LCC	Lynn Canal Behavioral Health Clinic (formerly Lynn Canal Counseling Center)
MCAC	Medicaid Care Advisory Committee
MCH	Maternal and Child Health (MCH) Epidemiology
MHC	Mental Health Center
MHSH	Mat-Su Health Services, Inc.
MHSIP	Mental Health Statistics Improvement Program
MHTA	Mental Health Trust Authority
MHTAAR	Mental Health Trust Authority Authorized Receipts
MMIS	Medicaid Management Information System
MOA	Memorandum of Agreement
MOC	Mobile Emergency Response Support (MERS) Operations Center
MOU	Memorandum of Understanding
MQS	Medicaid and Quality Section
MSIS	Medicaid Statistical Information System
MSTC	Mount Sanford Tribal Consortium
MYC	McLaughlin Youth Center
NAMI-AK	National Alliance on Mental Illness - Alaska
NATS	National Adult Tobacco Survey
NCHS	National Center for Health Statistics
NCS	National Comorbidity Survey
NCS-R	National Comorbidity Survey Replication
NDTC	Narcotic Drug Treatment Center
NHTSA	National Highway Traffic Safety Administration
NIDA	National Institute on Drug Abuse

NIH	National Institutes of Health
NPN	National Prevention Network
NRO	Northern Regional Office
NSB	North Slope Borough
NSDUH	National Survey on Drug Use and Health
NSHC	Norton Sound Health Corporation
OCS	Office of Children's Services
OMB	Office of Management and Budget
OOS	Out of State
OSPC	Out of State Placement Committee (youth)
OSMAP	DHSS Office of Substance Misuse and Addiction Prevention
OTIS	Offender Tracking Information System (Court System and Corrections)
P&EI	Prevention and Early Intervention
PA	Physician Assistant
PCHC	Peninsula Community Health Centers
PES	Psychiatric Emergency Services
PHH	Presbyterian Hospitality House
PKICC	Providence Kodiak Island Counseling Center
PMHS	Petersburg Mental Health Services
POA	Police Officer /Mental Health Professional Application for Examination
PRAMS	Pregnancy Risk Assessment Monitoring System (National and Alaska)
PVCC	Providence Valdez Counseling Center
QA	Quality Assurance
QC	Quality Control
RCCY	Residential Care for Children & Youth grants
RDT	Residential Diagnostic Treatment
RMHA	Railbelt Mental Health & Addictions
RPC	Regional Placement Committee (youth)
RPTC	Residential Psychiatric Treatment Center
RRC	Rainforest Recovery Center
RSA	Reimbursable Services Agreement
RTC	Residential Treatment Center
RYC	Residential Youth Care
SA	Substance Abuse
SA	Service Authorization
SADA	Substance Abuse Director's Association
SAMHSA	Substance Abuse and Mental Health Services Administration

SAMMEC	Smoking Attributable Mortality, Morbidity and Economic Costs
SBIRT	Screening, Brief Intervention, and Referral to Treatment (SBIRT)
SCAPS	Sitka Counseling and Prevention Services
SCCS	School Climate and Connectedness Survey (AASB)
SCF	Southcentral Foundation
SCRO	Southcentral Region Office
SCS	Seaview Community Services
SDEU	Statewide Drug Enforcement Unit (Alaska State Troopers)
SDFS	Safe and Drug-Free Schools
SEARHC	SouthEast Alaska Regional Health Consortium
SED	Seriously Emotionally Disturbed
SEOW	State Epidemiological Outcomes Workgroup
SERO	Southeast Region Office
SESA	Special Education Service Agency
SIG	State Incentive Grant
SMI	Serious Mental Illness
SOAR	SSI/SSDI Outreach, Access, and Recovery (SOAR)
SPBH	South Peninsula Behavioral Health Services, Inc.
SPFSIG or SPF-SIG	Strategic Prevention Framework State Incentive Grant
SUD	Substance Use Disorder
Synar	Synar program (oversees implementation of the Synar Amendment, which prohibits sale and/or distribution of tobacco products to individuals under the age of 18)
T & R	Treatment and Recovery
TB	Tuberculosis
TCC	Tanana Chiefs Conference
TEDS	Treatment Episode Data Set
UAA	University of Alaska, Anchorage
UAF	University of Alaska, Fairbanks
UAS	University of Alaska, Southeast
UCR	Uniform Crime Reports (Uniform Crime Reporting Program)
VA (AK)	Veterans Affairs (AK)
VA (US)	Veterans Affairs (US)
VDRS	Violent Death Reporting System (National and Alaska)
VOA	Volunteers of America Alaska
VPSO	Village Public Safety Officer
WCFH	Women's, Children's and Family Health (DHSS)
WRO	Western Regional Office (OCS)
WSDSG	Western States Decision Support Group
Xerox	Alaska Medicaid Health Enterprise system

YAS	Youth Advocates of Sitka
YKHC	Yukon-Kuskokwim Health Corporation
YRBS	Youth Risk Behavioral Survey (National and Alaska)