

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

CONSUMPTION AND CONSEQUENCE

UPDATE 2013





2013 Update

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**

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

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State of Alaska
Sean Parnell, Governor

Alaska Department of Health and Social Services
William Streur, Commissioner

Division of Behavioral Health
Melissa Witzler Stone, Director

Report Prepared by:
Deborah Hull-Jilly, MPH
Leanne Davis, MSN
Sherrie Wilson Hinshaw, MS

Reviewed by:
L. Diane Casto, MPA
Jesse Metzger, PhD
Alaska Substance Abuse Epidemiology Workgroup

Design and Formatting by:
Glenn Harvey

Additional information pertaining to the Alaska Strategic Prevention Framework 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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Executive Summary

The Alaska Epidemiologic Profile on Substance Use, Abuse and Dependency is a tool for substance abuse prevention and public health and mental health planners in support of the Substance Abuse and Mental Health Services Administration (SAMHSA) – Strategic Prevention Framework State Incentive Grants.

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, timely 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 for use in prevention/intervention planning, monitoring, and evaluation and provides recommendations to ensure comparable database field 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 of which 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 State Epidemiologic Profile on Substance Use, Abuse and Dependency 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. This will allow agencies and organization 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.

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.

The resulting descriptive study provides baseline and trend information on substance use, abuse, dependence and consequences thereof.

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 1.5 times the U.S. rate (55.2 vs. 38.0 per 100,000 persons).
- During 2007-2011, males were 2 times more likely than females to die from unintentional injury in Alaska.

Alcohol

- In 2010, ethanol consumption (beer, spirits, and wine) was consistently greater than the nation averages; spirits consumption was nearly 2 times the national average.
- Of the 108 communities with some alcohol restriction, most had lower rates of serious injury.
- In 2011, 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 2010-2011 National Survey on Drug Use and Health (NSDUH), indicated little change from previous surveys in adult alcohol use; binge (episodic) alcohol use was reported by 23% of adults in Alaska, of which persons aged 18-25 reported 42% binge alcohol use.
- Nearly 25% of all hospitalized injury patients had suspected or proven alcohol use injury; of these hospitalizations, assault, falls, motor vehicle, and suicide attempts were the leading injury causes for both males and females.
- Hospitalized injury associated with alcohol use among persons aged 20 years or less declined 47% (from 193 patient-cases in 2006 to 103 patient cases in 2010).
- During 2007-2011, 155 recreational boating events with 71 fatalities occurred in Alaska, of which 32% were associated with known alcohol use
- The number of high school suspensions declined 48% (from 222 in the 2006-2007 school year to 116 in the 2010-2011 school year).

- Alcohol-related motor vehicle events among Alaska high school youth was significantly lower than the national average in 2011 and lower than in previous years. However, one out of four youth still accompany a driver who had been drinking alcohol.
- The prevalence of younger drivers aged 16-34 years with Blood Alcohol Concentration (BAC) above the legal limit was lower than the national average; however the prevalence of drivers aged 35 years and older was significantly higher than the national average.

Illicit Drugs

- In 2011, the YRBS results indicated that 16% of all Alaska youths reported taking prescription drugs without a doctor's prescription.
- Boroughs in the Southcentral region of Alaska with greater population density and/or boroughs experiencing rapid growth had higher rates of drug induced death.
- During 2006-2010, 12% of all hospitalized injury patients in Alaska had suspected or proven drug use; of these hospitalizations, the most common cause was suicide attempt (47%).
- During 2007-2011, prevalence of drug induced death was highest among Alaska Native females aged 25-64 years.

Tobacco

- During 2009-2011, daily cigarette use decreased significantly among Alaska high school youth from 10.3% to 9.1%, while 23% of adults in Alaska reported cigarette use.
- During 2007-2011, tobacco attributable death rate in Alaska was 12-20 times the death rates due to alcohol, drug, and chronic liver disease/cirrhosis.
- Alaska Natives had the highest rate of death attributed to smoking (315.1 per 100,000 persons), of which Native males were nearly twice as likely to die from tobacco use as Native females (431.4 vs. 219.6 per 100,000 persons, respectively).

Data Improvement Recommendations include:

- SEW process should be continued to ensure the collection and analysis of information pertaining to substance abuse and related factors are broadly distributed to healthcare providers, public health officials, policymakers, and community advocates.
- As part of an on-going quality assurance process, state indicators should be evaluated annually and data quality and relevance should be systematically done routinely, 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 working 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 screening 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 health and mental health specialists to help evaluate prevention programs and intervention services.
- Toxicology data from the State Medical Examiner Office should be routinely analyzed for use by public health and mental health specialists to help evaluate prevention activities and intervention services.”

How to Use This Document

The Alaska Epidemiologic Profile on Substance Use, Abuse and Dependency is a tool for use by a broad spectrum of substance abuse prevention specialists and public health planners and program managers in addition to community health and safety personnel and policymakers. The information provides a state-level overview to support efforts related to the Substance Abuse and Mental Health Services Administration (SAMHSA) – Strategic Prevention Framework State Incentive Grants (SPF SIG).

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 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., 2007-2011) available. A combined 5-year period was used whenever possible for rate calculations.

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.

The following sections present information on the establishment of the Substance Abuse Epidemiology Workgroup (SEW), formerly the Substance Abuse Epidemiologic Outcomes Workgroup (SEOW), their processes to create this document, and several major indicators of Alaska's substance consumption and consequences related to use and dependency. These indicators include measures of alcohol and tobacco sales; self-reported substance abuse consumption behavior (from statewide surveys); and outcomes including morbidity, mortality, treatment, and criminal activity associated with substance abuse and dependency.

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 or by clicking on the link embedded in the web document.

Data Resources-National

- Alcohol Epidemiologic Data System. National Institute on Alcohol Abuse and Alcoholism, Division of Epidemiology and Prevention Research, National Institutes of Health. <http://alcoholism.about.com/cs/homework/a/blquick01.htm>
- Behavioral Risk Factor Surveillance System (BRFSS). Centers for Disease Control and Prevention (CDC). <http://www.cdc.gov/brfss>
- United States Census. <http://quickfacts.census.gov/qfd/states/02000.html>
- Fatality Analysis Reporting System (FARS). National Highway Traffic Safety Administration. <http://www.nhtsa.gov/FARS>
- National Center for Health Statistics (NCHS), Multiple Causes of Death Public Use File. <http://www.cdc.gov/nchs/nvss.htm>
- National Survey on Drug Use and Health (NSDUH). Office of Applied Studies, Substance Abuse and Mental Health Services Administration. <http://www.oas.samhsa.gov/states.cfm>
- Substance Abuse and Mental Health Statistics (SAMHS). Office of Applied Studies. Substance Abuse and Mental Health Services Administration. <http://oas.samhsa.gov/tobacco.htm>
- Youth Risk Behavior Surveillance System (YRBSS). Centers for Disease Control and Prevention (CDC). <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>

Data Resources-State

- Alaska Behavioral Risk Factor Surveillance System (BFRSS). Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services. <http://dhss.alaska.gov/dph/Chronic/Pages/brfss/default.aspx>
- Alaska Bureau of Vital Statistics. Division of Public Health, Alaska Department of Health and Social Services. <http://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://laborstats.alaska.gov/pop/popest.htm>
- Alaska Pregnancy Risk Assessment Monitoring System (PRAMS). Maternal and Child Health Epidemiology Unit, Section of Women's, Children's and Family Health, Division of Public Health, Alaska Department of Health and Social Services. <http://dhss.alaska.gov/dph/wcfh/pages/mchepi/prams>
- Alaska Tobacco Facts. Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services. <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. <http://www.dps.alaska.gov/Statewide/UCR.aspx>
- Alaska Youth Risk Behavior Survey (YRBS). Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services. <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/nclb/>
- Juvenile Justice Data. Division of Juvenile Justice, Alaska Department of Health and Social Services. <http://dhss.alaska.gov/djj/Pages/GeneralInfo/Stats.aspx>
- Tobacco Tax Program. Tax Division Programs, Alaska Department of Revenue. <http://www.tax.state.ak.us/>

Data Limitations

This report focused on a five-year data period from 2007-2011 to facilitate comparison between datasets and provide a statistically valid statewide assessment of resources. While some data was not available for the entire data period, the most recent datasets were used. Revisions to this report will be completed as data is made available.

Data analysis for this profile did not include 2011 ATR data. In 2011, poisonings among adults (aged 18 years and older) due to intentional, self-inflicted, or suicidal overdoses were no longer included in the ATR data collection algorithm. The amended patient criteria (eff. 1/1/2011) for hospitalizations of adults due to poisoning included only work-related poisoning and unintentional inhalation poisoning (e.g., carbon monoxide, ammonia, chlorine gas). Patient criteria for children (age 17 years and younger) were not amended; all hospitalizations of children due to poisoning continued to be entered without interruption.

This report adopted the guidelines used by the Alaska Bureau for Vital Statistics for mortality rates. U.S. death rates shown in this report were recomputed based on revised populations that were consistent with the 2010 census levels. These estimates were produced under a collaborative arrangement between the National Center for Health Statistics and the U.S. Census Bureau. Rates were based on the 2010 census counts by age, race, and sex, modified to be consistent with the U.S. Office of Management and Budget racial categories as of 1977 and historical categories for death data. Death rates previously published in Alaska's annual reports prior to 2010 were based on post census population estimates derived from the 2000 census.

The crude death rate was used to measure mortality. Since the age composition of the population can greatly influence the crude death rate, age adjustment was used in mortality statistics. Beginning in 2000, the U.S. and the Alaska Bureau of Vital Statistics used the year 2000 standard population for age adjustment.

Some data were not available statewide and limited to specific geographical areas.

When data were not available at the borough and census area level, information was presented by regions.

Reported race by census area was problematic due to changes in assigning race. Alaska Bureau of Vital Statistic decided not to calculate any rates by race and census area due to this problem.

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 augments information on low prevalence chronic diseases such as diabetes and cardiovascular disease. Data summarized by CDC and national organizations did not employ the additional survey and therefore their prevalence rates may differ from those produced by the Alaska Health Survey Laboratory.

The Alaska Youth Risk Behavior Surveillance System is composed of a CDC-funded high school sample as well as local school district samples of their high school and middle school students. The statewide sample is intended to be representative of high school students throughout Alaska attending traditional high schools. Alaska has also conducted statewide samples of its alternative high schools for students at risk for not completing high school in a traditional setting and youth incarcerated in correctional facilities. Alaska may present its data in alternate groupings such as by academic achievement and Alaska-specific racial groupings. The YRBS has been administered in Alaska seven times, 1995, 1999, 2003, 2005, 2007 and 2009. Weighted (representative) data were collected in 1995, 2003, 2007 and 2009, resulting in published reports. (The 1999 YRBS survey was conducted despite the lack of participation of the Anchorage School District. Although there was adequate participation from the remaining school districts to result in “weighted” or “representative” data, it was only representative to student population outside of the Municipality of Anchorage and was therefore not included in this state-level profile.) In 2001, the YRBS was not administered in Alaska; and in 2005, the YRBS did not receive an adequate participation rate to be considered representative of the state. In 2009, Alaska also conducted statewide samples of its alternative high schools for students at risk for not completing high school in a traditional setting and youth incarcerated in correctional facilities.

Statewide estimates were based upon datasets returned from CDC that conformed with national data sources such as Youth Online (<http://apps.nccd.cdc.gov/youthonline>). Alaska presented some data in alternate groupings such as by academic achievement and Alaska-specific racial groupings.

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

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 data field (variable) definitions and to improve data collection for future surveillance.

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 collection, review and analysis); Capacity (assessment and cataloging 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



Assessment (data collection, review and analysis); Capacity (assessment and cataloging 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”).

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. Following the establishment of the SEOW, the State was able to identify, maintain and improve 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) (formerly the SEOW). 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.

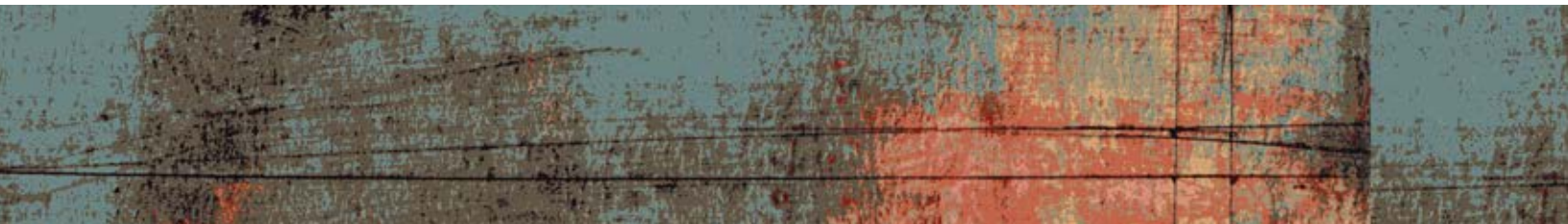
Having a broad scope of state-level data across multiple professional disciplines pertaining to the aforementioned constructs, it was necessary for the SEW to expand and refine the process initiated by the SEOW. Besides the review of all potential substance-related data, the SEW assessed issues impacting 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 of the selection process, see Appendix G.

Profile Overview

The following information summarizes select descriptive analyses of individual datasets. 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





Problem Statement: Alcohol Sales and Consumption

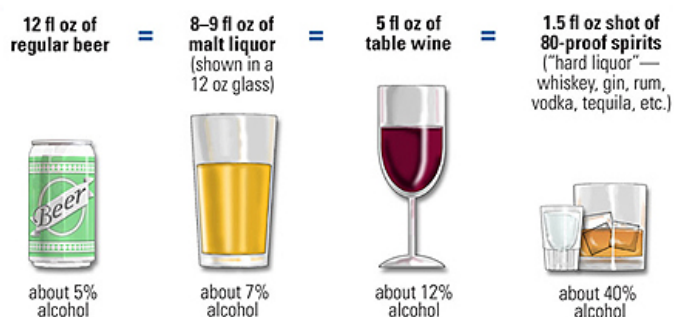
The prevalence of alcohol use, heavy drinking, and binge drinking among adults and youth in Alaska have historically been higher than national averages. Trends of alcohol consumption varied among age groups, gender and race. However, Alaska's rate of binge alcohol use was higher than the national average in 2011.

Alcohol use among youth did not vary significantly from national averages. However, alcohol use was associated with other high risk behaviors including abuse of other substances, sexual activity, behavior resulting in injury, delinquency, and criminal behavior in the majority of cases.

Data Analysis

Data on alcohol sales and consumption was provided through Alcohol Epidemiologic Data System (AEDS), Youth Risk Behavior Survey (YRBS), Behavioral Risk Factor Surveillance System (BRFSS), and National Survey on Drug Use and Health (NSDUH). Some rates were not available. Limiting factors include low number of observations, insufficient sample size or confidence interval (CI) range that is too broad to obtain reliable results. Most national averages were available for most recent year comparison. This section contains tables and charts with the following abbreviation: *DSU - Data Statistically Unreliable*.

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



The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.

<http://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/standard-drink>

Alcohol Epidemiologic Data System (AEDS)

<http://alcoholism.about.com/cs/homework/a/blquick01.htm>

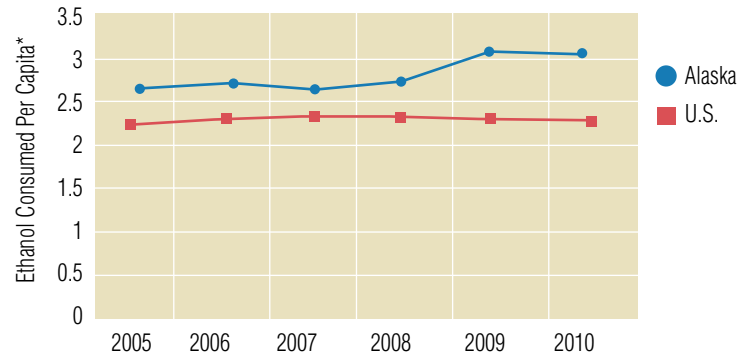
Ethanol consumption was consistently greater than national averages for all alcohol-containing beverages. While all alcohol beverages were higher than national statistics, spirits were 1.7 times higher in 2010 (Table 1.1; Chart 1.1).

**Table 1.1. Trends in Ethanol Consumed Per Capita*, Alaska**

Beverage Type	2005	2006	2007	2008	2009	2010	U.S. 2009	U.S. 2010
Beer	1.24	1.24	1.32	1.21	1.31	1.22	1.17	1.13
Spirits	0.99	1.02	1.07	1.09	1.16	1.25	0.74	0.74
Wine	0.43	0.46	0.45	0.49	0.54	0.55	0.38	0.38

*Total sales of ethanol in gallons per 10,000 population age 14 years and older

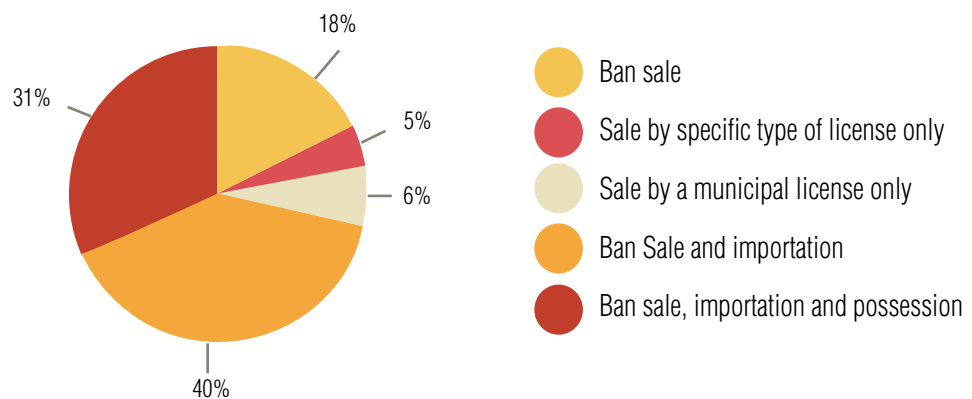
AEDS uses a population of persons aged 14 and older to calculate per capita consumption rates. Although age 14 is below the minimum legal age for the purchase of alcoholic beverages throughout the United States, most self-report surveys indicate that many 14-year-olds drink alcoholic beverages.

Chart 1.1. Trends in Ethanol Consumed Per Capita, All Beverages, Alaska

*Total sales of ethanol in gallons per 10,000 population age 14 years and older

<http://pubs.niaaa.nih.gov/publications/Surveillance95/pcyr19702010.txt>

Currently, 108 communities have some restriction that prohibits alcohol sales and possession. Nearly 75% of communities with alcohol restrictions ban the sale 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, 2012, N=108

*Total sales of ethanol in gallons per 10,000 population age 14 years and older

<http://commerce.alaska.gov/dnn/abc/Resources/DryDampCommunities.aspx>



Youth Risk Behavior Survey (YRBS)

<http://apps.nccd.cdc.gov/youthonline/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at: <http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/>

Definitions of alcohol use:

- Current alcohol use was defined as having one drink within the past 30 days.
- Heavy alcohol use was defined as having more than two drinks per day for males and one drink per day for females.
- Binge or episodic heavy alcohol use was defined as having five or more drinks within a couple of hours.

The prevalence of alcohol use before 13 years of age, current and binge alcohol use was higher among males, while the prevalence of any alcohol use continued to be slightly higher among females (Table 1.2). However, reports of alcohol use before sexual intercourse has increased marginally for both male and female students compared to preceding surveys but was lower than the 2011 national averages. Overall, the 2011 YRBS results for All Grades were lower than the national averages, 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 Youth, by Gender, Alaska YRBS

	2007	2009	2011	U.S. 2011
Female				
% Ever Drank Alcohol	73.9	67.8	68.1	70.9
% Alcohol Before 13	16.3	16.0	14.4	17.4
% Current Drinking	39.2	32.9	34.9	37.9
% Binge Alcohol Use	23.9	19.9	16.7	19.8
% Drank Alcohol or Used Drugs Before Last Sexual Intercourse	21.5	15.2	16	18.1
% Drank on School Property	4.0	2.3	3.1	4.7
Male				
% Ever Drank Alcohol	73.4	65.4	65.1	70.6
% Alcohol Before 13	24.0	17.6	25.3	23.3
% Current Drinking	40.0	33.5	36.4	39.5
% Binge Alcohol Use	27.3	23.3	16.7	23.8
% Drank Alcohol or Used Drugs Before Last Sexual Intercourse	22.9	18.6	21.0	26.0
% Drank on School Property	4.0	3.3	3.7	5.4



Chart 1.3. Trends in Youth Reporting Alcohol Use Before Age 13, by Grade, Alaska YRBS

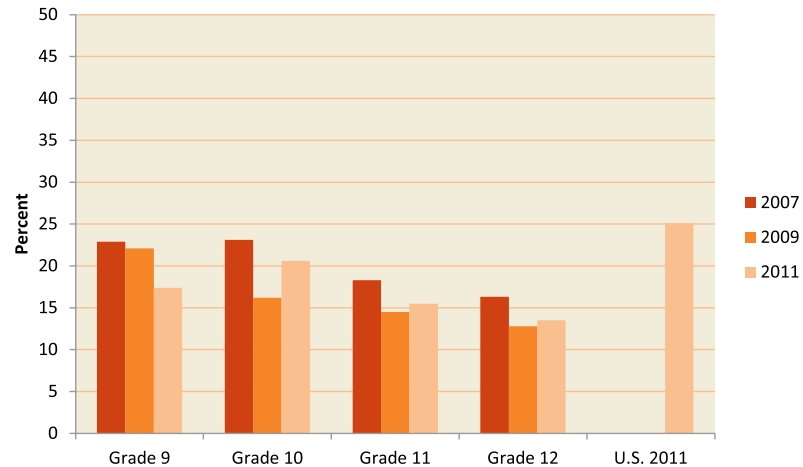
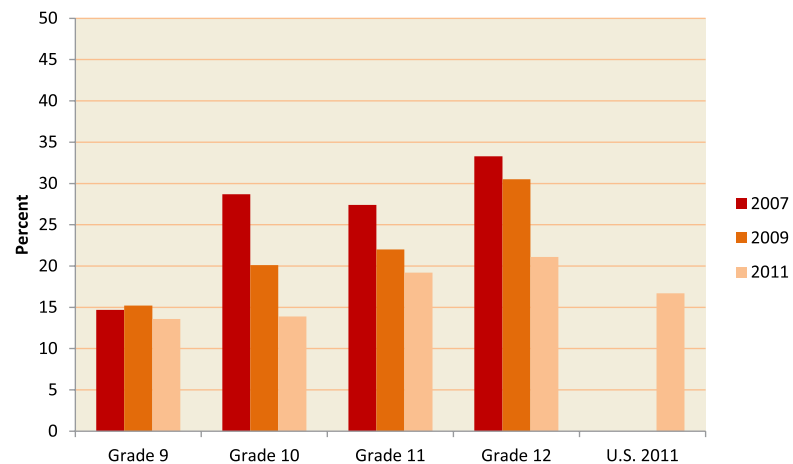


Chart 1.4. Trends in Youth Reporting Binge Drinking, by Grade, Alaska YRBS



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 conducted for the first time. In 2011, students from alternative schools reported significantly higher rates for all alcohol use indicators when compared to their traditional school counterparts. (Chart 1.5–1.8). Missing bars on the following graphs indicate an insufficient sample size.



Chart 1.5. Percentage of Youth Reporting Lifetime Use of Alcohol, Comparing Traditional and Alternative Schools, by Gender and by Grade, Alaska YRBS, 2011

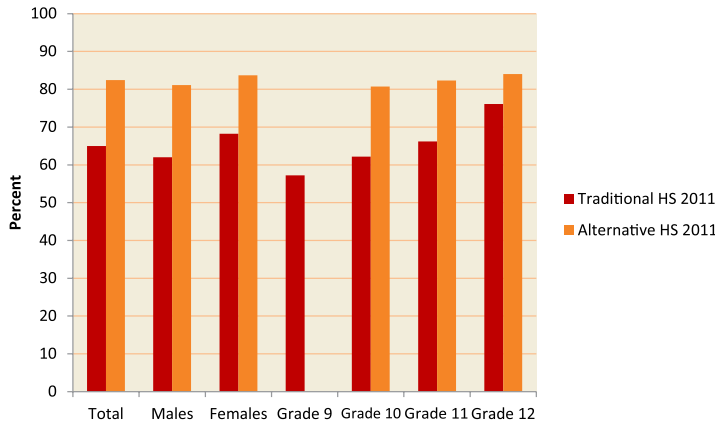


Chart 1.6. Percentage of Youth Reporting Alcohol Use Before Age 13, Comparing Traditional and Alternative Schools, by Gender and by Grade, Alaska YRBS, 2011

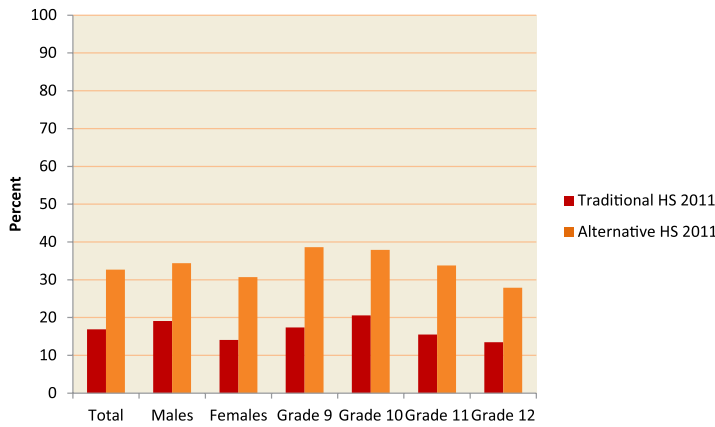
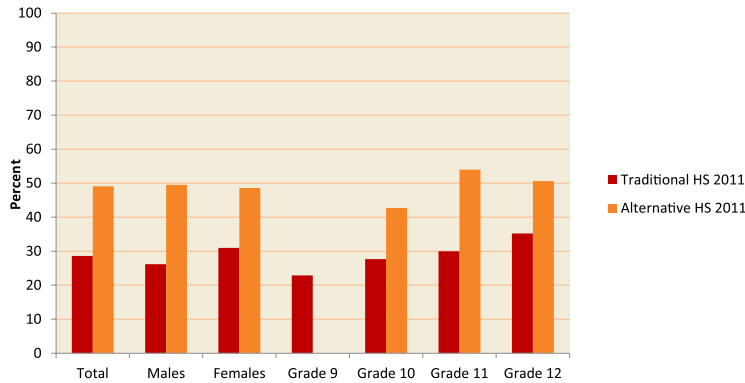


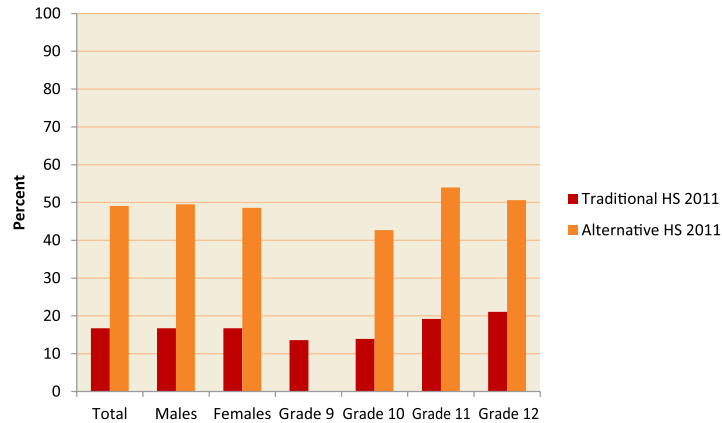
Chart 1.7. Percentage of Youth Reporting Current Alcohol Use, Comparing Traditional and Alternative Schools, by Gender and by Grade, Alaska YRBS, 2011





Alcohol use among females remained significantly higher than the 2009 national average.

Chart 1.8. Percentage of Youth Reporting Current Binge Drinking, Comparing Traditional and Alternative Schools, by Gender and by Grade, Alaska YRBS, 2011



Behavioral risk Factor Surveillance System (BRFSS)

<http://apps.nccd.cdc.gov/brfss/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at:

http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/brfss/brfss_health_profiles.aspx

With the reporting of 2011 BRFSS data, the CDC has officially introduced a new method of sampling (to include cell phone as well as landline phone numbers) and a new weighting methodology referred to as “raking”. These changes improve the overall representativeness of the BRFSS data. However, in addition to possibly affecting the results, these changes in methods mean changes in the way we use the data. Trend analyses will eventually focus on years of data that include both landline and cell phone respondents, and which are weighted using raking methodology. These new methods are necessary to provide a more accurate reflection of the health behaviors and conditions measured in the BRFSS survey, available at: <http://dhss.alaska.gov/dph/Chronic/Pages/brfss/default.aspx>

Definitions of alcohol use:

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

Nearly 60% of adults in Alaska reported current alcohol use. Results of reported use (current, heavy, and binge) were variable from year to year. Overall prevalence of alcohol use in Alaska was higher than the nation, of which the current use of alcohol in Alaska increased 5% over the last 5 years. In 2011, current use of alcohol among females increased 8%, while current use among males decreased 3% (Table 1.3). Binge and heavy alcohol use continued to remain higher than the national averages for females and males.

**Table 1.3. Trends in Alcohol Use Among Adults, by Gender, Alaska BRFSS**

	2007	2008	2009	2010	2011	U.S. 2011
Female						
% Binge Alcohol Use	13.0	10.2	13.3	14.2	15.0	12.6
% Current Alcohol Use	45.4	43.6	50.5	45.4	52.9	51.2
% Heavy Alcohol Use	6.1	4.5	6.8	4.0	6.4	5.5
Male						
% Binge Alcohol Use	25.5	21.6	22.6	28.7	25.1	24.2
% Current Alcohol Use	60.1	59.1	56.7	65.7	63.0	63.3
% Heavy Alcohol Use	6.8	5.1	5.7	8.0	8.2	7.8
Total						
% Binge Alcohol Use	19.5	16.1	18.1	21.8	20.2	18.3
% Current Alcohol Use	53.0	53.1	53.7	56.0	58.0	57.0
% Heavy Alcohol Use	6.5	4.8	6.2	6.1	7.3	6.6

Reports of binge, current, and heavy alcohol use by age group were variable from 2007 to 2011. In 2011, the prevalence of alcohol use was higher than national averages for adults 18 years and older. Prevalence of binge alcohol use was higher among adults 18 through 34 years and became less prevalent with each older age group (Table 1.4)



Alcohol use was most prevalent among White adults followed by Hispanic.

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

	2007	2008	2009	2010	2011	U.S. 2011
Ages 18 thru 24						
% Binge Alcohol Use	25.4	15.7	20.0	31.5	29.3	19.5
% Current Alcohol Use	48.3	40.7	39.5	51.4	51.8	49.8
% Heavy Alcohol Use	4.4	2.5	5.5	8.2	8.9	6.2
Ages 25 thru 34						
% Binge Alcohol Use	35.1	25.2	26.8	38.9	29.1	26.0
% Current Alcohol Use	65.0	64.2	61.3	68.2	66.4	60.1
% Heavy Alcohol Use	8.9	4.8	5.3	9.2	7.1	5.6
Ages 35 thru 44						
% Binge Alcohol Use	19.5	15.9	22.2	23.9	20.5	19.1
% Current Alcohol Use	55.2	57.3	60.7	58.4	59.1	59.8
% Heavy Alcohol Use	5.9	4.6	6.9	5.4	7.0	4.9
Ages 45 thru 54						
% Binge Alcohol Use	14.3	17.8	15.5	13.8	19.4	14.6
% Current Alcohol Use	51.9	56.1	57.7	55.2	63.3	56.6
% Heavy Alcohol Use	8.3	6.9	8.2	4.0	7.7	5.4
Ages 55 thru 64						
% Binge Alcohol Use	12.1	11.4	13.5	10.4	11.9	7.6
% Current Alcohol Use	53.0	52.1	54.0	54.0	55.0	53.0
% Heavy Alcohol Use	6.6	5.4	6.3	5.2	6.4	4.6
Ages 65 and over						
% Binge Alcohol Use	3.8	3.2	5.0	5.9	7.5	3.0
% Current Alcohol Use	35.4	37.3	38.6	39.7	44.2	40.4
% Heavy Alcohol Use	1.7	2.9	3.7	4.0	6.9	3.3

In 2011, binge alcohol use was reported by 20% of adults in Alaska; prevalence was higher in Alaska than national averages for all race categories except Hispanics and Others. Prevalence of current alcohol use was higher among Blacks followed by Hispanics. Prevalence of heavy alcohol use was higher among Whites and Other. No significant differences were found in reported heavy alcohol use except for an increase among White and Other adults (Table 1.5; Chart 1.9).



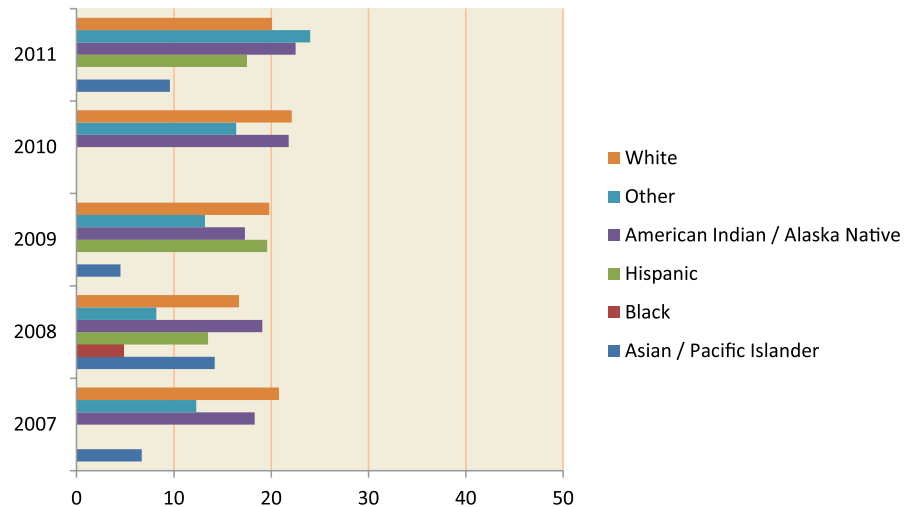
Table 1.5. Trends in Alcohol Use Among Adults, by Race and Ethnicity, Alaska BRFSS

	2007	2008	2009	2010	2011	U.S. 2010	U.S. 2011
Asian / Pacific Islander							
% Binge Alcohol Use	6.7	14.2	4.5	DSU	9.6	12.4	— ¹
% Current Alcohol Use	31.4	39.4	32.0	DSU	41.6	38.4	34.81
% Heavy Alcohol Use	1.0	0.6	0.9	DSU	1.7	2.0	— ¹
Black							
% Binge Alcohol Use	DSU	4.9	DSU	DSU	DSU	19.8	15.4
% Current Alcohol Use	DSU	50.7	DSU	DSU	DSU	42.8	50.0
% Heavy Alcohol Use	DSU	2.6	DSU	DSU	DSU	4.5	4.5
Hispanic							
% Binge Alcohol Use	DSU	13.5	19.6	DSU	17.5	25.1	23.1
% Current Alcohol Use	DSU	45.9	51.9	DSU	63.8	41.8	49.1
% Heavy Alcohol Use	DSU	.3	9.0	DSU	2.9	3.0	5.1
American Indian / Alaska Native							
% Binge Alcohol Use	18.3	19.1	17.3	21.8	22.5	24.7	— ¹
% Current Alcohol Use	40.5	37.7	38.2	45.7	45.6	36.6	43.01
% Heavy Alcohol Use	6.8	4.1	4.4	5.3	4.4	4.8	— ¹
Other							
% Binge Alcohol Use	12.3	8.2	13.2	16.4	24.0	21.5	16.5
% Current Alcohol Use	45.4	41.2	62.7	55.0	59.7	45.2	48.3
% Heavy Alcohol Use	4.0	2.6	1.4	4.6	15.1	5.0	4.4
White							
% Binge Alcohol Use	20.8	16.7	19.8	22.1	20.1	24.0	18.9
% Current Alcohol Use	57.8	59.0	59.3	61.4	61.3	56.7	59.9
% Heavy Alcohol Use	7.6	5.8	7.3	6.9	8.3	8.0	7.5

¹ 2011 National Health Interview Survey was used in the absence of US 2011 BRFSS data for Asian/Pacific Islander and American Indian/Alaska Native groups. http://www.cdc.gov/nchs/data/series/sr_10/sr10_256.pdf



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



National Survey on Drug Use and Health (NSDUH)

<http://www.oas.samhsa.gov/statesList.cfm>

Definitions of alcohol use:

- Current alcohol use was defined as any reported use within the past 30 days.
- Binge alcohol use was defined as having five or more drinks (at the same time or within a couple of hours of each drink) on at least 1 day within the past 30 days.
- Heavy alcohol use was defined as having five or more drinks on the same occasion (at the same time or within a couple of hours of each drink) on each of 5 or more days in the past 30 days.
- A person needing but not receiving treatment for an alcohol problem is that the person met the criteria for alcohol dependence or abuse in the past year but did not receive specialty treatment for an alcohol problem in the past year

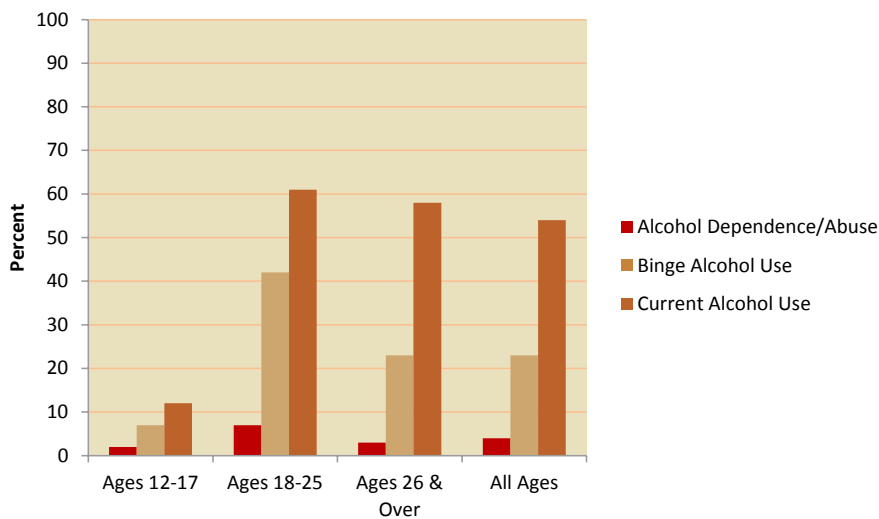
Surveys indicated that reported alcohol use had remained relatively unchanged. In the 2010-2011 survey, 12% of Alaskan youth reported alcohol use and 7% of youth reported binge drinking, which is a decrease from 2008-2009 survey findings. Because alcohol can be legally purchased at 21 years of age, a lower prevalence among youth was expected. Over the time the survey was conducted in Alaska, there was no difference in report of current alcohol use by adults (ages 18 and older), of which all were higher than national averages (Table 1.6; Chart 1.10)



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

	2006-2007	2008-2009	2010-2011	U.S. 2010-2011
Ages 12 thru 17				
% Alcohol Dependency/Abuse	5.9	1.8	1.6	3.2
% Binge Alcohol Use	9.5	9.7	7.4	7.6
% Current Alcohol Use	15.0	14.2	12.4	13.5
% Needing Treatment in Past Year	5.2	4.8	4.2	4.0
Ages 18 thru 25				
% Alcohol Dependency/Abuse	17.6	6.8	6.8	6.3
% Binge Alcohol Use	40.8	40.1	42.2	40.2
% Current Alcohol Use	61.2	60.3	60.8	61.0
% Needing Treatment in Past Year	16.7	15.9	15.1	14.5
Ages 26 and over				
% Alcohol Dependency/Abuse	6.2	3.6	3.3	2.8
% Binge Alcohol Use	21.5	43.3	22.9	21.8
% Current Alcohol Use	58.8	59.3	58.2	55.0
% Needing Treatment in Past Year	5.6	6.1	6.4	5.4
All Ages				
% Alcohol Dependency/Abuse	7.8	4.1	3.6	3.2
% Binge Alcohol Use	22.7	41.1	22.9	22.9
% Current Alcohol Use	53.9	59.5	53.8	51.8
% Needing Treatment in Past Year	7.1	7.7	7.4	6.5

Chart 1.10. Trends in Reported Alcohol Use, by Age Group, Alaska NSDUH, 2010-2011





Illicit drug use, like alcohol use, is a major contributing factor for both intentional and unintentional injury, leading to death and permanent disability.

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 or permanent disability. While marijuana use was the most commonly reported drug of abuse, other drugs used include inhalants, hallucinogens, opioids, and misused prescription drugs.

Data Analysis

Data on illicit drug use was provided through the Youth Risk Behavior Survey (YRBS) and National Survey on Drug Use and Health (NSDUH). Some rates were not available. Limiting factors include low number of observations, insufficient sample size or confidence interval (CI) range that is too broad to obtain reliable results. Most national averages were available for most recent year comparison. *DSU - Data Statistically Unreliable.*

Youth Risk Behavior Survey (YRBS)

<http://apps.nccd.cdc.gov/youthonline/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at:

<http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/>

Definitions of illicit drug use:

- Illicit drugs include marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including phencyclidine [PCP], lysergic acid diethylamide [LSD], and Ecstasy [MDMA]), heroin, 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.

In 2011, the prevalence of any lifetime use and current use was higher among males than females for most categories of illicit drugs (Tables 1.7 and 1.8; Chart 1.11). Thirty percent of all Alaska high school students participating in the 2011 survey reported having ever used marijuana (42% males; 40% females). Twenty-six percent of Grade 9 students reported ever using marijuana, increasing to 33% for Grades 10 thru 12. The prevalence of inhalant abuse was higher than cocaine, heroin, methamphetamine, ecstasy, and steroids.

The prevalence of illicit drug use was higher among Alaska non-Native students, while any reported use of marijuana was more likely to be reported by Alaska Native students. In 2011, YRBS began monitoring prescription drugs (OxyContin, Percocet, Vicodin, Codeine, Adderall, Ritalin or Xanax). Sixteen percent of Alaska youths reported using prescription drugs with the highest percentage among 11th graders (19%). There was no significant difference by race.

**Table 1.7. Trends of Illicit Drug Use Among Youth, by Gender, Alaska YRBS**

	2007	2009	2011	U.S. 2011
Female				
% Ever Used Cocaine	6.6	7.1	5.0	5.7
% Ever Used Inhalants	16.7	10.6	8.4	12.3
% Current Marijuana Use	18.9	19	18.7	20.1
% Marijuana Before 13	9.5	8.9	8.7	5.7
% Ever Used Heroin	0.9	2.3	1.6	1.8
% Ever Used Methamphetamines	4.3	2.8	2.5	3.0
% Ever Used Ecstasy	8	6.4	4.1	6.5
% Ever Used Injection Drugs	0.9	2.0	1.5	1.6
% Ever Used Steroids	2.8	DSU	DSU	2.9
% Ever Taken Prescription Drugs Without a Doctor's Prescription ¹				
			15.1	
Male				
% Ever Used Cocaine	8.7	7.4	4.8	7.9
% Ever Used Inhalants	12.3	8.7	6.2	10.5
% Current Marijuana Use	22.0	26	23.5	25.9
% Marijuana Before 13	14.1	10.3	11.9	10.4
% Ever Used Heroin	2.4	3.6	3.0	3.9
% Ever Used Methamphetamines	4.9	3.8	3.6	4.5
% Ever Used Ecstasy	7.1	7.3	7.3	9.8
% Ever Used Injection Drugs	3.3	2.1	2.0	2.9
% Ever Used Steroids	3.7	DSU	DSU	4.2
% Ever Taken Prescription Drugs Without a Doctor's Prescription ¹				
			16.4	

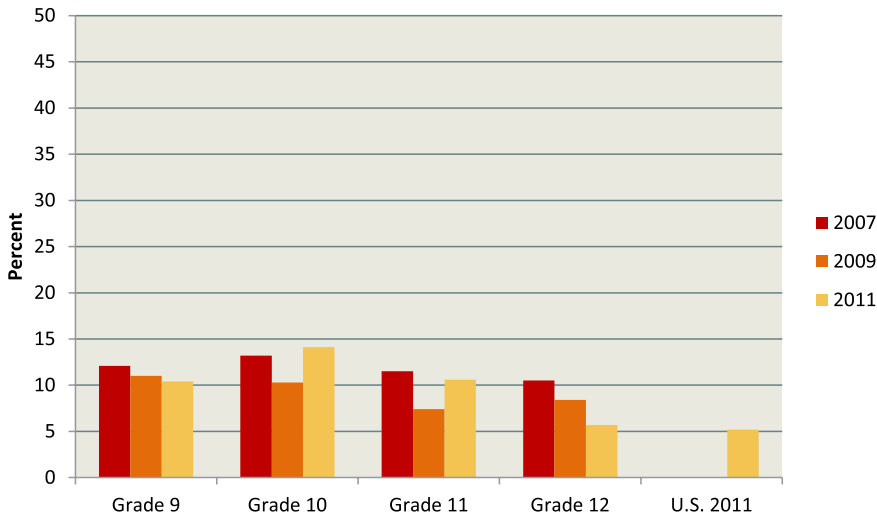
**Table 1.8. Trends of Illicit Drug Use Among Youth, by Grade, Alaska YRBS**

	2007	2009	2011	U.S. 2011
Grade 9				
% Ever Used Cocaine	6.0	5.1	4.5	5.0
% Ever Used Inhalants	13.6	10.1	6.4	12.7
% Current Marijuana Use	16.9	15.7	16.0	18.0
% Marijuana Before 13	12.1	11	10.4	9.7
% Ever Used Heroin	0.7	1.5	1.8	2.9
% Ever Used Methamphetamines	2.4	1.5	3.1	4.1
% Ever Used Ecstasy	5.7	3.7	3.6	5.2
% Ever Used Injection Drugs	2.2	1.6	1.5	2.1
% Ever Used Steroids	2.5	DSU	DSU	4.2
% Ever Taken Prescription Drugs Without a Doctor's Prescription ¹				
			11.4	
Grade 10				
% Ever Used Cocaine	9.9	5.8	4.2	6.5
% Ever Used Inhalants	17.9	10.8	7.2	11.8
% Current Marijuana Use	23.7	24.1	23.8	21.6
% Marijuana Before 13	13.2	10.3	14.1	7.5
% Ever Used Heroin	3	3	2.1	2.8
% Ever Used Methamphetamines	6.1	3.9	2.4	4.1
% Ever Used Ecstasy	8.5	4.3	5.5	7.7
% Ever Used Injection Drugs	3.0	2.0	1.3	2.3
% Ever Used Steroids	3.4	DSU	DSU	3.2
% Ever Taken Prescription Drugs Without a Doctor's Prescription ¹				
			15.9	
Grade 11				
% Ever Used Cocaine	6.7	7.3	6.1	7.5
% Ever Used Inhalants	13.4	8.1	8.8	11.1
% Current Marijuana Use	19.8	26.7	23.2	25.5
% Marijuana Before 13	11.5	7.4	10.6	7.6
% Ever Used Heroin	2.4	2.9	4.0	2.8
% Ever Used Methamphetamines	6.5	3.3	4.2	3.7
% Ever Used Ecstasy	8.4	9.4	7.3	9.2
% Ever Used Injection Drugs	1.4	2.3	3.1	2.4
% Ever Used Steroids	3.8	DSU	DSU	3.7
% Ever Taken Prescription Drugs Without a Doctor's Prescription ¹				
			19.2	
Grade 12				
% Ever Used Cocaine	8.2	10.3	4.2	8.5
% Ever Used Inhalants	12.9	9.0	6.5	9.3
% Current Marijuana Use	22.2	23.8	22.2	28.0
% Marijuana Before 13	10.6	8.4	5.7	7.0
% Ever Used Heroin	0.1	4.1	1.5	2.7
% Ever Used Methamphetamines	3.2	4.5	2.8	3.2
% Ever Used Ecstasy	7.6	9.6	7.0	11.3
% Ever Used Injection Drugs	1.4	1.9	1.1	2.2
% Ever Used Steroids	3.0	DSU	DSU	2.8
% Ever Taken Prescription Drugs Without a Doctor's Prescription ¹				
			16.9	

¹ Question was included in 2011 Alaska YRBS only



Chart 1.11. Trends in Youth Reporting Marijuana Use Before Age 13 Years, by Grade, Alaska YRBS



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. Students from alternative schools reported significantly higher rates for all illicit drug use indicators when compared to their traditional school counterparts. In 2011, YRBS reported prescription drug use. The alternative high school students reported a significantly higher use of prescription drug use than those in traditional high schools (Charts 1.12 -1.20). Missing bars on the following graphs indicate an insufficient sample size.

Chart 1.12. Percent of Youth Reporting Ever Used Marijuana, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

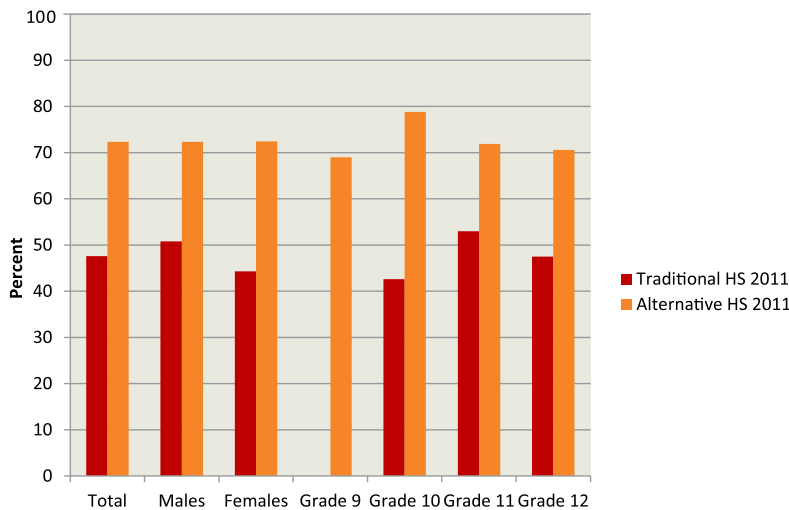




Chart 1.13. Percent of Youth Reporting Marijuana Use Before Age 13, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

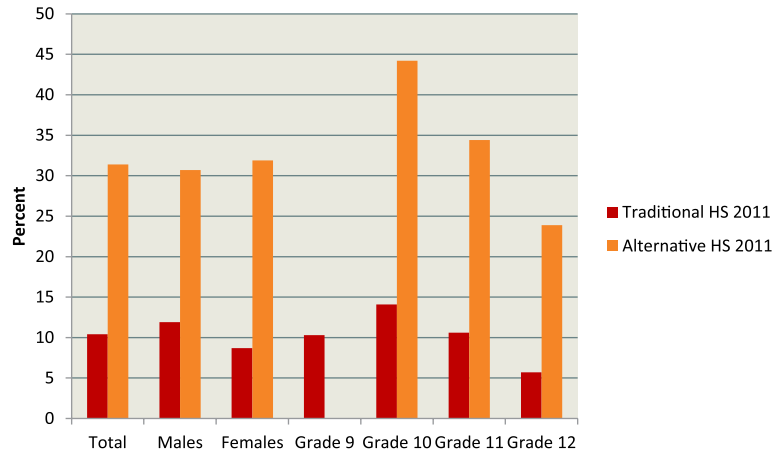


Chart 1.14. Percent of Youth Reporting Current Marijuana Use, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

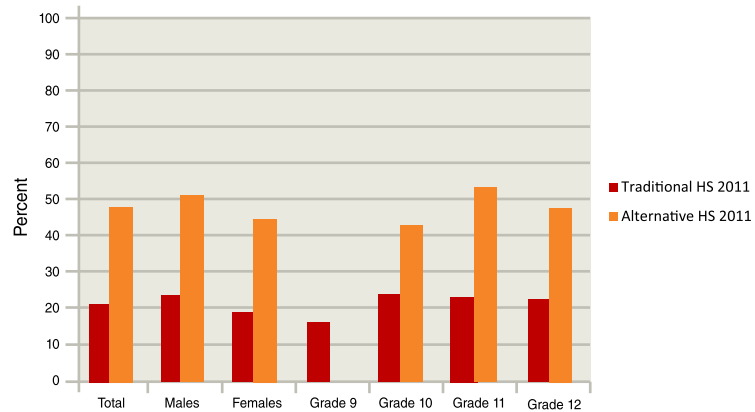


Chart 1.15. Percent of Youth Reporting Ever Used Heroin, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

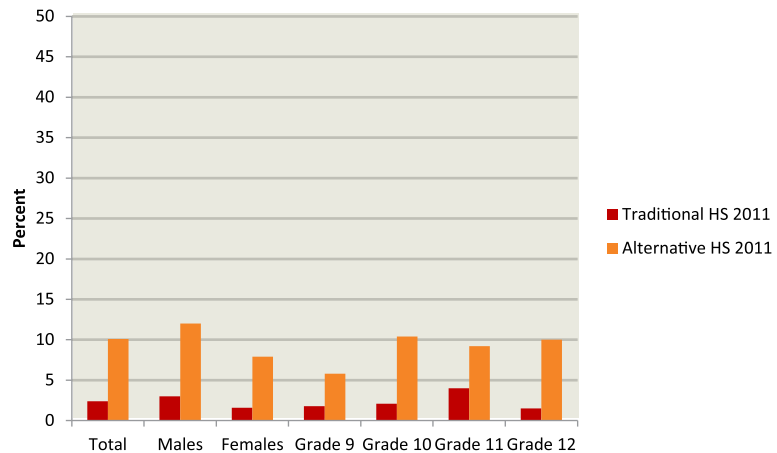




Chart 1.16. Percent of Youth Reporting Ever Used Methamphetamine, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

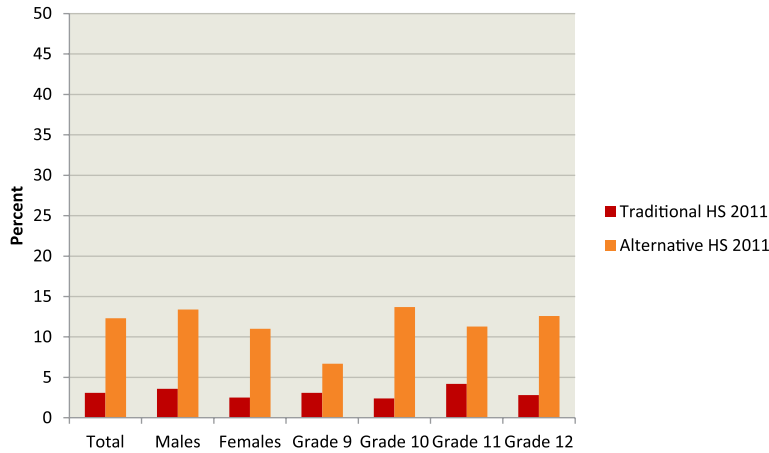


Chart 1.17. Percent of Youth Reporting Ever Used Ecstasy, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

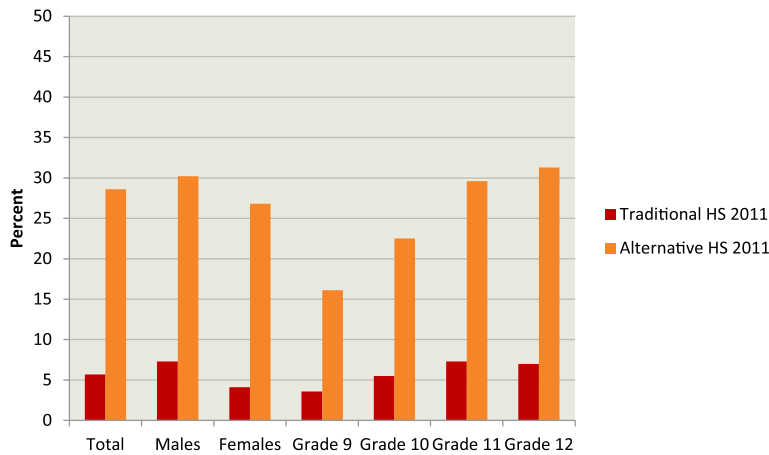


Chart 1.18. Percent of Youth Reporting Ever Used Cocaine, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

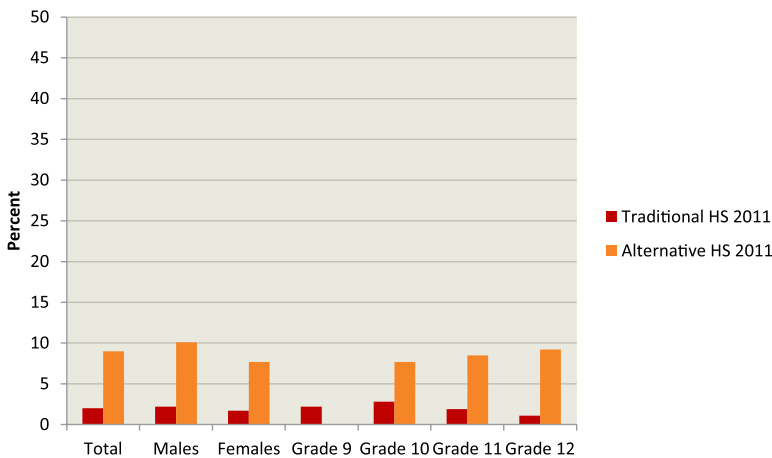




Chart 1.19 Percentage of Students Who Have Taken a Prescription Drug (such as OxyContin, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) Without a Doctor's Prescription One or More Times During Their Life, Comparing Traditional and Alternative Schools, Alaska YRBSS, 2011

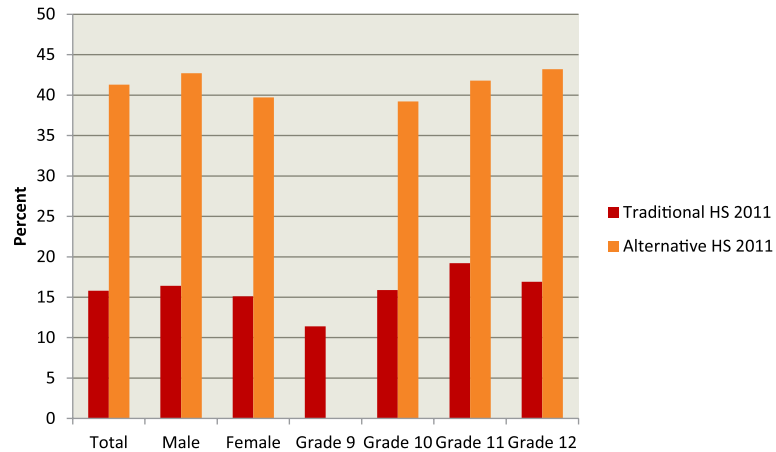
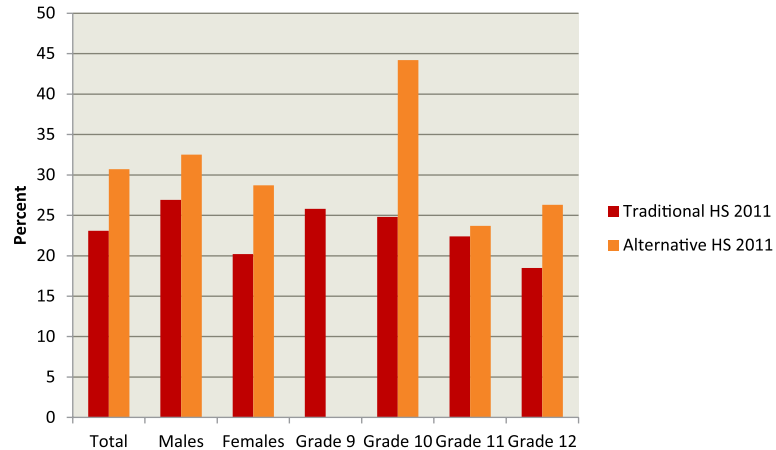


Chart 1.20. Percentage of Students Who Were Offered, Sold, or Given an Illegal Drug by Someone on School Property During the Past 12 Months, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011



National Survey on Drug Use and Health (NSDUH)

<http://www.samhsa.gov/data/NSDUH.aspx>

Definitions of illicit drug use:

- Illicit drugs include marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including phencyclidine [PCP], lysergic acid diethylamide [LSD], and Ecstasy [MDMA]), heroin, or prescription-type psychotherapeutics used non-medically, which include stimulants, sedatives, tranquilizers, and pain relievers.
- Current use was defined as any reported use within the past 30 days.
- A person needing but not receiving treatment for a drug problem is that the



person met the criteria for drug dependence or abuse in the past year but did not receive specialty treatment for an alcohol problem in the past year.

Overall, the 2010-2011 NSDUH results for all respondents in Alaska were equal to or higher than national averages. Approximately one-fourth of respondents between the ages of 18 through 25 years reported either current marijuana use or other illicit drug use in 2010-2011 survey. Prevalence of non-medicinal use of prescription pain relievers had not significantly changed since 2009, remaining at 11%. Seven percent of this age group reported drug dependence or abuse; 7% reported needing treatment in the past year. (Table 1.9; Chart 1.21 and 1.22).

Table 1.9. Trends in Reported Illicit Drug Use, by Age Group, Alaska NSDUH

	2006-2007	2008-2009	2010-2011	U.S. 2010-2011
Ages 12 thru 17				
% Current Marijuana Use	8.0	9.2	8.8	14.1
% Current Other Illicit Use	4.6	11.1	11.1	10.1
% Drug Dependence/Abuse	4.7	2.3	5.5	4.7
% Needing Treatment in Past Year	4.1	4.1	5.2	4.3
Ages 18 thru 25				
% Current Marijuana Use	19.2	25.2	24.3	30.4
% Current Other Illicit Use	8.7	28.6	26.0	21.5
% Drug Dependence/Abuse	9.0	5.2	7.0	7.7
% Needing Treatment in Past Year	7.8	6.9	6.6	7.1
Ages 26 and over				
% Current Marijuana Use	6.0	9.3	9.3	8.0
% Current Other Illicit Use	2.8	11.1	11.6	6.5
% Drug Dependence/Abuse	1.9	1.2	1.5	1.6
% Needing Treatment in Past Year	1.7	1.9	1.7	1.3
All Ages				
% Current Marijuana Use	8.1	11.4	11.4	7.0
% Current Other Illicit Use	3.9	13.9	3.6	3.3
% Drug Dependence/Abuse	3.2	1.9	2.7	2.7
% Needing Treatment in Past Year	2.8	2.7	2.8	2.4



Chart 1.21. Reported Illicit Drug Use, Dependency or Abuse, by Age Groups, Alaska NSDUH, 2010-2011

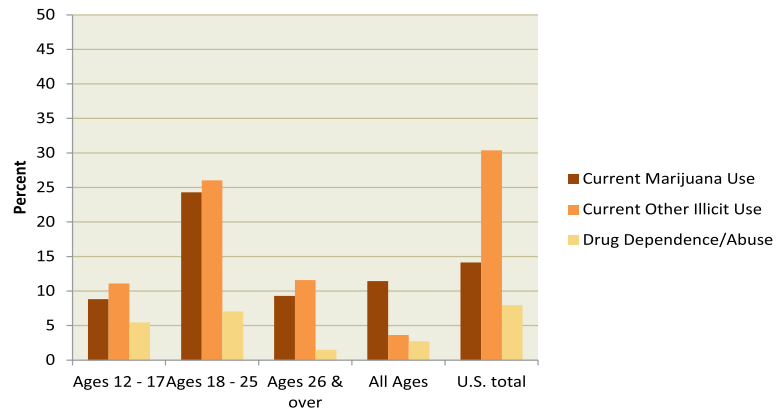
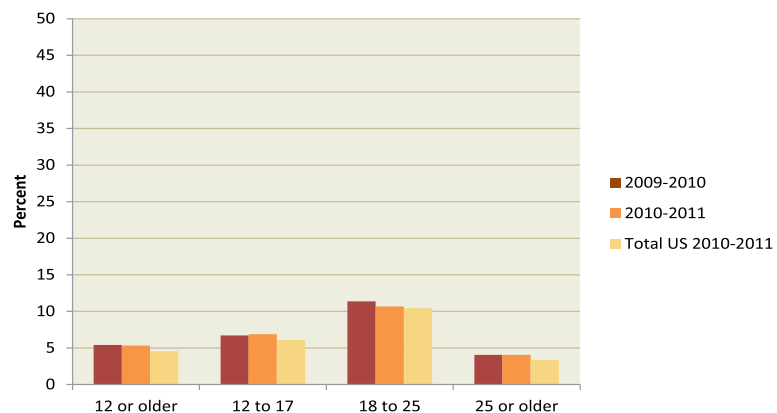


Chart 1.22. Non-Medical Use of Prescription Pain Relievers in the Past Year Among Persons Aged 12 or Older, by Age Group and Alaska, NSDUH, 2009-2010 and 2010-2011



Problem Statement: Tobacco Use

Nationally, cigarette use causes an estimated 440,000 deaths, and is responsible for about one in five deaths each year.¹ Accessed August 5, 2013 at http://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm.

Tobacco is the single largest killer of Alaskans, having deadly impact due to direct use and exposure to second-hand smoke. On average, nearly 546 lives per year are lost due to tobacco use with an additional 120 lives lost due to second-hand (environmental) smoke. In 2010, tobacco use costs the state \$348 million in direct medical expenditures and an additional \$231 million in lost productivity due to tobacco-related deaths.² According to the latest report by the Alaska Department of Health and Social Services, tobacco-related deaths in Alaska exceed the combined total of fatal intentional injuries (homicide and suicide) and fatal transportation injuries (motor vehicle, watercraft and aircraft). Alaska Native adults are still twice as likely to smoke as non-Native adults.



1 CDC, Smoking & Tobacco Use Fact Sheets. Accessed August 5, 2013 at http://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm.

2 Alaska Department of Health and Social Services, Section of Chronic Disease Prevention and Health Promotion. Alaska Tobacco Facts, Update 2012. Accessed August 5, 2013 at http://dhss.alaska.gov/dph/Chronic/Documents/Tobacco/PDF/2012_alaska_tobacco_facts.pdf

Data Analysis

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

Tobacco and Smoking Surveillance

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

In 1998, a dramatic drop in cigarette sales was noted that corresponded to an increased sales tax on tobacco products.³ Cigarette sales have continued to diminish; cigarette sales had declined by nearly 30% between 2005 and 2011. This trend in cigarette sales (Table 1.10) indicated significant progress regarding tobacco consumption and health education.

Table 1.10. Trend in Annual Cigarette Sales per Capita, Alaska

	2005	2006	2007	2008	2010	2011	U.S. 2011*
Cigarette Packs Sold Per Adult	88.0	80.4	78.0	67.4	62.9	58.2	60.5

* US minus Alaska

In accordance with tobacco regulation, each state must provide a detailed report on the progress to enforce tobacco laws prohibiting sales to youth. The purpose of the state reports were to provide both Congress and the states with a better understanding of progress and to assist with identifying state-based needs for program enhancement, particularly enforcing retailer compliance. In 2011, Alaska achieved “20% or below” compliance established by SYNAR. In 2011 the retailer violation rate was 7.6%.¹

¹<http://www.samhsa.gov/prevention/2011-Annual-Synar-Report.pdf>

Youth Risk Behavior Survey (YRBS)

<http://apps.nccd.cdc.gov/youthonline/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at: SAMHSA, FFY2011 Annual Synar Reports, Tobacco Sales to Youth. Accessed August 5, 2013 at <http://www.samhsa.gov/prevention/2011-Annual-Synar-Report.pdf>.

Tobacco is the single largest killer of Alaskans, having deadly impact due to direct use and exposure to second-hand smoke.



Definitions of tobacco use:

- Current cigarette/cigar use was defined as reported 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 for 30 days.
- 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.

Overall, daily cigarette use decreased among Alaska high school youth, from 15.7% in 2009 to 14.1% in 2011. However, Alaska Native students continued to report cigarette use as much as 15-20% higher than the rate of Non-Native youth. Nearly half of the survey participants reported ever trying cigarettes and 16% reported current use in the past month. While prevalence was higher among female students for current and daily cigarette use in 2011, male students were higher for ever tried smoking, use before 13 years of age, frequent use, as well as cigar and smokeless tobacco use. (Table 1.11; Chart 1.23 and 1.24).

Withstanding prominent smoking cessation campaigns, 32% of students who reported current cigarette use did not try to quit smoking in the past year. Nearly 9% of students reported use of smokeless tobacco (chewing tobacco, snuff, or dip) during the past month where prevalence was 2.8 times higher among male students. Not available for this survey was information pertaining to the use of "iq'mik".



Table 1.11. Trends in Cigarette Use Among Youth, by Gender, Alaska YRBS

	2007	2009	2011	U.S. 2011
Female				
% Ever Tried Cigarettes	54.0	48.1	42.4	46.3
% Cigarette Before 13	14.3	11.6	10.2	8.4
% Current Cigarette Use	19.7	17.1	14.7	16.1
% Daily Cigarette Use	15.5	11.2	9.6	9.2
% Frequent Cigarette Use	DSU	DSU	4.9	5.4
% Cigarette Use on School Property	8.2	4.3	3.9	4.1
% Current Cigar Use	6.1	6.2	6.1	16.1
% Smokeless Tobacco Use	7.3	7.4	4.3	2.2
% Smokeless Tobacco Use on School Property	2.8	3.5	1.5	0.9
Among Current Smokers, % Who Did Not Try to Quit	59.0	54.0	DSU	46.1
Male				
% Ever Tried Cigarettes	51.1	46.8	46.1	42.9
% Cigarette Before 13	17.4	13.6	11.7	12.0
% Current Cigarette Use	15.9	14.2	13.5	19.9
% Daily Cigarette Use	12.0	9.4	8.4	11.0
% Frequent Cigarette Use	DSU	DSU	5.3	7.4
% Cigarette Use on School Property	6.8	4.1	3.8	5.7
% Current Cigar Use	13.6	13.7	14.2	19.9
% Smokeless Tobacco Use	13.5	19.3	12.1	12.8
% Smokeless Tobacco Use on School Property	8.9	9.6	6.9	8.4
Among Current Smokers, % Who Did Not Try to Quit	64.6	63.4	DSU	53.0

Chart 1.23. Trends in Current Cigarette Use Among Youth, by Grade, Alaska YRBS

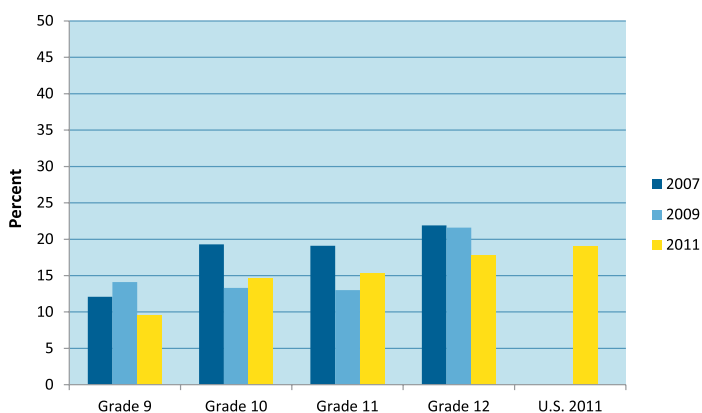
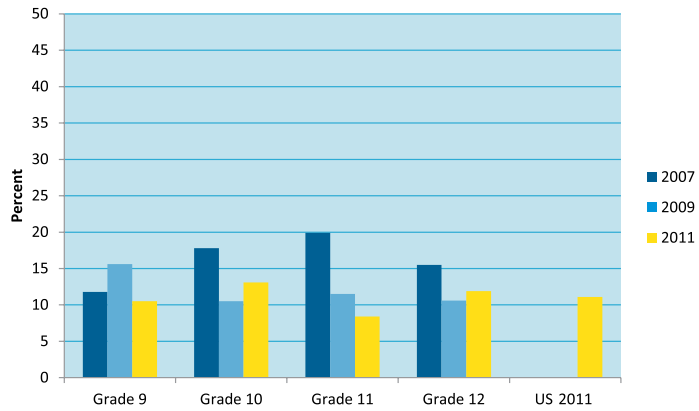




Chart 1.24. Trends in Youth Reporting Current Cigarette Before Age 13, by Grade, Alaska YRBS



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 2011 students from alternative schools reported significantly higher rates for all tobacco use indicators when compared to their traditional school counterparts (Charts 1.25-1.27).

Chart 1.25. Percentages of Students Who Smoked a Whole Cigarette for the First Time Before Age 13 Years, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

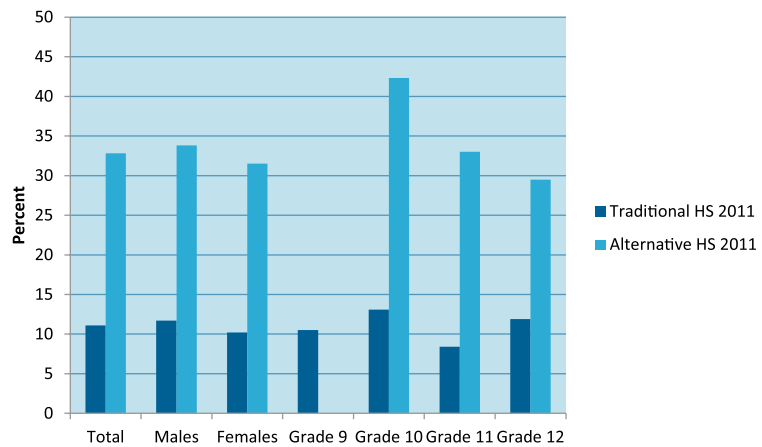




Chart 1.26. Percentages of Students Who Smoked Cigarettes on 20 or More of the Past 30 Days, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

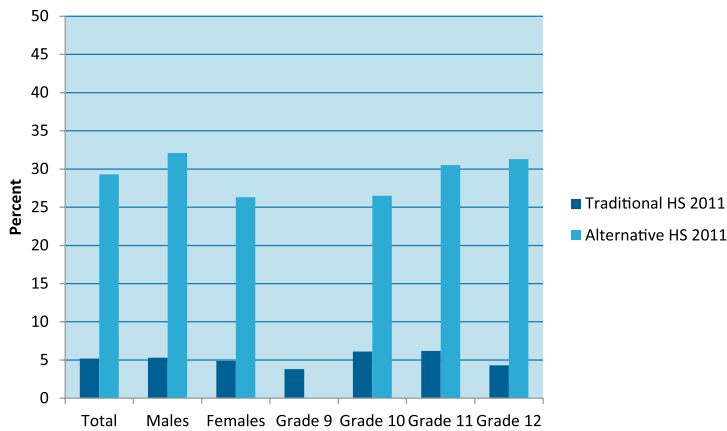
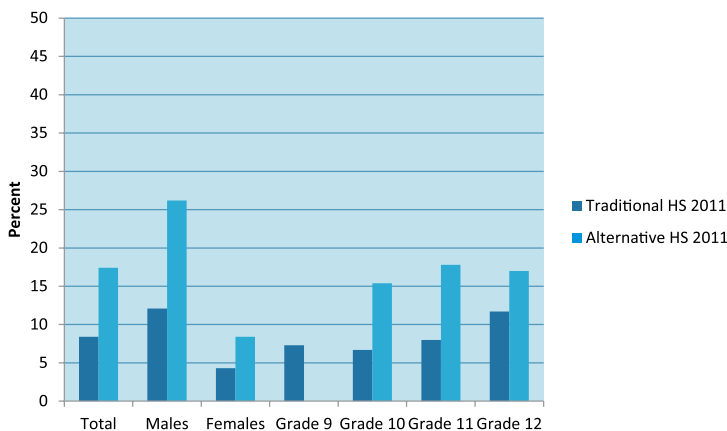


Chart 1.27. Percentage of Students Who Used Chewing Tobacco, Snuff, or Dip on One or More of the Past 30 Days, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011



Behavioral Risk Factor Surveillance Survey (BRFSS)

<http://apps.nccd.cdc.gov/brfss/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at:

http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/brfss/brfss_health_profiles.aspx

Definitions of cigarette use:

- Current cigarette use was defined as any reported use within the past 30 days.
- Daily cigarette use was defined as smoking at least one cigarette per day within the past 30 days.

In 2011, 23% of adults in Alaska reported cigarette use. Prevalence was higher among young adults aged 18-29 years and males. In 2011, 27.9% of current



smokers had incomes below the federal poverty level. Of Alaska Natives using smokeless tobacco, nearly half are “iq'mik” users.¹ The prevalence of cigarette use among Blacks was higher than all other racial groups, followed by Alaska Natives. The percentage of Black adults who smoked was nearly twice as high as White adults who smoke (Table 1.12 and 1.13; Chart 1.28 and 1.29).

¹http://dhss.alaska.gov/dph/Chronic/Documents/Tobacco/PDF/2012_TobaccoInGreatLand.pdf

Table 1.12. Trends in Cigarette Use Among Adults, by Gender, Alaska BRFSS

	2007	2008	2009	2010	2011	U.S. 2011
Female						
% Current Cigarette Use	21.7	21.9	20.0	29.8	21.1	18.8
% Daily Cigarette Use	15.6	15.1	10.78	14.6	14.5	14.2
Male						
% Current Cigarette Use	26.9	25.6	22.8	23.5	24	23.6
% Daily Cigarette Use	18.4	18.4	16.9	15.4	17.5	16.1

Chart 1.28. Percentage of Adults Who Are Current Smokers, by Age Group, Alaska BRFSS, 2011

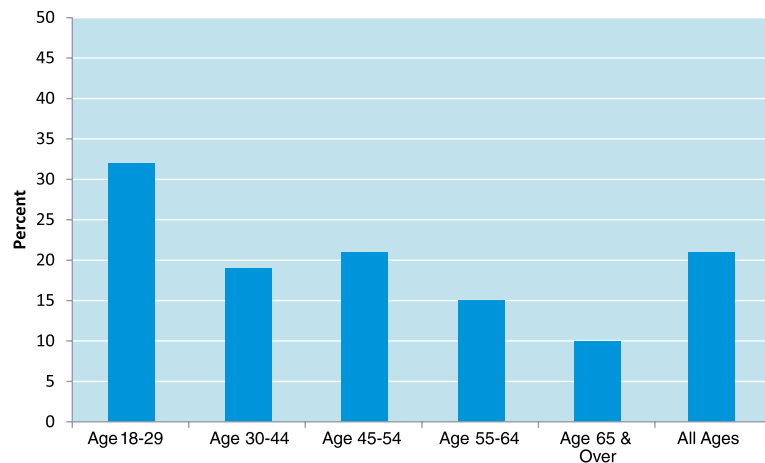




Chart 1.29. Trends in Current Tobacco Use Among Adults, by Race and Ethnicity, Alaska BRFSS

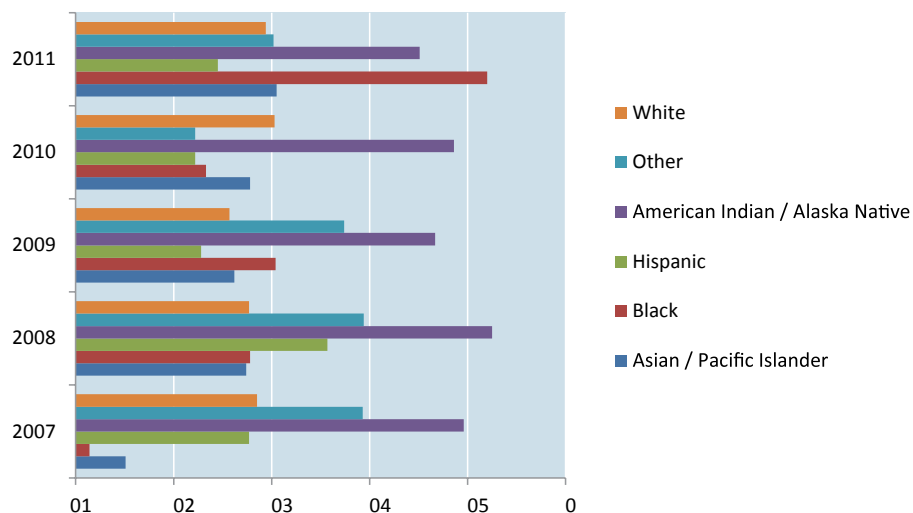


Table 1.13. Trends in Cigarette Use Among Adults, by Race and Ethnicity, Alaska BRFSS

	2007	2008	2009	2010	2011	U.S. 2011
Asian / Pacific Islander						
% Current Cigarette Use	5.4	21.3	17.1	17.8	20.5	-- ¹
% Daily Cigarette Use	4.4	16.1	16.7	16.2	11.8	-- ¹
Black						
% Current Cigarette Use	1.9	17.8	21.2	13.3	42.0	26.4
% Daily Cigarette Use	DSU	12.7	21.2	10.1	29.8	16.6
Hispanic						
% Current Cigarette Use	18.1	18.6	17.0	12.2	14.5	19.8
% Daily Cigarette Use	14.8	8.4	10.6	8.6	4.9	11.4
American Indian / Alaska Native						
% Current Cigarette Use	40.4	44.4	39.1	38.6	35.1	-- ¹
% Daily Cigarette Use	25.2	27.8	27.5	24.6	24.0	-- ¹
Other						
% Current Cigarette Use	20.3	16.3	14.2	12.2	20.2	20.7
% Daily Cigarette Use	11.8	9.0	10.3	11.0	14.7	15.4
White						
% Current Cigarette Use	22.2	20.0	18.3	20.3	19.4	20.9
% Daily Cigarette Use	16.5	15.4	12.7	13.5	14.6	15.3

¹ US 2011 BRFSS data not available for racial groups



National Survey on Drug Use and Health (NSDUH)

<http://www.oas.samhsa.gov/states.cfm>

Definitions of tobacco product and cigarette use:

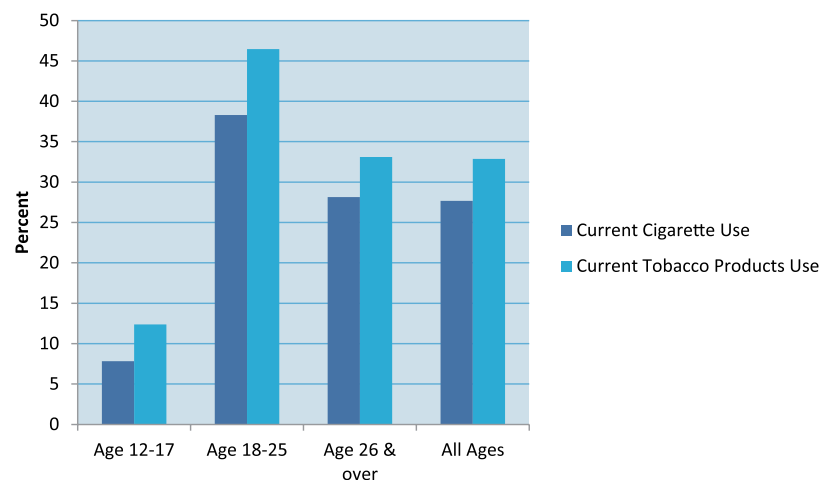
- Tobacco product includes cigarettes, chewing tobacco, snuff, cigars, and pipe tobacco.
- Current use was defined as any reported use within the past 30 days.

One-quarter of adults in Alaska currently use cigarettes. Forty-six percent of surveyed adults aged 18-25 years reported current use of tobacco products. The 2011 YRBS survey results indicated at least 19% of students reported current cigarette use, suggesting a greater prevalence of cigarette use among students over 18 years of age (Table 1.14; Chart 1.30).

Table 1.14. Trends in Reported Cigarette and Tobacco Products Use, by Age Group, Alaska NSDUH

	2006-2007	2008-2009	2010-2011	U.S. 2010-2011
Ages 12 thru 17				
% Current Cigarette Use	9.7	9.4	7.8	8.9
% Current Tobacco Products Use	14.0	13.5	12.4	11.5
Ages 18 thru 25				
% Current Cigarette Use	39.4	38.3	39.6	35.8
% Current Tobacco Products Use	46.5	44.5	46.5	41.5
Ages 26 and over				
% Current Cigarette Use	24.2	23.7	28.1	23.4
% Current Tobacco Products Use	29.7	28.9	33.1	27.8
All Ages				
% Current Cigarette Use	24.6	26.0	27.7	25.2
% Current Tobacco Products Use	30.1	31.3	32.9	29.8

Chart 1.30. Reported Cigarette and Tobacco Products Use, by Age Group, Alaska NSDUH, 2010-2011





Pregnancy Risk Assessment Monitoring System (PRAMS)

The Pregnancy Risk Assessment Monitoring System (PRAMS) was developed by 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.

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.

Survey findings from 2006 through 2011 indicated an overall increase of smoking before and during pregnancy for every age group except 25-34 years olds (Table 1.15). Prevalence for smoking before pregnancy was highest for women younger than 20 years.

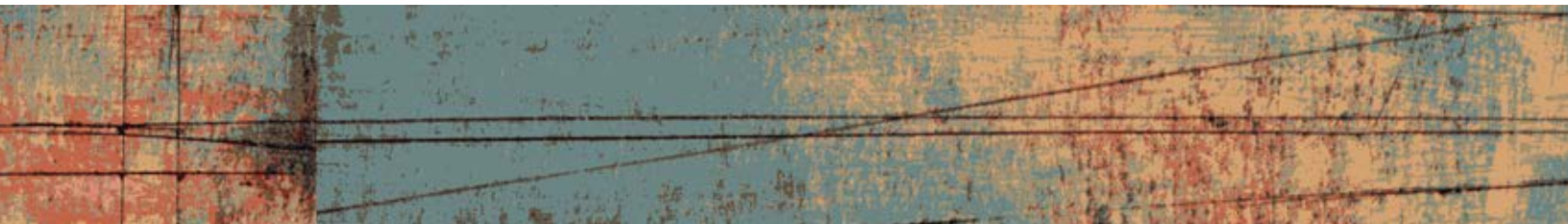
Table 1.15. Trends in Maternal Smoking, by Age Group and Year, Alaska PRAMS, 2006-2011

	2006	2007	2008	2009	2010	2011
Age < 20						
% Smoking Before Pregnancy	41.1	38.6	43.0	53.1	52.4	45.4
% Smoking During Pregnancy	20.4	21.7	23.5	18.2	25.7	25.2
Age 20–24						
% Smoking Before Pregnancy	37.1	38.8	37.2	40.1	49.4	47.4
% Smoking During Pregnancy	16.3	21.8	21.0	18.5	27.4	20.6
Age 25–34						
% Smoking Before Pregnancy	27.8	21.2	23.2	25.5	25.0	26.9
% Smoking During Pregnancy	14.8	11.4	11.6	13.1	10.8	10.3
Age 35 +						
% Smoking Before Pregnancy	10.6	13.5	13.8	26.9	21.5	20.2
% Smoking During Pregnancy	6.2	9.4	8.8	15.0	11.7	10.2

Table 1.16 Percentage of Prenatal Marijuana Use, by Year, Alaska PRAMS, 2006-2011

	2006	2007	2008	2009	2010	2011
Overall	6.1	5.4	6.0	7.1	6.3	7.8
Alaska non-Native	5.1	4.7	4.8	5.7	5.2	6.3
Alaska Native	9.3	7.0	10.0	11.1	9.6	12.3

SECTION 2
CONSEQUENCE



Problem Statement: Mortality

According to the National Institute on Drug Abuse, ‘Drug-related deaths have more than doubled since the early 1980s. There are more deaths, illness, and disabilities from substance abuse than from any other preventable health condition. Today, one in four deaths is attributable to alcohol, tobacco, and illicit drug use.’¹ Substance abuse is also a major contributing factor for non-fatal recreational, home, and occupational injuries. This section begins with a brief profile of mortality in Alaska and then focus on mortality rates for causes of death associated with substance abuse. Data were primarily gathered from the Alaska Bureau of Vital Statistics and from other public health surveillance programs. The most recent five-year period was used. Whenever possible, age adjusted death rates were provided to control for the effects of differences in population age distribution.

¹ National Institute on Drug Abuse, Medical Consequences of Drug Abuse. Accessed April 29, 2013 at <http://www.drugabuse.gov/related-topics/medical-consequences-drug-abuse/mortality>.

Substance abuse was also a major contributing factor for non-fatal recreational, home, and occupational injuries.

Data Analysis

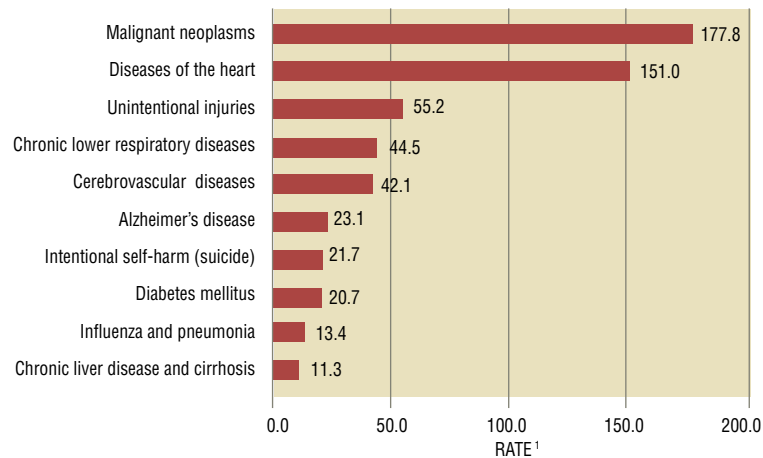
Mortality data was provided by the Alaska Bureau of Vital Statistics. All rates were calculated per 100,000 persons. This section contains tables and charts using the following notations for rates:

- * *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.*

Alaska Bureau of Vital Statistics

<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). Chronic liver disease, cirrhosis and diseases of the heart can be strongly associated with alcohol abuse. Chronic lower respiratory disease (chronic obstructive pulmonary disease-COPD), diseases of the heart, cerebrovascular disease and many cancers also have strong association with tobacco use. In 2011, unintentional injury was the third leading cause of death in Alaska and shown to have a strong association with alcohol and drug use. Substance abuse was also a major contributing factor for non-fatal recreational, home, and occupational injuries.

Chart 2.1. Ten Leading Causes of Mortality in Alaska, 2005-2009

1 Rates are per 100,000 population are age-adjusted to the year 2000 US standard population.
Source: Alaska Bureau of Vital Statistics, February 2011.

As expected, the number and rate of death increased with age, and this trend was generalizable across all genders and race aged 5-65+ years. The death rate among males and Alaska Native people was higher. Leading causes (see Appendix D — ICD-10 Codes for Cause of Death) of premature death, including chronic liver disease, cirrhosis, homicide, suicide, and unintentional injury, were strongly associated with substance abuse (Table 2.1-2.4).

Table 2.1. All Causes of Death by Age, Gender, and Race, Alaska, 2007-2011

	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	8	16.7*	109	158.1	193	1,972.0	310	389.2
Black	14	38.0*	81	251.9	102	3,130.8	197	612.3
American Indian / Alaska Native	171	123.4	787	585.6	983	4,820.0	1,941	1,018.2
White	163	40.4	1,575	229.3	3,595	3,559.3	5,333	601.7
All Races ²	357	57	2,574	279	4,894	3,640.2	7,830	652.8
Male								
Asian/Pacific Islander	32	64.3	164	277	143	2,332.8	339	550.1
Black	32	77.2	159	380.3	104	3,779.1	295	842.3
American Indian / Alaska Native	330	225.1	1,013	752.7	952	5,556.9	2,295	1,320.7
White	341	77.1	3,146	408	3,805	3,761.6	7,292	823.6
All Races ²	741	109	4,513	448.3	5,038	3,961.7	10,294	887.1
Total								
Asian/Pacific Islander	40	40.9	273	213	336	2,111.0	649	454.4
Black	46	58.8	240	324.5	206	3,427.6	492	724.8
American Indian / Alaska Native	501	175.7	1,800	669.2	1,935	5,156.4	4,236	1,159.3
White	504	59.6	4,721	323.8	7,400	3,660.5	12,625	710.1
All Races ²	1,098	84	7,087	367.4	9,932	3,796.5	18,124	765.6

1 Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

2 "All Races" includes decedents whose race is "Unknown."

Table 2.2. All Causes of Death by Gender and Borough/Census Area, Alaska, 2007-2011

	Total Deaths	Age Adjusted Death Rate ¹	Male Deaths	Male Age Adjusted Death Rate ¹	Female Deaths	Female Age Adjusted Death Rate ¹
Aleutians East Borough	33	433.5	22	385.5	11	529.3*
Aleutians West	64	746.7	38	708.3	26	835.7
Anchorage	6,948	736.8	3,680	826.7	3,267	656.3
Bethel	482	975.6	299	1,127.6	183	810.2
Bristol Bay Borough	37	1,084.4	20	653.5	17	916.3*
Denali Borough	20	614.4	13	399.8*	7	979.4*
Dillingham	153	1,002.2	90	1,082.9	62	896.9
Fairbanks North Star Borough	1,980	710.0	1,162	857.1	817	581.8
Haines Borough	87	643.8	59	900.4	28	405.5
Juneau Borough	788	700.6	426	830.8	361	599.5
Kenai Peninsula Borough	1,814	743.9	1,036	840.7	778	643.1
Ketchikan Gateway Borough	487	839.6	268	971.1	219	728.2
Kodiak Island Borough	282	706.1	176	846.1	106	568.8
Lake And Peninsula	65	1,057.0	45	1,338.5	20	709.7
Matanuska-Susitna Borough	2,201	759.8	1,302	898.1	899	627.5
Nome	363	1,365.0	230	1,555.1	133	1,191.30
North Slope Borough	233	1,336.3	136	1,483.7	97	1,197.60
Northwest Arctic Borough	224	993.6	138	1,257.7	86	780.9
Prince Of Wales-Outer Ketchikan	168	829.9	117	993.8	51	621.2
Sitka Borough	289	702.2	160	917.0	129	545
Skagway-Hoonah-Angoon	102	727.5	60	790.4	42	643.2
Southeast Fairbanks	188	769.0	113	1,081.2	75	627.7
Valdez-Cordova	282	836.8	177	1,063.8	105	630.5
Wade Hampton	276	1,318.8	166	1,594.0	109	1,048.70
Wrangell-Petersburg	255	865.9	150	1,007.4	104	713.9
Yakutat Borough	18	626.6*	13	1,372.9*	5	**
Yukon-Koyukuk	254	1,117.6	171	1,272.6	83	914
Alaska	18,130	765.9	10,294	887.1	7,830	652.8

¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

Table 2.3. Numbers of Premature Deaths Associated with Substance Abuse, by Leading Cause and Borough/Census Area, Alaska, 2007-2011

Health Indicators for Census Areas/Boroughs	Number of Deaths						
	All Causes of Death	Alcohol Induced	Drug Induced	Unintentional Injury	Suicide	Homicide	Chronic Liver Disease & Cirrhosis
Aleutians East Borough	33	1	1	5	1	0	0
Aleutians West	64	5	1	7	4	0	5
Anchorage	6,948	295	257	616	235	79	168
Bethel	482	22	5	71	42	10	5
Bristol Bay Borough	37	1	1	8	2	0	1
Denali Borough	20	0	0	1	1	0	0
Dillingham	153	8	4	31	7	1	3
Fairbanks North Star Borough	1,980	63	61	182	85	20	42
Haines Borough	87	3	1	5	2	0	3
Juneau Borough	788	32	23	75	29	3	19
Kenai Peninsula Borough	1,814	49	42	165	65	9	40
Ketchikan Gateway Borough	487	18	10	24	20	0	11
Kodiak Island Borough	282	13	7	21	14	1	6
Lake And Peninsula	65	8	1	10	1	2	1
Matanuska-Susitna Borough	2,201	51	76	214	84	26	32
Nome	363	15	3	44	33	5	2
North Slope Borough	233	12	1	24	15	1	1
Northwest Arctic Borough	224	15	1	44	21	1	1
Prince Of Wales-Outer Ketchikan	168	12	1	11	8	1	7
Sitka Borough	289	8	8	24	13	4	7
Skagway-Hoonah-Angoon	102	6	0	16	5	2	2
Southeast Fairbanks	188	6	3	20	4	0	6
Valdez-Cordova	282	10	7	27	10	2	6
Wade Hampton	276	9	1	43	29	10	2
Wrangell-Petersburg	255	7	7	17	7	2	8
Yakutat Borough	18	0	0	4	2	0	0
Yukon-Koyukuk	254	18	3	38	21	3	6
Alaska	18,130	689	525	1,752	760	182	384

Cause of Death:

Unintentional Injury
 Suicide
 Homicide
 Chronic Liver Disease & Cirrhosis
 Alcohol-Induced¹
 Drug-Induced²

ICD-10 Codes

V01-X59, Y85-Y86
 U03, X60-X84, Y870
 U01-U02, X85-Y09, Y871
 K70, K73-K74
 E244, F10, G312, G621, G721, I426, K292, K70, K852, K860, R780, X45, X65, Y15
 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

Table 2.4. Rates of Premature Deaths Associated with Substance Abuse, by Leading Cause and Borough/Census Area, Alaska, 2007-2011

Health Indicators for Census Areas/Boroughs	Age-Adjusted Death Rates ¹						
	All Causes of Death	Alcohol Induced	Drug Induced	Unintentional Injury	Suicide	Homicide	Chronic Liver Disease & Cirrhosis
Aleutians East Borough	433.5	**	**	**	**	**	**
Aleutians West	746.7	**	**	53.1*	**	**	**
Anchorage	736.8	20.3	17.1	47.1	16.1	5.3	12.2
Bethel	975.6	29.8	**	88.6	48.4	14.4*	**
Bristol Bay Borough	1,084.4	**	**	134.1*	**	**	**
Denali Borough	614.4	**	**	**	**	**	**
Dillingham	1,002.2	40.0*	**	148.1	30.2*	**	**
Fairbanks North Star Borough	710.0	15.0	12.5	45.8	17.4	4.2	10.8
Haines Borough	643.8	**	**	**	**	**	**
Juneau Borough	700.6	21.1	14.2	50.7	20.1	**	11.7*
Kenai Peninsula Borough	743.9	15.4	15.7	62.7	23.0	3.3*	12.0
Ketchikan Gateway Borough	839.6	24.5*	12.4*	38.0	30.5	**	16.5*
Kodiak Island Borough	706.1	20.9*	13.4*	37.1	20.5*	**	11.6*
Lake And Peninsula	1,057.0	93.5*	**	106.2*	**	**	**
Matanuska-Susitna Borough	759.8	11.4	16.9	54.1	20.8	5.7	7.9
Nome	1,365.0	36.5*	**	113.5	71.0	**	**
North Slope Borough	1,336.3	26.0*	**	112.9	35.1*	**	**
Northwest Arctic Borough	993.6	45.4*	**	136.1	55.0	**	**
Prince Of Wales-Outer Ketchikan	829.9	36.1*	**	56.6*	30.9*	**	20.6*
Sitka Borough	702.2	16.0*	18.3*	55.3	28.1*	**	15.8*
Skagway-Hoonah-Angoon	727.5	23.7*	**	129.1*	**	**	**
Southeast Fairbanks	769.0	13.9*	**	62.1	**	**	13.5*
Valdez-Cordova	836.8	17.2*	13.9*	62.0	21.3*	**	10.6*
Wade Hampton	1,318.8	31.8*	**	121.5	70.3	31.1*	**
Wrangell-Petersburg	865.9	19.6*	25.4*	64.8*	22.2*	**	19.4*
Yakutat Borough	626.6*	**	**	**	**	**	**
Yukon-Koyukuk	1,117.6	55.5*	**	151.2	78.1	**	17.9*
Alaska	765.9	19.4	14.5	55.2	21.7	5.2	11.3

1 Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

Cause of Death:

Unintentional Injury
Suicide
Homicide
Chronic Liver Disease & Cirrhosis

ICD-10 Codes

V01-X59, Y85-Y86
U03, X60-X84, Y870
U01-U02, X85-Y09, Y871
K70, K73-K74
E244, F10, G312, G621, G721, I426, K292, K70, K852, K860, R780, X45, X65, Y15

Alcohol-Induced¹

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

Drug-Induced²



Problem Statement: Alcohol-Related Consequences

There are approximately 75,000 deaths attributable to excess alcohol each year in the United States. Chronic liver disease and cirrhosis are often associated with alcoholism and are ranked as the 12th most common cause of death in adults in the United States. The consequences of alcohol abuse are severe in Alaska; Alaska consistently has one of the highest rates of death from alcohol-related causes. Alaska's alcohol-related problems mirror issues experienced in other states—domestic/family violence, intentional and unintentional injury, motor vehicle crash, mental illness, crime, poverty, and unemployment. In addition, a variety of medical diseases are associated with alcohol abuse and dependency including diseases of nervous, circulatory, and digestive systems.

Data Analysis

Mortality data was provided by the Alaska Bureau of Vital Statistics. Injury and other consequential data was provided through the Alaska Trauma Registry, No Child Left Behind-Alaska's Consolidated State Performance Reports, and Fetal Alcohol Syndrome Disorder (FASD) Surveillance System. This section contains tables and charts using the following notations for rates:

* 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.

Alaska Bureau of Vital Statistics

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

Overall, males experienced 1.4 times the number and 1.3 times the rate of alcohol induced deaths than females. Alaska Natives experience the highest rate of alcohol induced death. Prevalence of alcohol induced death among Alaska Native females aged 25-54 years was higher than males. From 2007 to 2011, nearly one of every 13 Alaska Native deaths was an alcohol induced death. Prevalence was higher in rural Alaska (Table 2.5 and 2.6; Chart 2.2–2.4). Causes of alcohol induced death included alcohol psychoses, alcohol dependence syndrome, non-dependent abuse of alcohol; alcohol induced chronic liver disease and cirrhosis, and alcohol poisoning. Lake and Peninsula borough had the highest rate of alcohol-induced death, followed by Yukon-Kuskokwim and Northwest Arctic boroughs. Prince of Wales-Outer Ketchikan and Wrangell-Petersburg had the highest rates of chronic liver disease and cirrhosis death.

Table 2.5. Comparison of Alcohol Induced and Chronic Liver Disease and Cirrhosis Deaths Rates¹, Alaska and U.S., 2007-2011

	Alaska	U.S.
Alcohol Induced Deaths	19.4	7.6
Chronic Liver Disease and Cirrhosis Deaths	11.3	9.4

¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

**Table 2.6. Alcohol Induced Death by Age, Gender, and Race, Alaska, 2007-2011**

	0-24		25-64		65+		All Ages	
	Deaths	Rate ¹	Deaths	Rate ¹	Deaths	Rate ¹	Deaths	Rate ¹
Female								
Asian/Pacific Islander	0	0.0	0	0.0	0	0.0	0	**
Black	0	0.0	1	**	0	0.0	1	**
American Indian / Alaska Native	5	**	157	116.8	9	44.1*	171	67.5
White	0	0.0	92	13.4	17	16.8*	109	8.7
All Races ²	5	**	253	27.4	26	19.3	284	16.7
Male								
Asian/Pacific Islander	0	0.0	4	**	1	**	5	**
Black	0	0.0	3	**	0	0.0	3	**
American Indian / Alaska Native	6	4.1*	130	96.6	15	87.6*	151	62.2
White	2	**	204	26.5	36	35.6	242	16.4
All Races ²	8	1.2*	344	34.2	53	41.7	405	21.9
Total								
Asian/Pacific Islander	0	0.0	4	**	1	**	5	**
Black	0	0.0	4	**	0	0.0	4	**
American Indian / Alaska Native	11	3.9*	287	106.7	24	64.0	322	64.8
White	2	**	296	20.3	53	26.2	351	12.8
All Races ²	13	1.0*	597	30.9	79	30.2	689	19.4

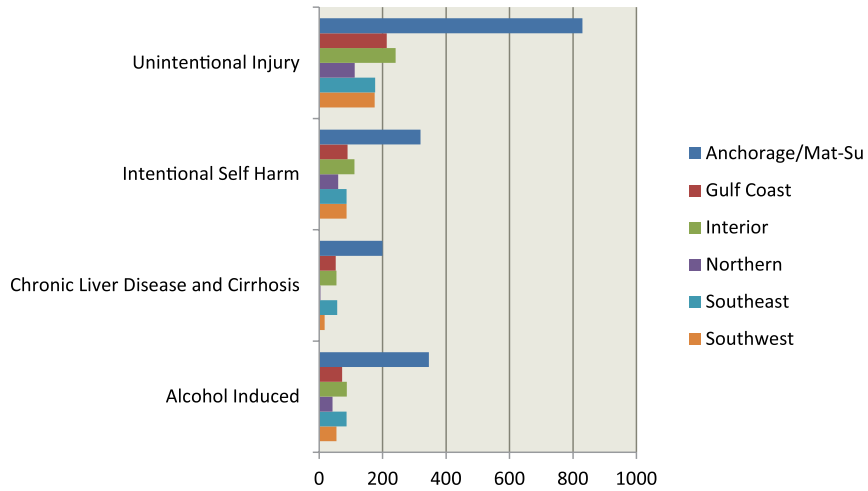
¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

² All Races includes decedents whose race is unknown.

Cause of Death: Alcohol-Induced
ICD-10 Codes: E244, F10, G312, G621, G721, I426, K292, K70, K852, K860, R780, X45, X65, Y15

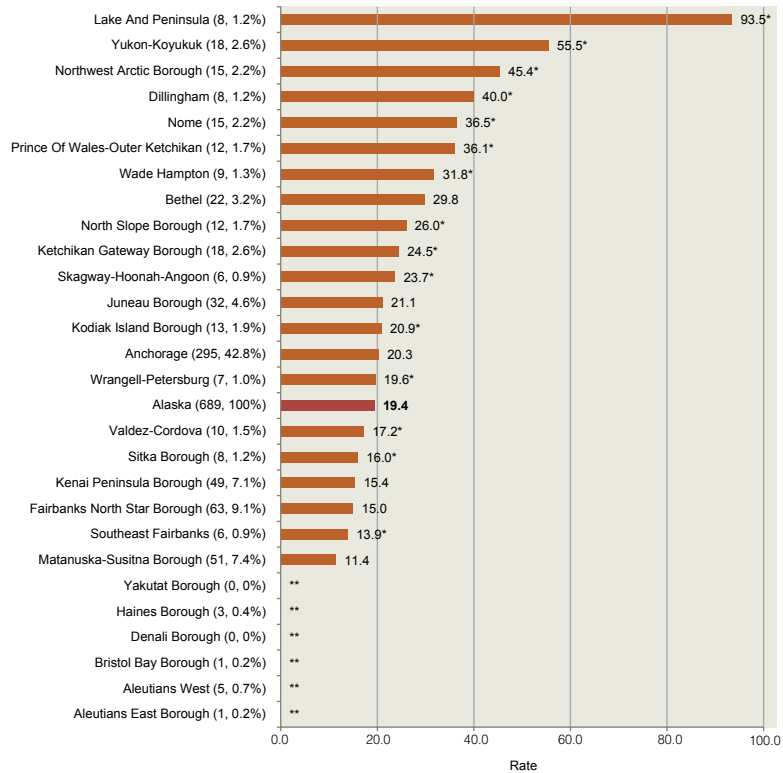


Chart 2.2. Number of Deaths Associated With Alcohol Use, by Region, Alaska, 2007-2011



Source: Alaska Bureau of Vital Statistics
Last updated on 01/31/2013

Chart 2.3. Alcohol Induced Deaths and Rates¹ by Borough/Census Area, Alaska, 2007-2011
Borough/Census Area (# of deaths, % of statewide total)

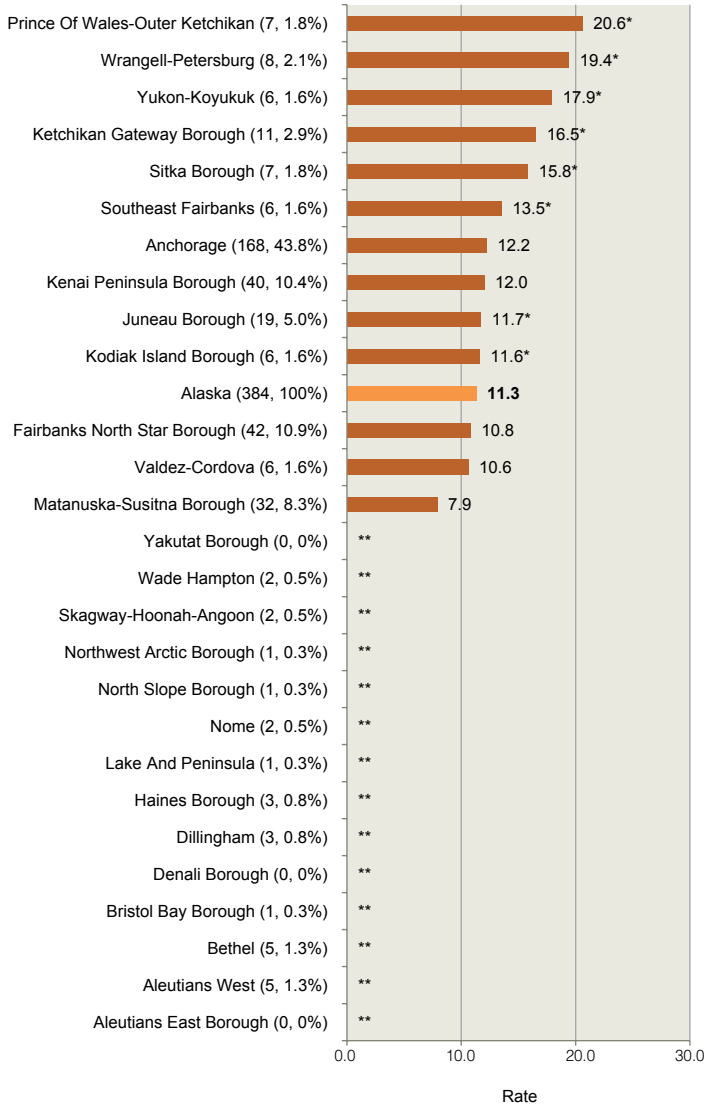


¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

Source: Alaska Bureau of Vital Statistics
Last updated on 01/31/2013



**Chart 2.4. Chronic Liver Disease and Cirrhosis Death and Rates¹ by Borough/
Census Area, Alaska, 2007-2011**
Borough/Census Area (# of death, % of statewide total)



¹ Rates are age-adjusted to the year 2000 US standard population.
Source: Alaska Bureau of Vital Statistics, February 2011.



Unintentional Injury

According to the World Health Organization, 32% of all alcohol-attributable deaths were due to unintentional injuries.¹ However, this should be considered an under ascertainment since events may and do include other person(s) that were fatally injured as a result of a person under the influence of alcohol (e.g., driving after drinking, accidental fire).

Alaska's unintentional injury death rate was 1.5 times the U.S. rate. During 2007-2011, males were 2.0 times more likely than females to die from unintentional injury in Alaska, where prevalence was highest among males aged 65 years and older. Alaska Natives experienced the highest rate of death due to unintentional injury in contrast to Whites, who experienced the greatest number of deaths. Prevalence was highest among Alaska Native males aged 25 years and older, who experienced 1.7-2.5 times the rate of death of White males. Yukon-Kuskokwim and Dillingham boroughs had the highest rates of unintentional injury, followed by Northwest Arctic and Bristol Bay boroughs (Table 2.7 and 2.8; Chart 2.5).

¹ Health Organization.... Accessed April 1, 2013 at [Http://www.who.int/mwg-internal/de5fs23hu73ds/progress?id=F1Et9pt2a6](http://www.who.int/mwg-internal/de5fs23hu73ds/progress?id=F1Et9pt2a6). Assessed April 1, 2013.

Table 2.7. Comparison of Unintentional Injury Deaths Rates¹, Alaska and U.S., 2007-2011

	Alaska	U.S.
Unintentional Injury Deaths	55.2	38.0

¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population.

**Table 2.8. Unintentional Injury Deaths by Age, Gender, and Race, Alaska, 2007-2011**

	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	**	9	13.1*	2	**	12	11.1*
Black	2	**	2	**	1	**	5	**
American Indian / Alaska Native	45	32.5	109	81.1	28	37.3	182	73.4
White	60	14.9	181	26.3	94	93.1	335	31.6
All Races ²	108	17.2	303	32.8	125	93	537	36.1
Male								
Asian/Pacific Islander	6	12.1*	7	11.8*	3	**	16	17.3*
Black	4	**	18	43.1*	3	**	25	42.9
American Indian / Alaska Native	109	74.4	234	173.9	34	198.5	377	145.9
White	129	29.2	539	69.9	119	117.6	787	63.4
All Races ²	252	37.1	803	79.8	159	125	1,214	72.7
Total								
Asian/Pacific Islander	7	7.2*	16	12.5*	5	**	28	13.8
Black	6	7.7*	20	27	4	**	30	27.4
American Indian / Alaska Native	154	54	343	127.5	62	165.2	559	109.5
White	189	22.4	720	49.4	213	105.4	1,122	48.4
All Races ²	360	27.6	1106	57.3	284	108.6	1,751	55.2

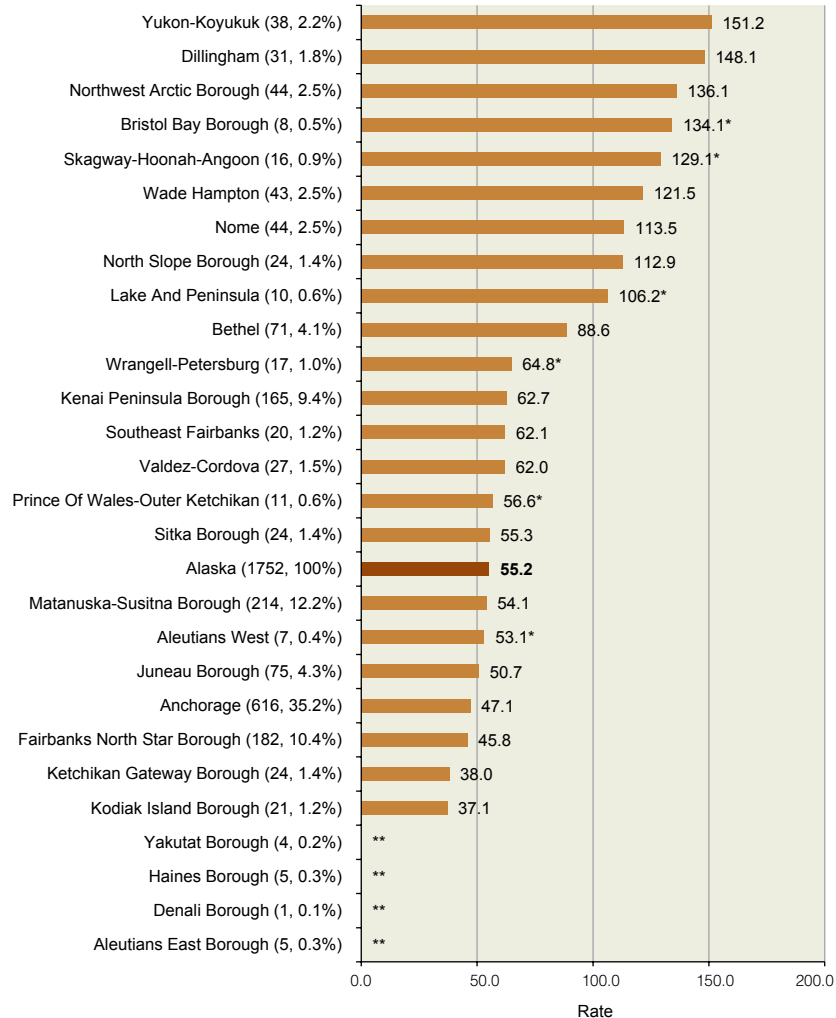
1 Rates are per 100,000 population in age group; all ages rates are age-adjusted to the year 2000 US standard population.
 2 All Races includes decedents whose race is unknown.

Cause of Death: ICD-10 Codes
 Unintentional Injury V01-X59, Y85-Y86



Chart 2.5. Unintentional Injury Deaths and Rates¹ by Borough/Census Area, Alaska, 2007-2011

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



¹ Rates are age-adjusted to the year 2000 US standard population.
Source: Alaska Bureau of Vital Statistics, February 2011.

Alaska Trauma Registry (ATR)

The high rate of alcohol abuse in Alaska contributed significantly to the rate of serious non-fatal injury. Most national statistics were available only for death. In Alaska, hospitalizations due to injury were reported to the Alaska Trauma Registry (ATR). The information should be considered an under ascertainment of injuries associated with alcohol. Injury resulting from someone else's alcohol involvement, other than the injured person, was not reportable to the registry. For example, a hospitalized injury victim would be reported to the registry (alcohol suspected or proven would be noted); however an intoxicated all-terrain vehicle driver causing the pedestrian-vehicle crash would not be reported to the registry unless the driver was hospitalized for injuries (alcohol suspected or proven would be noted). (See Data Limitation)



Table 2.9. Top Five Hospitalized Injury Causes Associated with Alcohol Use¹, Occurrence in Alaska, by Gender, ATR 2006-2010

Cause of Injury with Alcohol	Male (N=3,701)	Cause of Injury with Alcohol	Female (N=2,291)
Assault	890 (24%)	Suicide Attempt	964 (42%)
Falls	789 (21%)	Falls	520 (23%)
Suicide Attempt	615 (17%)	Assault	250 (11%)
Motor Vehicle	327 (9%)	Motor Vehicle	172 (8%)
All Terrain Vehicle/Snow Machine	302 (8%)	Poisoning	83 (4%)

¹Known or suspected use prior to the injury event

Table 2.10. Hospitalized Injury Associated with Alcohol Use¹, Alaska Residents, by Race, and Ethnicity, ATR, 2006-2010

	Number of Injury Cases	Number of Suspected or Proven Alcohol Use by Patient at Time of Injury	Percent Suspected or Proven Alcohol Use	Rate of Injury (Per 100,000 Persons)	Rate of Injury Among Persons with Suspected or Proven Alcohol Use (Per 100,000 Persons)
White	13,279	2,067	16%	593.9	92.5
Black	527	97	18%	391.7	72.1
Asian/Pacific Islander	613	51	8%	301.3	301.2
American Indian / Alaska Native	8,394	3,561	42%	1,640.4	695.9
2 or more	361	70	19%	— ²	— ²
Other	164	39	24%	— ²	— ²
Unknown	505	109	22%	— ²	— ²
Total	23,843	5,994	25%	— ²	— ²

¹ Known or suspected use prior to the injury event

² No population data available

Alaska Natives experienced the highest rate of death due to unintentional injury in contrast to Whites who experienced the greatest number of injury deaths.



Table 2.11 Hospitalized Injury Associated with Alcohol Use¹, by Region, ATR, 2006-2010

Region	2006	2007	2008	2009	2010	% Reduction Between 2006 and 2010%
Anc/MatSu	409	387	428	418	394	4%
Gulf Coast	135	121	123	108	64	53%
Interior	166	177	145	173	135	19%
Northern	172	191	166	120	97	44%
Southeast	133	155	137	140	47	65%
Southwest	206	170	185	143	181	12%
Alaska**	1,221	1,201	1,184	1,102	1,018	17%

¹ Known or suspected use prior to the injury event

Table 2.12 Hospitalized Injury Associated with Alcohol Use, Persons Aged 20 Years and Less, by Region, ATR, 2006-2010

Region	2006	2007	2008	2009	2010	% Reduction Between 2006 and 2010%
Anc/MatSu	48	40	43	22	23	52%
Gulf Coast	20	16	14	11	6	70%
Interior	19	19	13	19	9	53%

Out-of-School Suspensions and Expulsions Due to Alcohol

During the 2006-2007 school year through the 2010-2011 school year, there were 947 out-of-school suspensions and 26 expulsions from school were related to alcohol, representing 6% of all out-of-school suspensions and expulsions. High school suspension and expulsions for alcohol use occurred more frequently than middle and elementary school (Table 2.13 and 2.14). The number of high school suspensions significantly declined (48%) over the 5-year period. The number of middle school suspensions was variable of the 5-year period, representing 20% of the suspensions (or about 1 in 5).

Table 2.13. Trends in Alcohol Related Out-of-School Suspensions, Alaska N=949

	School Year					
	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2006-2011
Elementary School	1	0	5	1	2	9
Middle School	55	27	39	25	37	183
High School	222	184	131	104	116	757

Source: Alaska Consolidated State Performance Reports, accessed May 1, 2013.

**Table 2.14. Trends in Alcohol Related School Expulsions, Alaska N=26**

	School Year					
	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2006-2011
Elementary School	0	0	0	0	0	0
Middle School	0	2	0	0	0	2
High School	15	6	0	0	3	24

Source: Alaska Consolidated State Performance Reports, accessed May 1, 2013.

Fetal Alcohol Spectrum Disorders (FASD)

The term Fetal Alcohol Spectrum Disorders (FASD) indicates that there are a variety of effects of prenatal alcohol exposure. FASD is not a diagnosis. This definition of FASD is used by national experts representing the Centers for Disease Control and Prevention (CDC); the National Institute on Alcohol Abuse and Alcoholism (NIAAA); the Substance Abuse and Mental Health Services Administration (SAMHSA); Health Canada; and the fields of research, psychiatry, and justice.

Although the various FASD are permanent conditions, specific systems may be treatable or manageable; such as the disorder and individual affected. SAMHSA estimates the prevalence of FASD at about 100 per 10,000 live births. Brain damage can occur when alcohol crosses the placenta and damages developing tissues. The result may be mild to severe cognitive impairment, mental retardation, social and emotional problems, learning disabilities, visual impairment, neurobehavioral problems and other structural birth defects. Although other etiologies may lead to similar clinical presentations, prenatal alcohol exposure is by definition the only cause of FASD. Fetal Alcohol Syndrome (FAS) is the most severe.

The Division of Public Health, Section of Women's, Children's, and Family Health collects information pertaining to FAS and FASD. Prevalence in Alaska (Table 2.15 and 2.16; Chart 2.6) is provided below.



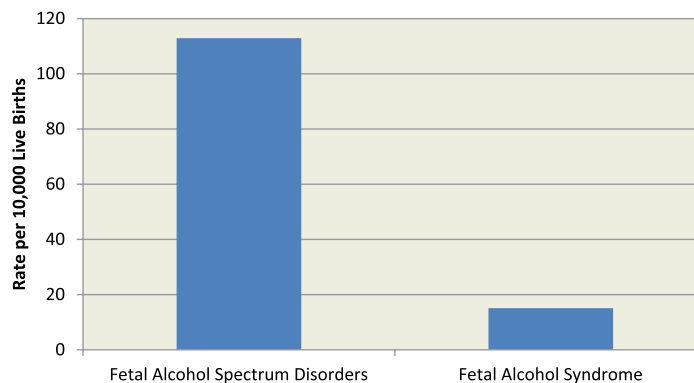
Table 2.15 Fetal Alcohol Spectrum Disorders by Select Birth Characteristics, Alaska, 1996-2011

	Number	Birth Prevalence ¹
Gender		
Female	869	107.5
Male	1010	118.0
Birth Weight		
Low and Very Low	331	343.9
Normal	1542	98.5
Maternal Race		
Asian, Pacific Islander	10	*
Black ¹	33	47.7
Native American, Alaska Native	1458	350.5
White	365	35.1
Maternal Age		
15 - 19 years	252	147.9
20 - 29 years	974	103.9
30 - 39 years	589	115.7
40 - 45 years	46	105.8
Prenatal Care		
First Trimester	831	81.8
Second Trimester	393	212.4
Later or None	653	141.2
Maternal Tobacco Use		
Reported	1189	425.3
Not Reported	667	48.5

¹ Prevalence per 10,000 live births.

Source: Alaska MCH Data Book, Birth Defects Surveillance Edition, 2012.

Chart 2.6. Prevalence of Specific Fetal Alcohol Spectrum Disorders, Alaska, 1996-2011



Source: Alaska MCH Data Book, Birth Defects Surveillance Edition, 1012



Table 2.16 Number of Fetal Alcohol Spectrum Disorder Births in Alaska by Maternal Age, 1996-2011

	Maternal Age				Total
	15–19 years		20–45 years		
FASD Births	252	13.5%	1,610	86.5%	1,862
Total live births	17,203	10.2%	150,757	89.8%	167,960

Source of data: Alaska Birth Defects Registry, 2012

Problem Statement: Illicit Drug-Related Consequences

Drug abuse and dependency are among Alaska's most insidious health and social concerns, impacting individuals, families, friends, and communities. This is particularly true in small rural settings where family and friends constitute the entire community.

Inhalant abuse by adolescents and young adults is a serious health and social issue in Alaska. In rural Alaska, gasoline is a common inhalant used by adolescents. As with alcohol, drug abuse is associated with domestic/family violence, intentional and unintentional injury, mental illness, crime, poverty, and unemployment. A variety of medical diseases are also associated with drug abuse and dependency including anemia, nutritional and metabolic diseases, and diseases of nervous, respiratory, skin and musculoskeletal systems.

Data Analysis

Mortality data was provided by the Alaska Bureau of Vital Statistics. Injury and other consequential data was provided through the Alaska Trauma Registry, and Alaska School Districts. This section contains tables and charts using the following notations for rates:

* *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.*

Alaska Bureau of Vital Statistics

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

Drug induced mortality included deaths from dependent and non-dependent use of drugs; legal and illegal drugs; and poisonings from medically prescribed drugs. It excluded accidents, homicides and other causes indirectly related to drug use. In 2001, the rate of drug induced death began to increase with a more accelerated rise in Alaska Natives, particularly Alaska Native females. During 2007-2011, prevalence of drug induced death was highest among Alaska Native females aged 25-64 years. Boroughs with greater population density and exhibiting rapid growth had higher rates of drug-induced death than Alaska overall. While the highest rate was in the Southeast borough of Wrangell-Petersburg, fewer than 20 deaths were documented and should be evaluated with caution. (Table 2.17 and 2.18; Chart 2.7).

**Table 2.17. Comparison of Drug Induced Deaths Rates¹, Alaska and U.S., 2007-2011**

Mortality Indicator	Alaska	U.S.
Drug Induced Deaths	14.5	12.9

¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population

Table 2.18. Number and Rate of Drug Induced Deaths by Age, Gender, and Race, Alaska, 2007-2011

	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	3	**	0	0.0	3	**
Black	0	0.0	3	**	1	**	4	**
American Indian / Alaska Native	7	5.1*	43	32.0	0	0.0	50	18.6
White	15	3.7*	130	18.9	9	8.9*	154	12.0
All Races ²	22	3.5	179	19.4	10	7.4*	212	12.2
Male								
Asian/Pacific Islander	0	0.0	2	**	0	0.0	2	**
Black	0	0.0	10	23.9*	0	0.0	10	13.6*
American Indian / Alaska Native	7	4.8*	40	29.7	1	**	48	18.4
White	29	6.6	213	27.6	7	6.9*	249	17.7
All Races ²	37	5.4	267	26.5	8	6.3*	312	16.7
Total								
Asian/Pacific Islander	0	0.0	5	**	0	0.0	5	**
Black	0	0.0	13	17.6*	1	**	14	11.7*
American Indian / Alaska Native	14	4.9*	83	30.9	1	**	98	18.4
White	44	5.2	343	23.5	16	7.9*	403	15.0
All Races ²	59	4.5	446	23.1	18	6.9*	524	14.5

¹ Rates are per 100,000 population in age group; all ages rates are age-adjusted to the year 2000 US standard population.

² All Races includes decedents whose race is unknown.

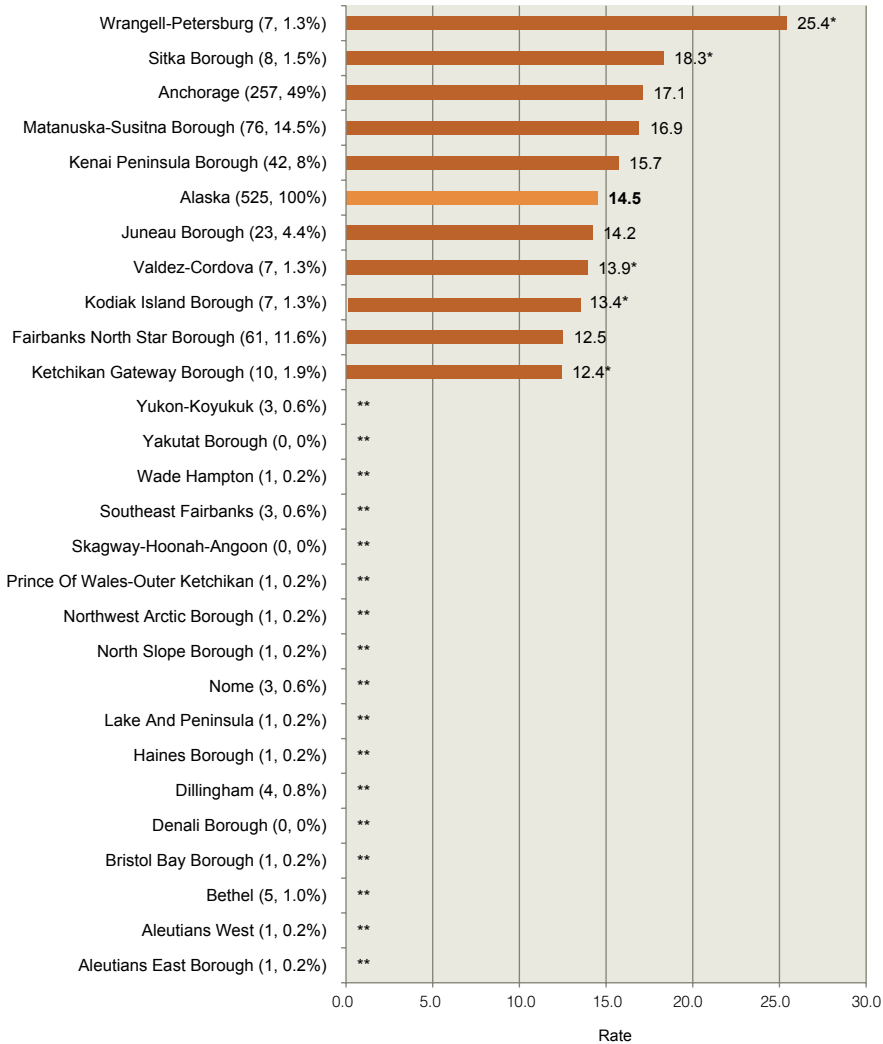
Cause of Death:Drug-Induced²**ICD-10 Codes**

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



Chart 2.7. Drug Induced Deaths and Rates¹ by Borough/Census Area, Alaska, 2007-2011

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



¹ Rates are per 100,000 population in age groups, age-adjusted to the year 2000 US standard population.
Source: Alaska Bureau of Vital Statistics, January 2013.

Alaska Trauma Registry

The high rate of drug abuse in Alaska contributed significantly to the rate of serious non-fatal injury. In Alaska, hospitalizations due to injury were reported to the Alaska Trauma Registry (ATR). The information should be considered an under ascertainment of injuries associated with illegal drug use. Injuries resulting from someone else’s drug use that initiated or contributed to an injury were not reportable to the registry. For example, a hospitalized pedestrian hit by snowmobile would be reported to the registry (illegal drug use suspected or proven would be noted); however an individual driving the snowmobile would not be reported to the registry unless the individual is hospitalized for injuries (illegal drug use suspected or proven would be noted). (See Data Limitation)

Over one-tenth of all hospitalized injury patients had suspected or proven drug use injuries. Of these hospitalizations, the prevalence was higher among females



(55%) than males (45%). This is a significant change in the female injury rate compared to findings for the 2004-2008 ATR data. While the distribution was nearly equal among Alaska Natives (46%) and Whites (49%), prevalence was higher among Alaska Natives (Table 2.19–2.21), having rates 3.9–13.4 times greater than other race groups for injuries associated with drug use.

Table 2.19 Top Five Hospitalized Injury Causes Associated with Drug Use¹, Occurrence in Alaska, by Gender, ATR 2006-2010

Cause of Injury with Drugs	Male (N=1,305)	Cause of Injury with Drugs	Female (N=1,595)
Suicide Attempt	520 (33%)	Suicide Attempt	857 (66%)
Assault	278 (17%)	Motor Vehicle	126 (10%)
Motor Vehicle	210 (13%)	Falls	84 (6%)
Falls	184 (12%)	Assault	82 (6%)
All Terrain Vehicle/Snow Machine	117 (7%)	Poisoning	33 (2%)

*Known or suspected use prior to the injury event

Table 2.20. Hospitalized Injury Associated with Drug Use¹, Alaska Residents, by Race and Ethnicity, ATR 2006-2010

	Number of Injury Cases	Number of Suspected or Proven Drug Use by Patient at Time of Injury	Percent Suspected or Proven Drug Use	Rate of Injury (Per 100,000 Persons)	Rate of Injury Among Persons with Suspected or Proven Drug Use (Per 100,000 Persons)
White	13,279	1,331	10%	593.9	59.5
Black	527	88	17%	391.7	65.4
Asian/Pacific Islander	613	39	6%	301.3	19.2
American Indian / Alaska Native	8,394	1,321	16%	1640.4	258.2
2 or more	361	43	12%	— ²	— ²
Other	164	21	13%	— ²	— ²
Unknown	505	59	12%	— ²	— ²
Total	23,843	2,902	12%	— ²	— ²

¹Known or suspected use prior to the injury event

²No population data available

**Table 2.21. Hospitalized Injury Associated with Drug Use, by Region, ATR, 2001-2010**

Region	2006	2007	2008	2009	2010	% Reduction Between 2006 and 2010
Anc/MatSu	240	206	222	217	231	4%
Gulf Coast	50	54	75	51	42	16%
Interior	79	93	74	90	80	- ¹
Northern	76	81	73	68	55	28%
Southeast	73	79	70	57	85	-16%
Southwest	63	43	50	45	57	9%
Alaska ²	597	584	594	554	573	4%

¹ While counts were variable, there was no significant change between 2006 and 2010

² Counts do not include cases where the Region was unknown or not identified.

Over one-tenth of all hospitalized injury patients had suspected or proven drug use injuries.

School Suspensions and Expulsions Due to Illicit Drugs

During the 2006-2007 school year through the 2010-2011 school year, 2,960 out-of-school suspensions and 158 expulsions from school were related to drugs. High school out-of-school suspensions and expulsions for drug use occurred more frequently than middle and elementary school and occur more frequently than suspensions and expulsions for alcohol (3 to 1 for suspensions and 6 to 1 for expulsions) (Table 2.22 and 2.23). The numbers of high school suspensions have not significantly changed, whereas middle school suspensions increased 23% over the 5-year period. In contrast, expulsions for illicit drugs have significantly declined for both middle school and high school students. Out-of-suspensions for elementary school students were variable over the 5-year period, with one expulsion.

Table 2.22. Trends in Illicit Drug Related Out-of-School Suspensions, Alaska N=2,960

	School Year					
	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2006-2011
Elementary School	4	0	1	16	6	27
Middle School	128	124	82	158	157	649
High School	464	429	446	457	488	2,284

Source: Alaska Consolidated State Performance Reports, accessed May 1, 2013.

**Table 2.23. Trends in Illicit Drug Related Out-of-School Expulsions, Alaska N=2,960**

	School Year					
	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2006-2011
Elementary School	0	0	0	1	0	1
Middle School	11	12	15	2	3	43
High School	54	41	47	5	11	158

Source: Alaska Consolidated State Performance Reports, accessed May 1, 2013.

Problem Statement: Tobacco Use Related Consequences

Tobacco use is considered the leading health problem in Alaska. Tobacco is addictive. Smoking causes heart disease and 87% of all lung cancers. Tobacco use has been shown to shorten the lives of Alaskans more than all infectious disease and lead to more deaths than alcohol and drug use.

Data Analysis

Mortality data was provided by the Alaska Bureau of Vital Statistics. This section contains tables and charts using the following notations for rates:

* *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.*

Alaska Bureau of Vital Statistics

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

Deaths associated with tobacco use were the most prevalent of all substance related deaths for Alaskans. Nearly one out of seven deaths was attributed as tobacco related. However, the magnitude was most apparent when comparing the number and rates of smoking attributable deaths to the number and rates of alcohol induced deaths, illicit drug induced deaths, and chronic liver disease/cirrhosis combined (Table 2.24). Alaska Natives had the highest rate of death attributed to smoking, of which Native males are twice as likely to die from tobacco use as Native females (Table 2.25). Causes of death attributable to tobacco use included several types of cancer, cardiovascular disease, respiratory disease, and infant death (Table 2.26).



Table 2.24. Comparison of Smoking Attributable Death Rates¹ to Alcohol Induced, Chronic Liver Disease/Cirrhosis and Drug Induced Death Rates¹, Alaska and U.S., 2007-2011

		Alaska	U.S.
Alcohol Induced Deaths	689	19.4	7.6
Chronic Liver Disease and Cirrhosis Deaths	384	11.3	9.4
Drug Induced Deaths	525	14.5	12.9
Smoking Attributable Deaths	2,838	225.3	247.8

¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population.

Deaths associated with tobacco use were the most prevalent of all substance related deaths for Alaskans.

Table 2.25. Smoking Attributable Deaths by Age, Gender, and Race, Alaska, 2007-2011

	Age 0-24		Age 25-64		Age 65+		All Ages ¹	
	Deaths	Rate ¹	Deaths	Rate ¹	Deaths	Rate ¹	Deaths	Rate ¹
Female								
Asian/Pacific Islander	0	0	15	29.5*	18	183.9*	33	64.1
Black	0	0	8	37.6*	11	337.6*	19	107.9*
American Indian / Alaska Native	0	0	73	75.6	142	696.3	215	219.6
White	0	0	234	45.1	541	535.6	775	161.5
All Races ²	0	0	342	49.7	719	534.8	1,061	164.3
Male								
Asian/Pacific Islander	0	0	23	54.0	32	522.0	55	195.3
Black	0	0	24	88.4	18	654.1*	42	274.2
American Indian / Alaska Native	0	0	136	142.1	213	1,243.3	349	431.4
White	0	0	528	90.5	790	781.0	1,318	275.2
All Races ²	0	0	720	96.2	1,057	831.2	1,777	294.2
Total								
Asian/Pacific Islander	0	0	38	40.7	50	314.1	88	111.3
Black	0	0	32	66.1	29	482.5	61	181.9
American Indian / Alaska Native	0	0	209	108.7	355	946.0	564	315.1
White	0	0	762	69.1	1,331	658.4	2,093	216.1
All Races ²	0	0	1062	73.9	1,776	678.9	2,838	225.3

¹ Rates are per 100,000 population in age group; all ages rates are age-adjusted to the year 2000 US standard population.

² All Races includes decedents whose race is unknown.

Source: Alaska Bureau of Vital Statistics. Last updated on 01/31/2013



Table 2.26. Number and Percent of Deaths Due to Select Causes Estimated to be Due to Tobacco Use, Alaska, 2007-2011

	Total Deaths	Tobacco-Related Deaths	Percent Tobacco Related Deaths
Malignant Neoplasms	2,104	1,320	63%
Lip, Oral Cavity, Pharynx	48	32	67%
Esophagus	114	78	68%
Stomach	100	21	21%
Pancreas	271	66	24%
Larynx	24	21	88%
Trachea, Lung, Bronchus	1,264	1,030	81%
Cervix Uteri	35	4	11%
Kidney and Renal Pelvis	122	31	25%
Urinary Bladder	72	30	42%
Acute Myeloid Leukemia	54	7	13%
Cardiovascular Diseases	4,024	771	19%
Ischemic Heart Disease	1,935	441	23%
Other Heart Disease	1,138	165	15%
Cerebrovascular Disease	805	112	14%
Atherosclerosis	23	4	17%
Aortic Aneurysm	69	42	61%
Other Arterial Disease	54	7	13%
Respiratory Diseases	1,124	747	66%
Pneumonia, Influenza	250	47	19%
Bronchus, Emphysema	120	103	86%
Chronic Airways Obstruction	754	597	79%
Infant Deaths	92	15	16%
Total	7,344	2,853	39%

Source: Alaska Bureau of Vital Statistics, January 2013.



Problem Statement: Alcohol- and Drug-Related Transportation Crashes

In 2010, Alaska ranked 27th out of the fifty states for motor vehicle deaths. Approximately one out of three fatal motor vehicle crashes were alcohol-related.

Data Analysis

Data on alcohol- and drug-related transportation risk behavior and associated fatalities was provided through the YRBS, the BRFSS, the Fatality Analysis Reporting System (FARS) and other morbidity data sets. National averages were available for most recent comparisons.

Youth Risk Behavior Survey (YRBS)

<http://apps.nccd.cdc.gov/youthonline/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at: <http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/>

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.

From 2007 to 2011, the report of drinking prior to operating a motor vehicle declined significantly. Overall, the prevalence of alcohol-related motor vehicle events among Alaska high school youth was below the national average in 2011 and lower than in previous years of the survey. However, one out of five youth still accompanied a driver who had been drinking alcohol. Prevalence of drinking and driving episodes was lower among female high school students. While the prevalence of driving after drinking had been above the national average among Grade 11 in 2009, the survey results were lower than national average in 2011 (Table 2.27 and 2.28).

Table 2.27. Trends in Motor Vehicle Driving After Drinking Among Youth, by Gender, Alaska YRBS

	2007	2009	2011	U.S. 2011
Female				
% Driving After Drinking	7.8	6.9	4.7	6.7
% Passenger With a Drinking Driver	25.4	22.7	18.1	24.1
Male				
% Driving After Drinking	11.3	12.8	6.4	9.5
% Passenger With a Drinking Driver	21.5	19.7	18.9	23.2



Table 2.28. Trends in Motor Vehicle Driving After Drinking Among Youth, by Grade, Alaska YRBS

	2007	2009	2011	U.S. 2011
Grade 9				
% Driving After Drinking	5.0	3.8	3.1	4.7
% Passenger With a Drinking Driver	20.9	19.1	19.5	21.8
Grade 10				
% Driving After Drinking	7.8	7.1	4.3	5.6
% Passenger With a Drinking Driver	27.7	18.7	18.9	23.3
Grade 11				
% Driving After Drinking	10.9	12.3	7.4	9.1
% Passenger With a Drinking Driver	25.0	22.5	19.5	23.8
Grade 12				
% Driving After Drinking	16.5	13.2	8.4	13.6
% Passenger With a Drinking Driver	20.6	24.4	16.1	27.7

Behavior Risk Factor Surveillance Survey (BRFSS)

<http://apps.nccd.cdc.gov/brfss/>

Alaska Center for Health Data and Statistics – 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.
- 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.

The Alaska survey collected information pertaining to driving after drinking on even years. From 2004 to 2010, prevalence of driving after drinking was not significantly different by gender nor by age over the period of the survey (Table 2.29 and 2.30). National averages were not available for this indicator.



Table 2.29. Trends of Adults Driving After Drinking Among Adults, by Gender, Alaska BRFSS

	2004	2006	2008	2010
Female				
% Driving After Drinking	2.5	3.8	1.4	1.9
Male				
% Driving After Drinking	4.6	5.6	4.5	4.0

Table 2.30. Trends in Drug Related School Expulsions, Alaska, 2003-2008

		2004	2006	2008	2010
Ages 18 thru 24	% Driving After Drinking	3.1	7.5	2.9	1.6
Ages 15 thru 34	% Driving After Drinking	3.2	10.0	3.2	3.7
Ages 35 thru 44	% Driving After Drinking	5.7	2.1	3.4	3.8
Ages 45 thru 64	% Driving After Drinking	3.4	2.8	3.9	3.8
Ages 65+	% Driving After Drinking	1.4	4.3	0.6	0.0

Source: Alaska Department of Education & Early Development

Fatality Analysis Reporting System (FARS)

<http://www.dot.state.ak.us/stwdp/ing/hwysafety/stats.shtml>

Definition of activities associated with drinking and driving:

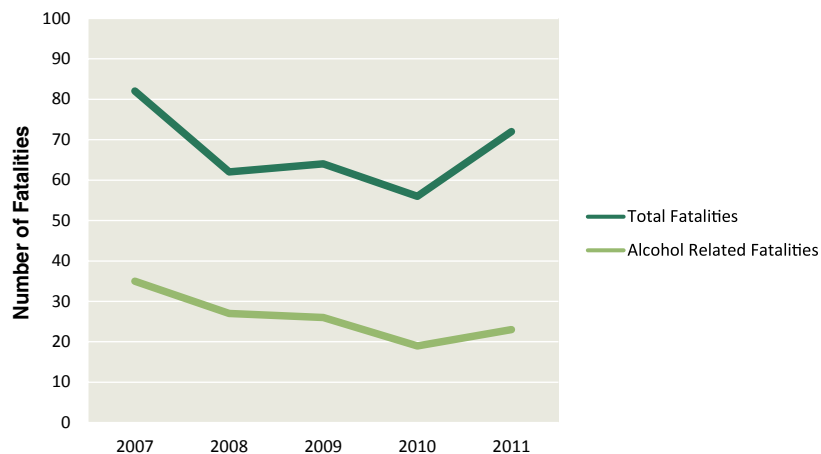
- Driving under the influence (DUI) or “drunk driving” was defined as operating a motor vehicle while ones’ blood alcohol is above the legal limit of 0.08 grams per deciliter (g/dL) (equivalent to 80 mg/dL or 80 mg/100mL) blood alcohol concentration (BAC).

Beginning in 2002, Alaska’s rate for alcohol-related motor vehicle crashes fell below the national average. Alcohol-related motor vehicle deaths were prevalent but declining. This may be attributed to a number of campaigns promoting safe driving habits and awareness of enforcement action. While there was an increase in the total number of fatalities in motor vehicle crashes in 2011, the proportion of alcohol involvement in these events continued to decline (from 43% in 2007 to 32% in 2011) (Table 2.31; Chart 2.8).

**Table 2.31. Fatalities Due to Alcohol-Related Motor Vehicle Crashes, Alaska FARS**

Year	Total Fatal Crashes	Total Fatalities	Alcohol-Related Fatal Crashes	Fatalities Due to Alcohol-Related Crashes	Percent Alcohol Related Crashes	Percent Alcohol Related Fatalities
2007	75	82	31	35	41%	43%
2008	55	62	22	27	40%	44%
2009	59	64	22	26	37%	41%
2010	52	56	17	19	33%	34%
2011*	64	72	21	23	33%	32%

* These numbers are based on preliminary reports and are therefore subject to change.

Chart 2.8. Total Motor Vehicle Crash Fatalities Compared to Alcohol-Related Motor Vehicle Crash Fatalities, Alaska FARS

Prior to 2009, trends in BAC among drivers involved in fatal motor vehicle crashes were relatively steady. Starting in 2010, the percent of drivers with BAC ≥ 0.08 g/dL decreased significantly from 41% in 2009 to 32% in 2011; similarly, the percent of drivers with BAC of 0.01-0.07 g/dL also declined from 48% in 2009 to 36% in 2011 (Chart 2.9 and 2.10). The prevalence of younger drivers aged 16-34 years with BAC above the legal limit were lower than national; prevalence of drivers aged 35 years and older were significantly higher than national averages. Drinking and driving campaigns and improved law enforcement surveillance of drivers suspected of driving after drinking along with on-sight BAC testing may account for the shift (Chart 2.9; Table 2.32).



Chart 2.9. Trends in Blood Alcohol Concentration (BAC) Collected After Fatal Motor Vehicle Crashes, by Highest Driver BAC in Crash, Alaska FARS

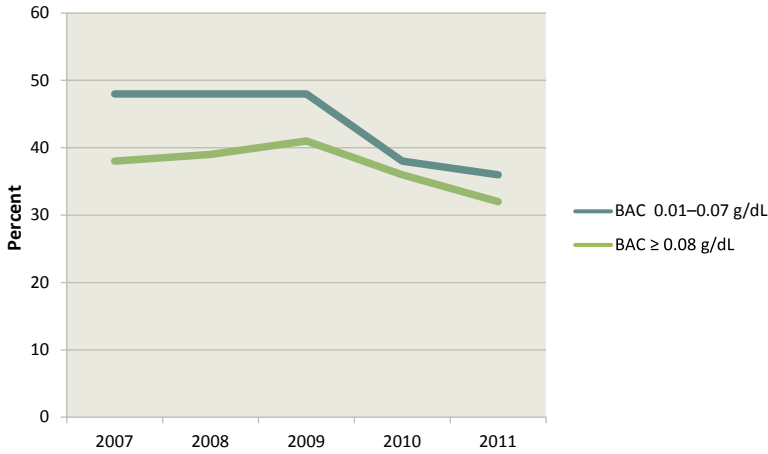


Table 2.32. Citations Issued by Law Enforcement to Motor Vehicles Drivers Involved in Traffic Crashes, by Age Group and Citation, Anchorage and Alaska, 2000-2009

	≤15 Years		16-20 Years		21-29 Years		≥30 Years		Total
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
Anchorage									
Alcohol DWI	4	0.2	271	11.3	833	34.9	1,282	53.6	2,390
Intoxicated	0	0.0	0	0.0	2	8.0	23	92.0	25
Refuse chemical test	0	0.0	2	13.3	6	40.0	7	46.7	15
Refuse Breathalyser test	0	0.0	1	4.0	11	44.0	13	52.0	25
Snow Machine intoxicated	0	0.0	0	0.0	1	100.0	0	0.0	1
Open alcohol	0	0.0	2	15.4	3	23.1	8	61.5	13
Other	269	0.6	10,850	23.2	11,480	24.5	24,197	51.7	46,796
Alaska (Excluding Anchorage)									
Alcohol DWI	13	0.6	327	16.2	601	29.8	1,079	53.4	2,020
Intoxicated	0	0.0	0	0.0	0	0.0	0	0.0	0
Refuse chemical test	0	0.0	1	3.0	12	36.4	20	60.6	33
Refuse Breathalyser test	0	0.0	8	12.1	13	19.7	45	68.2	66
Snow Machine intoxicated	0	0.0	1	50.0	1	50.0	0	0.0	2
Open alcohol	1	2.3	2	4.7	18	41.9	22	51.2	43
Other	275	1.3	6,232	30.0	4,544	21.9	9,724	46.8	20,775

Source: Alaska Court System, accessed March 2013

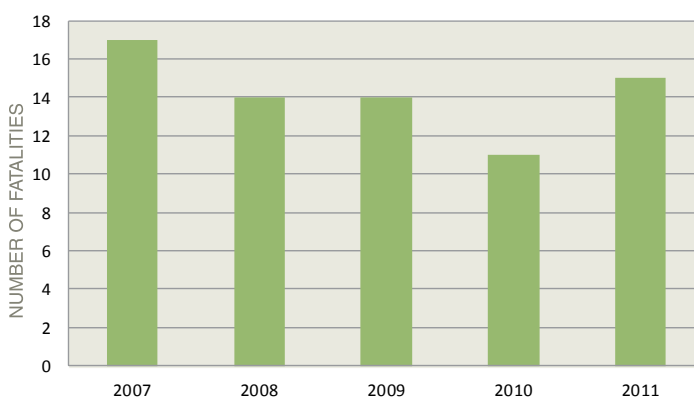


Drowning and Recreational Boating Fatality Databases

<http://dnr.alaska.gov/parks/boating/accidental>

Boating in Alaska can be a normal form of daily transportation between home and community. Working industries include commercial fishing, guiding services, and tourism. Boating is also a common recreational activity among 100+ communities on approximately 44,000 miles of coastal shoreline and numerous lakes, streams, and rivers. During 2007-2011, 71 recreational boating accidents with fatalities were documented (Chart 2.10).

Chart 2.10. Recreational Boating Fatalities, Alaska, 2007-2011



Source: Alaska Office of Boating Safety.

According to the United States Coast Guard, Boating Under the Influence (BUI) increased boat fatalities by approximately 34% each year in the United States. BUI is very similar to a Driving Under the Influence (DUI) offense. Law enforcement officials will look for erratic behavior while operating a boat and will ask the operator to perform a field sobriety test and to take a chemical test. The From 2007 to 2011, 155 recreational boating accidents with 71 fatalities occurred in Alaska, of which 17% of the accidents and one-third of the decedents were associated with known alcohol use (Chart 2.11 and 2.12). The number of incidents related to alcohol use declined between 2007 and 2010, of which no alcohol related incidents were identified in 2010. Of the 2007-2011 events, 20 of the 71 involved canoes.

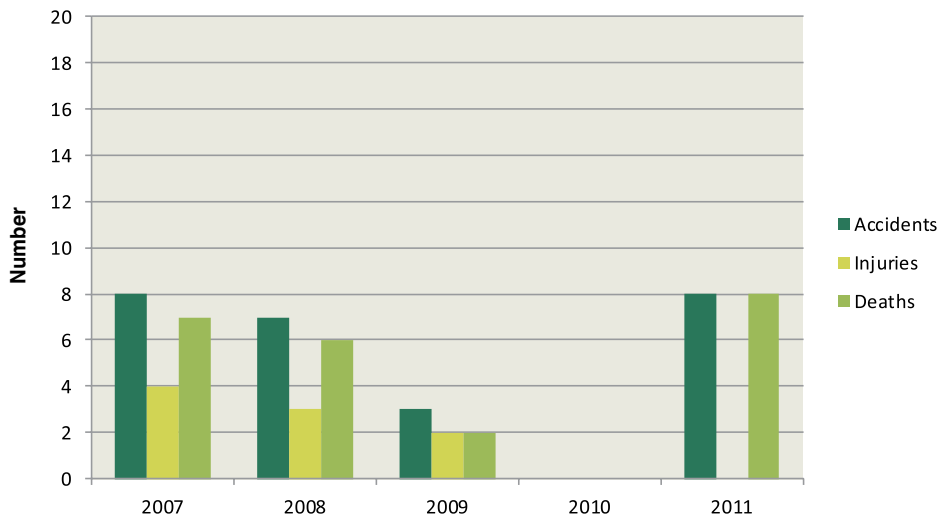


Chart 2.11. Recreational Boating Accidents, Fatal Accidents, and Deaths, Alaska, 2007-2011



Source: Boating Safety Resource Center http://www.uscgboating.org/statistics/accident_statistics.aspx

Chart 2.12. Recreational Boating Accidents, Injuries and Deaths Related to Alcohol Use, Alaska 2007-2011



Source: Boating Safety Resource Center http://www.uscgboating.org/statistics/accident_statistics.aspx



Problem Statement: Other Consequences Related to Substance Abuse and Dependency

According to the 2011 Annual Drug Report by Alaska Bureau of Alcohol and Drug Enforcement (ABADE), Alaska's current drugs of choice (excluding tobacco) were alcohol, cocaine, heroin, methamphetamine, marijuana, and pharmaceuticals. Areas of growing interest, as seen by law enforcement officials, are 1) methamphetamine use and manufacture and 2) pharmaceutical (hydrocodone and oxycontin/oxydocone) abuse and "club" drugs. Alcohol and drugs are leading co-contributors to violence, suicide, and injury-related deaths.

Data Analysis

Data on other consequences related to substance abuse and dependency were provided through the following data providers: YRBS, Alaska Bureau of Vital Statistics (BVS), Alaska Violent Death Reporting System (AKVDRS), Alaska Occupational Surveillance (OIS), Uniform Crime Report (UCR), Alaska Juvenile Justice, Alaska Bureau of Alcohol and Drug Enforcement (ABADE). This section contains tables and charts using the following notations for rates:

* *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.*

Youth Risk Behavior Survey (YRBS)

[Http://apps.nccd.cdc.gov/youthonline/](http://apps.nccd.cdc.gov/youthonline/)

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at: <http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/>

Substance use and teen sexual activity often co-occur (See Section 1 - Consumption). In 2009, CDC-National Center for Chronic Disease Prevention and Health Promotion reported that 46% of high school students reported having sexual intercourse, and 14% of high school students reported having four or more sexual partners. Results from the 2011 Alaska YRBS show that the percent of high school students reporting sexual activity was lower than national averages. Additionally, the percentage of Alaska high school students reporting not using a condom during sexual intercourse was higher than the national average when there were >100 responders. (Table 2.33).

**Table 2.33. Trends in Reported Youth Sexual Behavior, by Grade, Alaska YRBS**

		2007	2009	2011	U.S. 2011
9th Grade	% Ever Had Sexual Intercourse	26.6	26.2	22.4	47.4
	% Had Sex Before 13	6.0	7.0	4.2	8.8
	% Had Sex With ≥4 Partners	6.6	4.0	4.2	8.7
	% Currently Sexually Active	14.6	16.6	14.8	21.3
	Among Sexually Active, % Who Did Not Use a Condom During Last Sexual Intercourse	78.7	69.2	DSU	37.8
10th Grade	% Ever Had Sexual Intercourse	46.9	39.9	22.4	32.9
	% Had Sex Before 13	3.8	4.1	6.5	6.3
	% Had Sex With ≥4 Partners	13.8	10.0	5.7	12.3
	% Currently Sexually Active	34.2	23.6	20.4	30.3
	Among Sexually Active, % Who Did Not Use a Condom During Last Sexual Intercourse	69.6	62.3	DSU	36.7
11th Grade	% Ever Had Sexual Intercourse	48.3	52.9	47.2	43.8
	% Had Sex Before 13	3.7	4.8	3.7	4.9
	% Had Sex With ≥4 Partners	16.5	15.1	12.7	17.3
	% Currently Sexually Active	35.1	38.8	30.7	38.7
	Among Sexually Active, % Who Did Not Use a Condom During Last Sexual Intercourse	56.9	58.8	DSU	38.9
12th Grade	% Ever Had Sexual Intercourse	62.6	55.6	48.8	53.2
	% Had Sex Before 13	4.0	3.6	2.6	4.2
	% Had Sex With ≥4 Partners	18.1	17.3	16.3	24.1
	% Currently Sexually Active	42.0	43.0	35.7	47.5
	Among Sexually Active, % Who Did Not Use a Condom During Last Sexual Intercourse	48.8	63.7	DSU	43.7



Alaska Bureau of Vital Statistics

<http://dhss.alaska.gov/dph/VitalStats/Pages/data/defaultter>

Suicide is legally defined as the act of voluntarily and intentionally taking one's own life. Suicide is also closely associated with alcohol use, drug abuse, or both. Alaskans commit suicide at a much greater rate than all other states. Suicide was the fourth leading cause of death among Alaska Natives, where higher rates are found among Native males and in Northern and Southwest regions of Alaska (Table 2.34 and 2.35; Chart 2.13).

Table 2.34. Comparison of Violent Death Rates¹, Alaska and U.S., 2007-2011

	Alaska	U.S.
Homicides	5.2	5.3
Suicides	21.7	12.1

¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population.

Table 2.35. Suicide Deaths by Age, Gender, and Race, Alaska, 2007-2011

	Age Group 0-24		Age Group 25-64		Age Group 65+		Age Group All Ages	
	Deaths	Rate ¹	Deaths	Rate ¹	Deaths	Rate ¹	Deaths	Rate ¹
Female								
Asian/Pacific Islander	0	0.0	2	**	0	0.0	2	**
Black	2	**	3	**	0	0.0	5	**
American Indian / Alaska Native	26	18.8	28	20.8	1	**	55	18.2
White	11	2.7*	76	11.1	7	6.9*	94	7.3
All Races ²	39	6.2	109	11.8	8	6.0*	156	8.9
Male								
Asian/Pacific Islander	2	**	15	25.3*	0	0.0	17	14.6*
Black	6	14.5*	10	23.9*	0	0.0	16	16.6*
American Indian / Alaska Native	92	62.8	89	66.1	3	**	184	58.8
White	63	14.3	274	35.5	47	46.5	384	29.6
All Races ²	163	24.0	389	38.6	52	40.9	604	34
Total								
Asian/Pacific Islander	2	**	17	13.3*	0	0.0	19	7.6*
Black	8	10.2*	13	17.6*	0	0.0	21	12.7
American Indian / Alaska Native	118	41.4	117	43.5	4	**	239	38.7
White	74	8.8	350	24.0	54	26.7	478	18.6
All Races ²	202	15.5	498	25.8	60	22.9	760	21.7

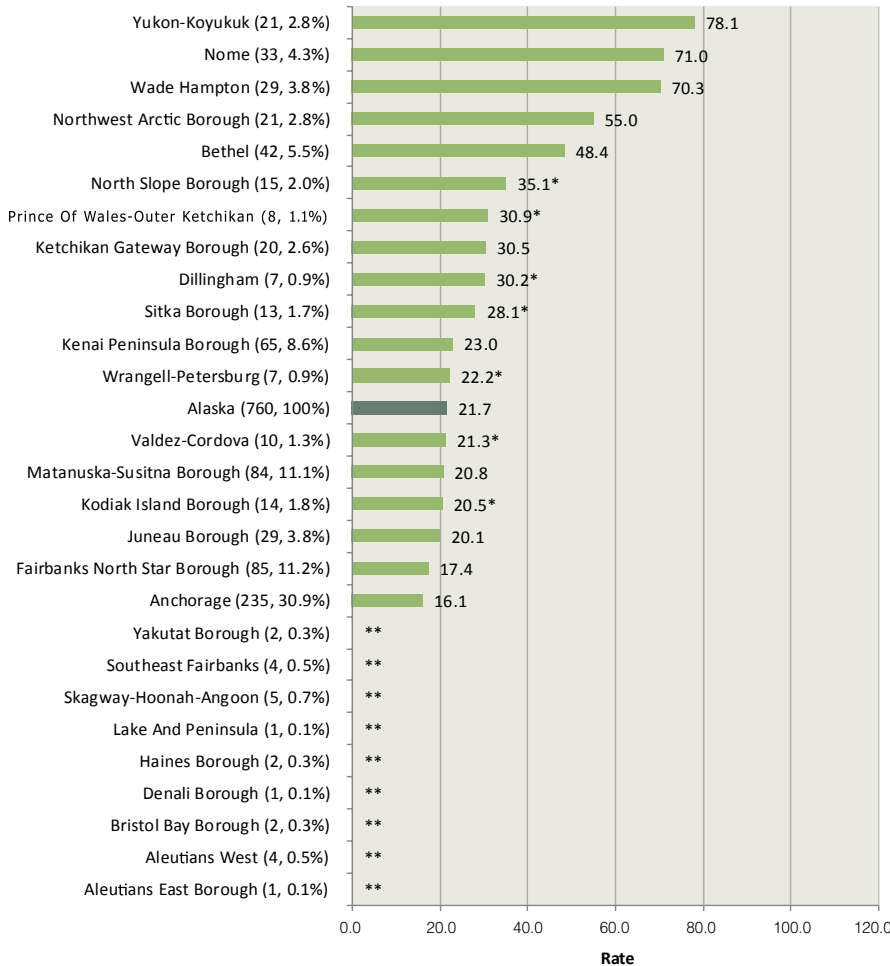
¹ Rates are per 100,000 population in age group; all ages rates are age-adjusted to the year 2000 US standard population.

² All Races includes decedents whose race is unknown.

Cause of Death: Suicide
ICD-10 Codes: U03, X60-X84, Y870



Chart 2.13. Suicide Deaths and Rates¹ by Borough/Census Area, Alaska, 2007-2011
Borough/Census Area (# of deaths, % of statewide total)



¹ Rates are per 100,000 population in age groups; all ages rates are age-adjusted to the year 2000 US standard population. Source: Alaska Bureau of Vital Statistics, February 2011.

Alaska Violent Death Reporting System (VDRS)

<http://www.epi.hss.state.ak.us/injury/akvdrs/>

Substance abuse is widely recognized as a major contributing factor to violent crimes, especially domestic, family, and intimate partner violence and sexual assault. The Alaska Violent Death Reporting System (VDRS) is a comprehensive, linked reporting system that collects and centralizes information on violent deaths from a variety of sources, including Bureau of Vital Statistics (death certificates), State Medical Examiner’s Office (autopsy report), and law enforcement agencies (investigation reports). The VDRS captures information such as treatment status, diagnoses and toxicology test results.

Definition of Violent Death:

- A death that results from the intentional use of physical force or power, threatened or actual, against oneself, another person, or group. Analysis of the 2007-2011 Alaska VDRS data indicated seven out ten victims



tested for alcohol and/or drug use (amphetamine, anti-depressants, cocaine, marijuana, opiates, or other drugs considered as evidence) were positive, suggesting that substance use contributed to pre-event circumstances (Table 2.36).

Table 2.36. Trends in Violent Death Associated with Substance Abuse, Alaska VDRS

Year	2007	2008	2009	2010	2011
Total Number of Victims Identified	236	278	246	260	217
Number of Victims Suspected of Alcohol Use	72	93	74	53	49
Number of Victims Tested for Alcohol and/or Drugs	134	204	195	116	89
Percent of Victims Tested for Alcohol and/or Drugs	56.8%	73.4%	79.3%	44.6%	41.0%
Number of Victims Positive for Alcohol and/or Drugs	96	154	151	98	74
Percent Positive for Alcohol and/or Drugs	71.6%	75.5%	77.4%	84.5%	83.1%

*Denominators based on number of tests performed for alcohol, drugs, or both alcohol and drugs.

Alaska Occupational Injury Surveillance (OIS)

[Http://www.epi.hss.state.ak.us/injury/occupation_injury/](http://www.epi.hss.state.ak.us/injury/occupation_injury/)

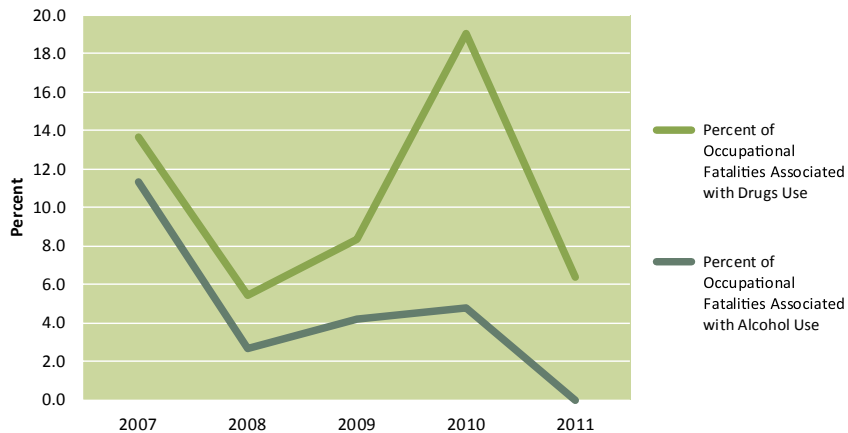
Definitions of associated alcohol and/or drug use prior to occupation-related death:

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

From 2007 to 2011, 5.5% of work-related deaths in Alaska were documented as suspected or proven alcohol and/or drug involvement that contributed to the event circumstances. Although both alcohol and drug involvement with these fatal events peaked in 2010, the overall trend of alcohol and drug involvement was declining. Information presented below were not mutually exclusive, including cases involving both alcohol and drug use (Chart 2.14).



Chart 2.14. Trends in Occupational Fatalities Associated with Alcohol and/or Drug Use, Alaska OIS



Alaska Uniform Crime Report (UCR)

[Http://www.dps.alaska.gov/Statewide/UCR.aspx](http://www.dps.alaska.gov/Statewide/UCR.aspx)

There is a strong association between substance use and crime. The effects dependency and abuse had on the user's behavior, generating violence and other illegal activity, is well documented. The Alaska UCR collects information from law enforcement agencies statewide, however not all agencies participate; approximately 99.3% of population served by these agencies were represented in the 2011 UCR. The crime index is composed of selected offenses used to gauge fluctuations in the overall volume and rate of crime reported to law enforcement. The crime rate compares the incidence of crime to the total reporting agency population. Reported crimes associated with substance abuse are based on crime index offenses that can be monitored over time. Illicit drugs (including prescription drugs) have been linked to the following crimes: homicide, assault, prescription fraud, home invasion thefts and pharmacy robberies. People who are addicted to prescription drugs facilitate their addition by 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 2010 to 2011, the overall crime rate in Alaska had declined. Of all the violent crimes, only aggravated assault was shown to continuously increase from 2007 through 2011, representing 77% of these crimes and 14% of the total crime index offenses. While homicide was the most severe violent offense, it represented <1% of violent crimes. The number of forcible rape, while variable year to year, had not significant changed. By UCR definition, male victims of forcible rape were not included. Of the property crimes, larceny-theft represented 78% of these crimes and 63% of total crime index offenses. The estimated property loss related to larceny/theft was \$8,434,135 in 2011. (Table 2.37; Chart 2.15 and 2.16).



Table 2.37. Fatalities Due to Alcohol-Related Motor Vehicle Crashes, Alaska FARS

	Population	Total Offenses	Violent Crimes	Aggravated Assault	Homicide	Burglary	Larceny-Theft	Forcible Rape	Robbery
Crime Index	1.8%	-5.2%	-2.9%	0.6%	-3.1%	-7.8%	-4.3%	-17.8%	-2.7%
Crime Rate		-6.8%	-4.5%	-2.3%	-4.6%	-9.4%	-6.0%	**	-4.4%

Note: Negative numbers relate to decrease in crime.

Chart 2.15 Trends in Violent Crime Associated with Substance Abuse, Alaska UCR

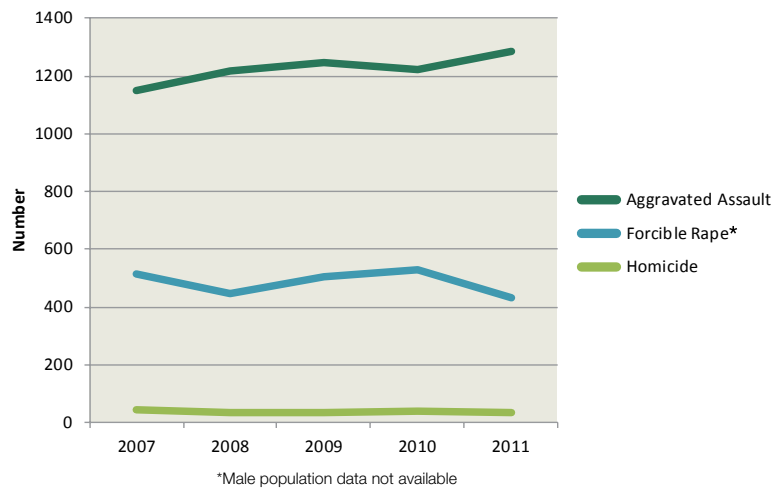
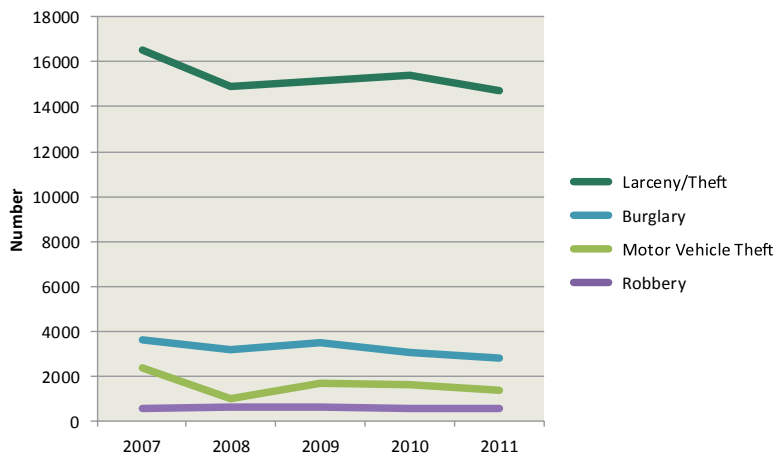


Chart 2.16 Trends in Property Crime Associated with Substance Abuse, Alaska UCR





In 2011, 352 juveniles (under 18 years of age) and 1,996 adults (18 years of age and older) were arrested in Alaska for drug offenses (sales, manufacture, and possession). Since 2007, the number of arrests for possession increased, indicating an overall upward trend. Half of these arrests were for drug possession; the most common offense was for marijuana possession. In 2011, the male to female ratio among adult offenders was about 3.5 to 1 for sales/manufacturing and possession (Chart 2.17, Table 2.38).

Chart 2.17. Trends in Drug Offenses, Adults–18 Years of Age and Older, Alaska UCR

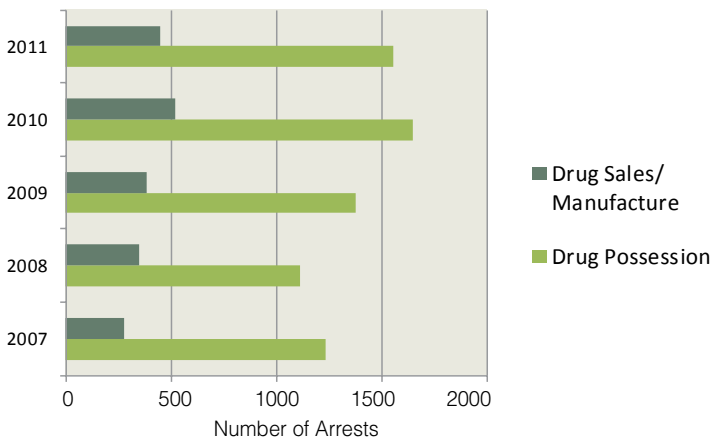
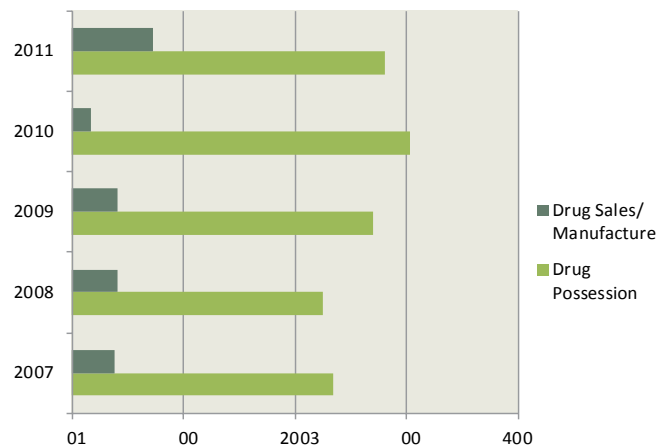


Table 2.38. Trends in Drug Arrest, Adults–18 Years of Age and Older, by Gender, Alaska UCR

Number of Arrests	2007	2008	2009	2010	2011	2007–2011
Sales/Manufacturing						
Females	62	89	109	151	96	507
Males	213	257	275	375	348	1,368
Possession						
Females	261	226	316	379	343	1,525
Males	970	862	1,062	1,266	1,209	5,369

Arrests for drug offenses among juveniles increased 29% from 272 in 2007 to 353 in 2011. The arrest pattern among juveniles was similar to those among adults. Nearly 90% of drug arrests were for drug possession in 2011, of which the most common offense was for marijuana possession (87%). In 2011, the number of arrests for drug sales /manufacturing increased 175% (from 8 arrests in 2007 to 22 arrests in 2011), and the ratio of males to females arrested for sales/ manufacturing was nearly 2 to 1. (Chart 2.18, Table 2.39).

**Chart 2.18. Trends in Drug Offenses, Youth–17 Years of Age and Under, Alaska UCR****Table 2.39. Trends in Drug Arrests, Youth–17 Years of Age and Under, by Gender, Alaska UCR**

	2007	2008	2009	2010	2011	2007–2011
Sales/Manufacturing						
Females	8	6	6	0	22	42
Males	30	35	38	17	50	170
Possession						
Females	57	53	71	68	56	305
Males	177	172	199	235	224	1,007

Juvenile Justice

<https://go.dhss.ak.local/pub/home/djj/>

Juvenile correction facilities and programs are under the jurisdiction of the Department of Juvenile Justice (DJJ) in the Department of Health and Social Services. The State operates eight juvenile facilities with probation offices throughout the state, directed through four regions. Most juveniles taken into custody were detained for only a short period of time, with cases usually not resulting in long-term confinement. A small number of cases eventually do lead to longer-term institutional treatment.

Definitions of delinquent and delinquency referral:

- A 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.
- A Referral was defined as a request by a law enforcement agency for a response from Alaska Division of Juvenile Justice (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.



Of the 2,664 juveniles referred (for all offenses), approximately 13% of the referrals were for drug and alcohol offenses, including misconduct involving a controlled substance; 835 (31%) were considered to be “under the influence” of one or more substance. This accounted for 1,110 of the 3,859 referrals during Fiscal Year 2012. Of those “under the influence” at referral, approximately 77% were male (Table 2.40-2.42).

Table 2.40. Substances Used by Referred Juveniles While “Under the Influence” Per Referral and Intake Data, Alaska DJJ

Substance Present/Suspected	# of times cited	% of instances
Alcohol	341	30.7%
Alcohol & Marijuana	1	0.1%
Amphetamines	23	2.1%
Cocaine	23	2.1%
Hashish	1	0.1%
Heroin	6	0.5%
Imitation Drug	1	0.1%
Inhalants	4	0.4%
Marijuana	583	52.5%
Marijuana & Other	1	0.1%
Methamphetamine	4	0.4%
Opiates	6	0.5%
Opiates & Prescription	2	0.2%
Other	6	0.5%
Over The Counter	12	1.1%
Prescription	18	1.6%
Synthetic cannabis	22	2.0%
Unknown	56	5.0%
Total Cited Substances	1,110	100.0%

Table 2.41. Drug and Alcohol Referrals for Juvenile Offenders, Alaska DJJ

	Alcohol and Drug (A&D) Referrals & Offenses for Juvenile Offenders, Alaska DJJ					
	Unduplicated Juveniles	Unduplicated A&D Referrals	Drug Offenses	Alcohol Offenses	Total A&D Offenses	Average # of A&D Offenses per juvenile
FY07	539	605	466	177	643	1.19
FY08	498	546	439	150	589	1.18
FY09	491	536	463	117	580	1.18
FY2010	476	510	464	87	551	1.16
FY2011	511	561	525	95	620	1.21
FY2012	451	483	482	67	549	1.22

**Table 2.42. Drug and Alcohol Referrals for Juvenile Offenders, by Gender, Alaska DJJ**

	FEMALE	MALE	TOTAL	% MALE of TOTAL
FY2007	193	412	605	68.1%
FY2008	166	380	546	69.6%
FY2009	164	372	536	69.4%
FY2010	128	382	510	74.9%
FY2011	166	395	561	70.4%
FY2012	109	374	483	77.4%

Alaska Bureau of Investigation Statewide Drug Enforcement Unit (SDEU)

Surveillance of methamphetamine problems in Alaska is conflicted. Reports of charges, arrests and drug labs seized 2005 through 2008 were variable but declining. However, quantities of methamphetamine seized in 2009 indicated a marked increase of its availability in Alaska. According to the SDEU (formerly the Alaska Bureau of Drug and Alcohol Enforcement (ABADE)), Anchorage, Mat-Su, and Kenai Peninsula have the most significant problems with clandestine labs that produce quantities for local sale. Ketchikan, Juneau, and other Southeast Alaska communities have larger quantities imported for distribution of select prescription pain and seizure medications. Oxycontin/Oxycondone also had marked increases. (Table 2.43; Chart 2.19 and 2.20).

[.http://www.dps.alaska.gov/AST/ABI/docs/SDEUreports/2005ABADEAnnualReport.pdf](http://www.dps.alaska.gov/AST/ABI/docs/SDEUreports/2005ABADEAnnualReport.pdf)

Table 2.43. Trends in Illicit Drug Related Arrests/Charges, Alaska SDEU

	2007	2008	2009	2010	2011
Cocaine Related Charges/Arrests	216	187	96	145	108
Cocaine Seized (kilos)	-1	-1	28.8	22.2	37.1
Heroin Related Charges/Arrests	-1	-1	64	82	118
Heroin Seized (Pounds)	-1	-1	3.3	4.6	6.4
Marijuana Related Charges/Arrests	1,108	852	1,011	1,040	1,211
Marijuana Seized (pounds)	145	253	258	316	261
Meth Related Charges/Arrests	144	138	163	185	194
Methamphetamine Seized (pounds)	4	3.8	45.7	4.5	6.2
Meth Labs Shut Down	11	12	9	11	8

-1 Data not available



Chart 2.19. Trends in Prescription Medication Seizures, by Dosage Unit, Alaska SDEU

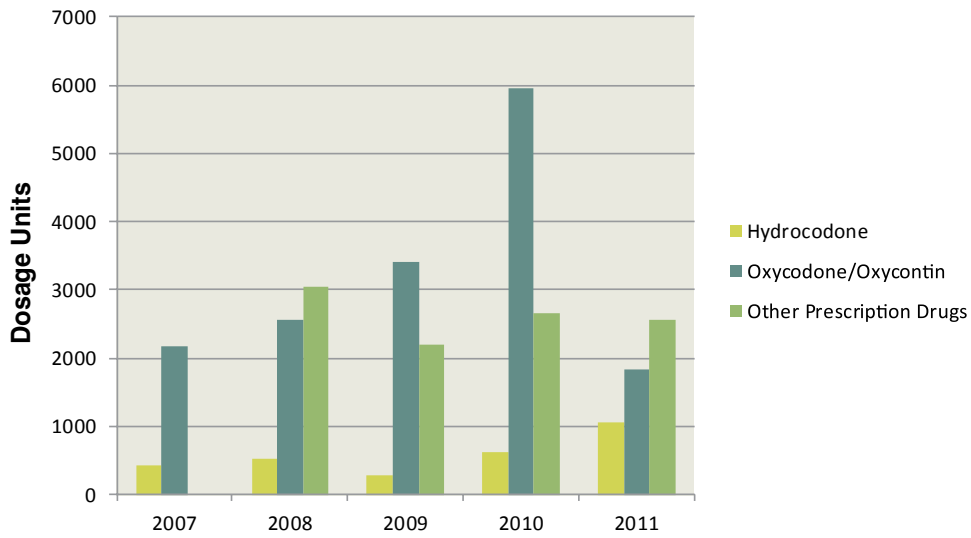
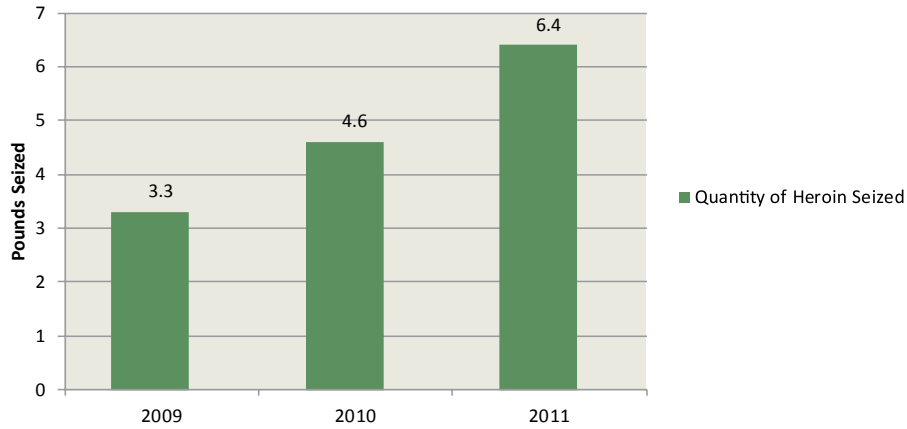


Chart 2.20. Trends in Heroin Seizures, Alaska SDEU



SECTION 3
INFLUENCES



Problem Statement: Influences

For more than fifty years extensive national research focusing on adolescence has demonstrated a strong association between specific social conditions, personal experiences and the use of tobacco, alcohol and other drugs. While most public health agencies monitor substance use (e.g., 30 day use, binge use, ever use) or the consequences of use (e.g., drinking and driving crashes, hospital visits, school suspensions), monitoring influences that impact substance use, such as protective factors and risk factors, will provide insight to factors that can be implemented to prevent initial substance use and subsequent abuse.

Data for this section is incomplete. Data collected at this time is not generalizable for Alaska as a whole. Until that is accomplished, this section will continue to be developed and updated as information becomes available.

Data Analysis

In 2006, a State Epidemiological Outcomes Workgroup (SEOW) Subcommittee was created to review and report on influences on substance use and abuse. The subcommittee was tasked to: 1) identify and prioritize the factors that impact substance use and abuse, and 2) identify existing and recommend new indicators to monitor over time.

The subcommittee began with the adolescent population while recognizing the significant need to look at younger and older populations as well. The risk and protective factor national research for adolescent substance use (and other risk behaviors) provided the working foundation. Additional factors were considered that had a strong research base of support. The priority factors were selected based on: 1) strength of the research; 2) relevance to Alaska; and 3) ability of a community /state partnerships to change that factor. To assure a comprehensive review, the subcommittee examined factors across the social domains (family, community, school, and individual). Through this process five protective factors and five risk factors were prioritized—

Protective Factors

1. Connected to Family
2. Connected to their Schools
3. Positive Connection to Other Adults
4. Engaged in Meaningful Activities
5. Social, Emotional and Employability Skills

Risk Factors

1. Experienced Child Abuse
2. Early Initiation of Substances
3. Suicide by a Family Member
4. Availability of Alcohol and Drugs
5. Community Norms and Laws Related to Alcohol and Drug Use

In addition, cultural identity or loss of culture was selected as a risk factor that has tremendous influence on one's sense of self and subsequent behavior. For this section, baseline data on elements pertaining to protective and risk factors were provided from the Youth Risk Behavior Survey (YRBS) and presented for both traditional and alternative schools. For more information on the definition for each factor along with other data included in the review, see Appendix H.

Youth Risk Behavior Survey (YRBS)

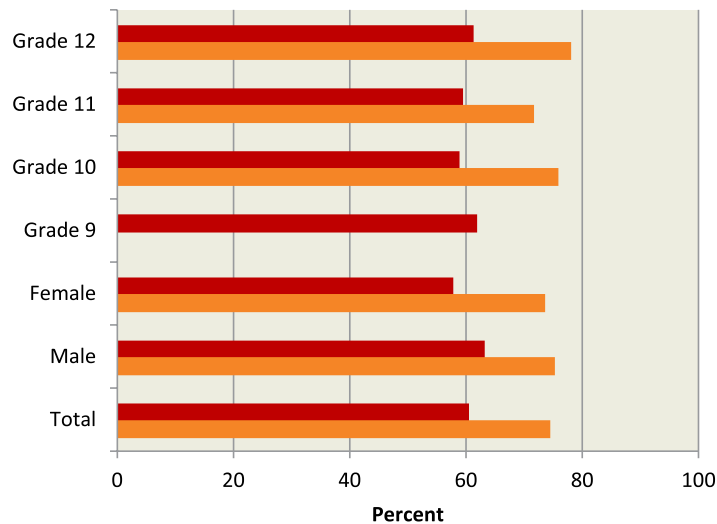
<http://apps.nccd.cdc.gov/youthonline/>

Alaska Center for Health Data and Statistics – Interactive maps and data files may be accessed at: <http://dhss.alaska.gov/dph/InfoCenter/Pages/ia/>

As stated previously, alternative schools serving at-risk students have been routinely excluded from traditional statewide YRBS surveys until 2009 when surveys of high school (HS) students in Alaska’s alternative schools were conducted for the first time. In 2011 students from alternative schools reported significantly higher rates for most of the following indicators when compared to their traditional school counterparts.

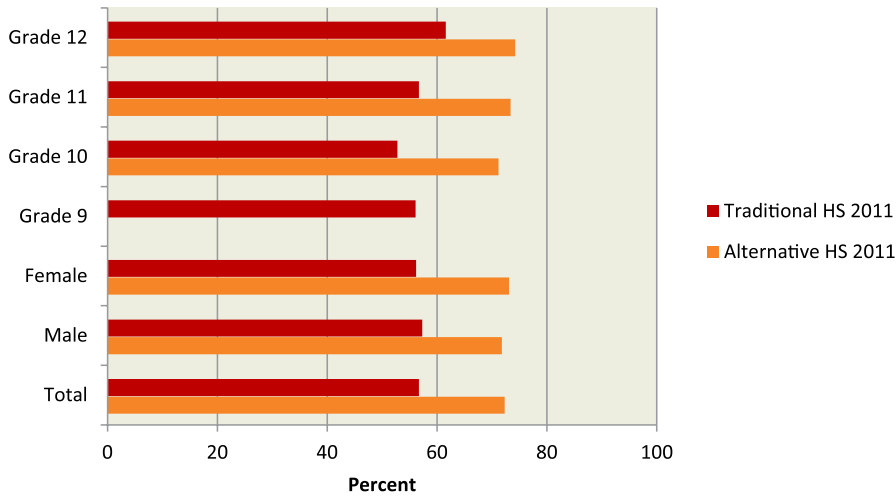
Both traditional and alternative school students feel they have communication with their parents about school and with their teachers. Over 70% of the alternative school student believe in both parental involvement and teachers caring. A low percentage of students in Alaska report that they have been threatened in school or afraid to go to school because of violence (Charts 3.1-3.5).

Chart 3.1. Percentage of students whose parent talks with them about what they are doing in school about once or twice a week or less, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011



Missing bars indicate less than 100 students in the subgroup.

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 Schools, Alaska YRBS, 2011



Missing bars indicate less than 100 students in the subgroup.

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 Schools, Alaska YRBS, 2011

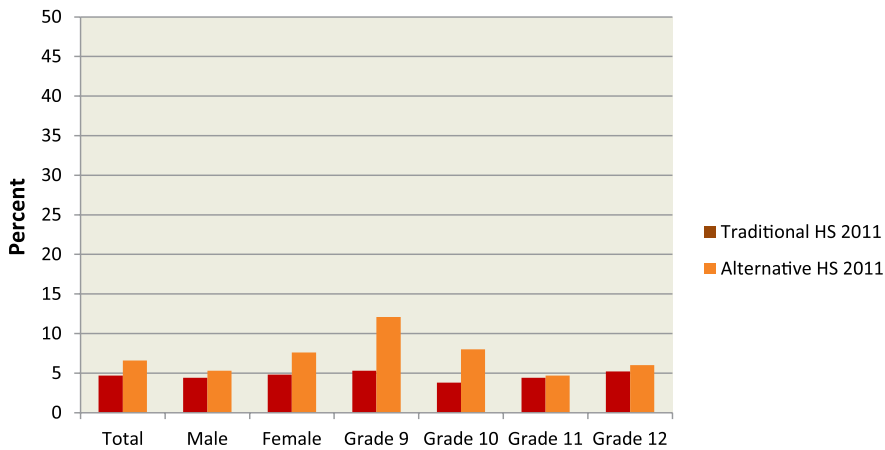


Chart 3.4. Percentage of students who had been threatened or injured with a weapon such as a gun, knife, or club on school property one or more times during the past 12 months, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011

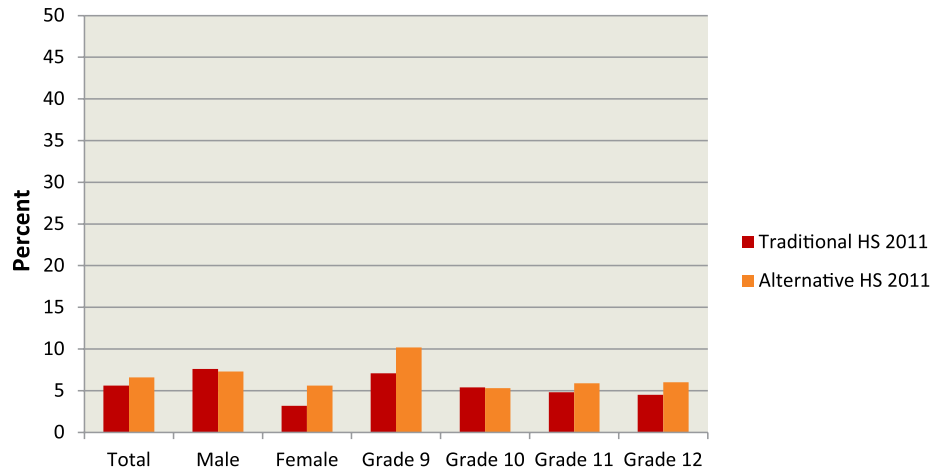
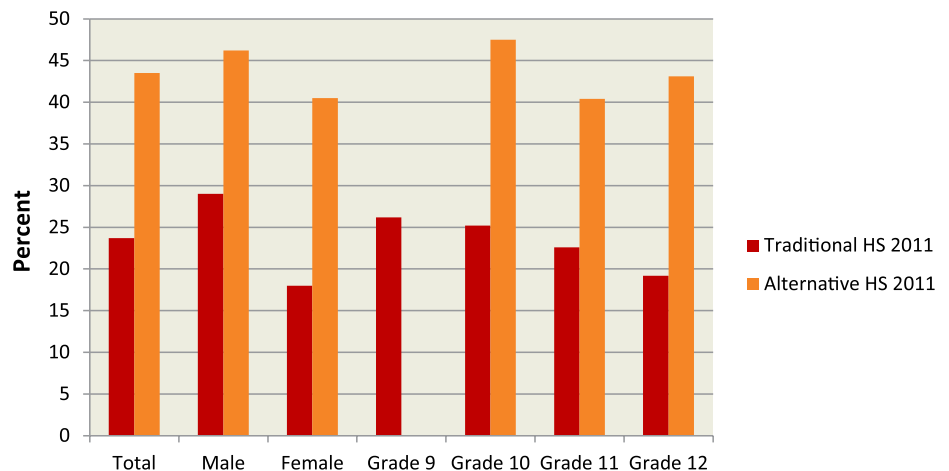


Chart 3.5. Percentage of students who were in a physical fight one or more times during the past 12 months, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011



Missing bars indicate less than 100 students in the subgroup.

Nearly 23% of females and 13% of males in alternative schools have reported being forced to have sex against their will compared to 11% and 7%, respectively, of their counterparts in traditional schools. Students in the alternative high schools also showed a higher incidence of considering suicide. Sexual violence and sexual activity before age 13 have been shown to lead to destructive behaviors including thoughts of self-harm (Charts 3.6-3.7).

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 Schools, Alaska YRBS, 2011

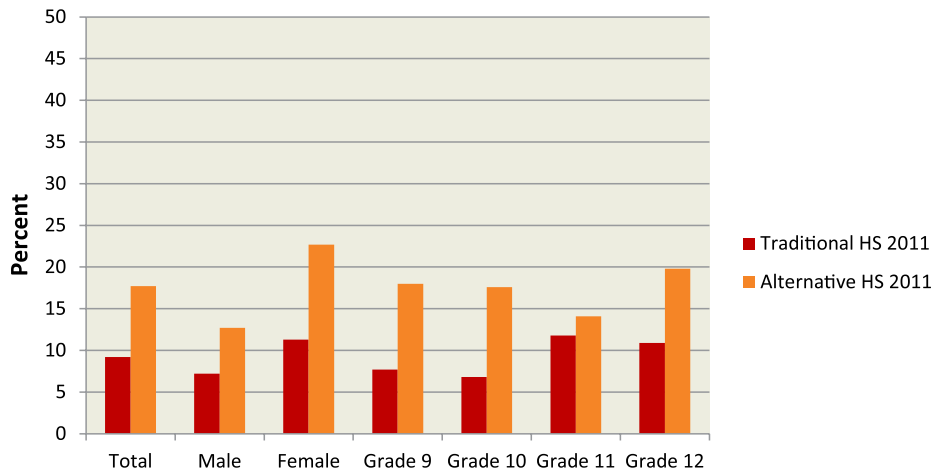
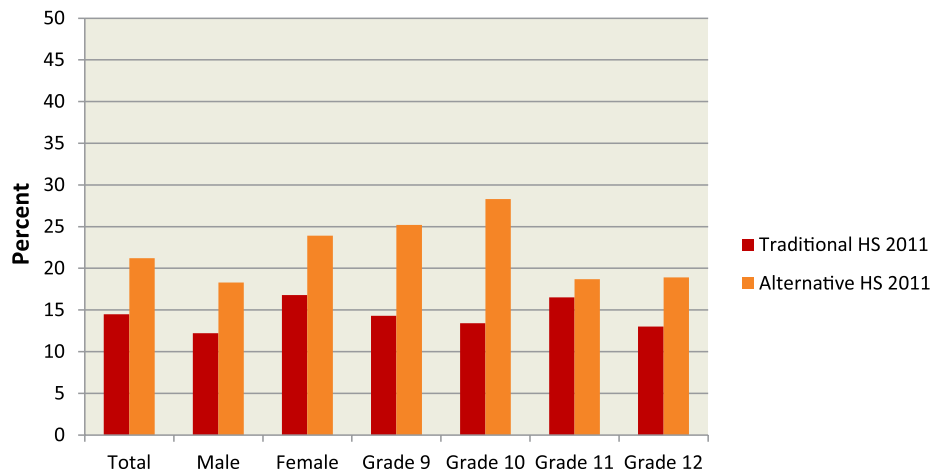
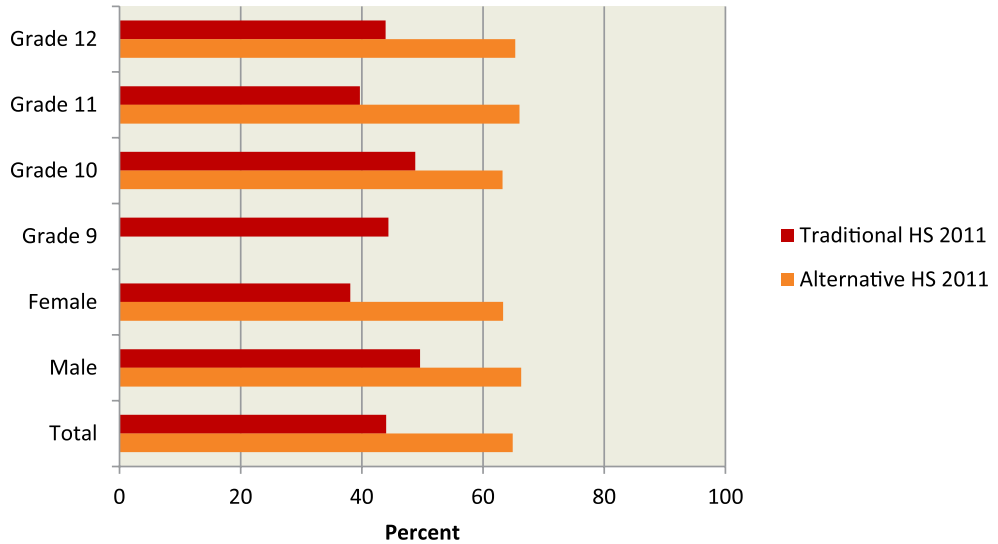


Chart 3.7. Percentage of students who seriously considered attempting suicide during the past 12 months, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011



A higher percentage of the alternative high school students were not involved in the community than the traditional high school students. Nearly 65% of the alternative high school students are not involved while 45% of the traditional high school students are not involved (Charts 3.8).

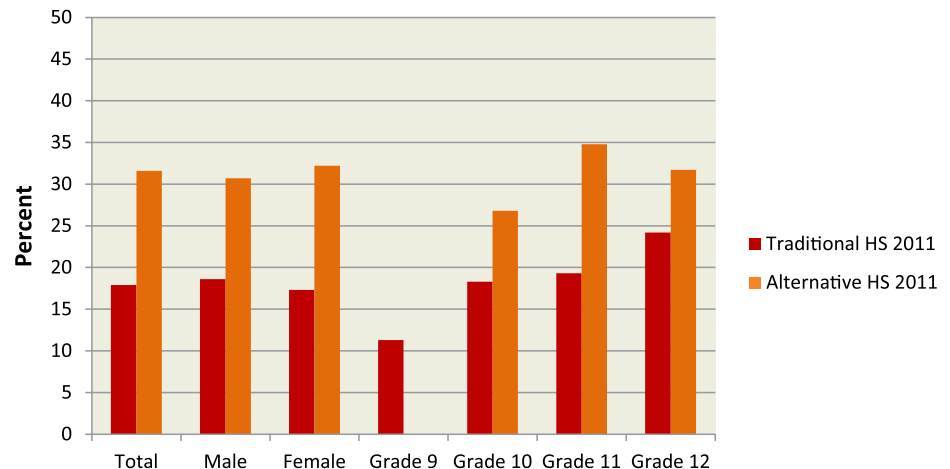
Chart 3.8. Percentage of students who take part in organized after school, evening, or weekend activities (such as school clubs; community center groups; music, art, or dance lessons; drama; church; or cultural or other supervised activities) on zero days during an average week, Comparing Traditional and Alternative Schools, Alaska YRBS, 2011



Missing bars indicate less than 100 students in the subgroup.

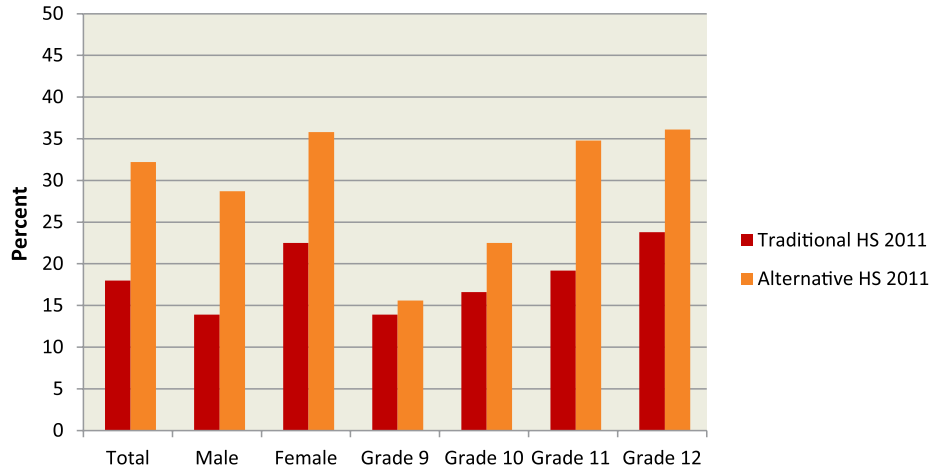
Over 30% of the alternative high school students feel their parents are not concerned with underage drinking while 20% traditional high school students agreed. Nearly one-third of the students in alternative high schools reported having someone buy liquor for them. As grade level increased, students both traditional and alternative schools reported that they are more likely to have someone else buy liquor for them (Charts 3.9-3.10). While the law prohibits the sale of alcohol to minors, there was a 14% failure rate for the alcohol sales licensees checked in 2011.

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 Schools, Alaska YRBS, 2011



Missing bars indicate less than 100 students in the subgroup. Chart 3.10. Percentage of students who usually got the alcohol they drank during

Chart 3.10. Percentage of students who usually got the alcohol they drank during the past 30 days from someone else 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 Schools, Alaska YRBS, 2011



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 manager 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 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 done routinely, 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 working 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.



APPENDICES



Appendix A: Alaska Epidemiological Outcomes Workgroup Membership

Deborah Hull-Jilly, SEW Chairperson

DHSS, Division of Public Health
Injury Epidemiologist
3601 C Street, Suite 540
Anchorage, AK 99503
Deborah.hull-jilly@alaska.gov
907/269-8078

Steven Arlow

Department of Public Safety
AST Commander, Western Alaska
4500 West 50th Ave.
Alaska State Troopers
Anchorage, AK 99502
Steven.arlow@alaska.gov
907/245-4527

Ambrosia Bowlus

DHSS, Division of Public Health
Alaska Trauma Registry Manager
3601 C Street, Suite 424
Anchorage, AK 99503
Ambrosia.bowlus@alaska.gov
907/334-4471

Randy Burton

DHSS, Division of Behavioral Health
Research Analyst II
P.O. Box 110620
Juneau, AK 99811-0620
Randalph.burton@alaska.gov
907/465-3320

Diane Casto

DHSS, Division of Behavioral Health
Program Manager
PO Box 110620
Juneau, AK 99811-0620
L.casto@alaska.gov

Jessica Craig, MPH

Alaska Native Epidemiology Center
Alaska Native Tribal Health Consortium
Epidemiologist
4000 Ambassador Drive
Anchorage, Alaska 99508
jcraig@anthc.org
907/729-4562

Bill Herman

Alaska Mental Health Trust Authority
Senior Trust Program Officer
3745 Community Park Loop, Suite 200
Anchorage, AK 99508
William.herman@alaska.gov
907/269-7962

Andrew Jessen

DHSS, Division of Public Health
Research Analyst
Bureau of Vital Statistics
Alaska Bureau of Vital Statistics
P.O. Box 110675
Juneau, AK 99811-0675
Andrew.jessen@alaska.gov
907/465-8604

Janet Johnston

University of Alaska Anchorage
Institute for Circumpolar Health Studies
Assistant Professor of Biostatistics
DPL 404, 3211 Providence Drive
Anchorage, AK 99508
Jmjohnston2@uaa.alaska.edu
907/786-6567

Devon Lewis (Staff)

DHSS, Division of Behavioral Health
SPF SIG Project Assistant
Prevention & Early Intervention Services
P.O. Box 110620
Juneau, AK 99811-0620
Devon.lewis@alaska.gov
907-465-8407



Susan McDonough

DHSS, Division of Juvenile Justice
 Research Analyst IV
 Division of Juvenile Justice
 P.O. Box 110635
 Juneau, AK 99811-0635
Susan.mcdonough@alaska.gov
 907/465-3863

Romy Mohelsky

Alaska Native Tribal Health Consortium
 Division of community Health Services
 Epidemiologist
 3900 Ambassador Drive, Suite 401
 Anchorage, Alaska 99508
rmohelsky@anthc.org
 907/729-3295

Michael Powell

DHSS, Division of Behavior Health
 Health Program Manager
 ASAP Program
 303 K Street
 Anchorage, AK 99501
Michael.powell@alaska.gov
 907/264-0721

Alice Rarig

DHSS, Division of Public Health
 Planner IV
 Health Care Services
 P.O. Box 110650
 Juneau, AK 99811-0650
Alice.rarig@alaska.gov
 907/465-1285

Jim Sellers

Alaska Action Research Committee
 Chairman
 4111 Minnesota Drive
 Anchorage, AK 99503
jsellers@akeela.org
 907/565-1233

Jesse Metzger

UAA, Behavioral Health Research & Services
 Center
 Research Assistant
 P.O. Box 241626
 Anchorage, AK 99524-1626
afjms1@uaa.alaska.edu
 907/561-2880

Laurie Orell

McDowell Group
 Project Manager
 1400 W. Benson Blvd., Suite 350
 Anchorage, Alaska 99503
laurieo@mcdowellgroup.net
 907/274-3202

Ellen Provost

Alaska Native Tribal Epidemiological
 Center
 Director
 4000 Ambassador Drive
 Anchorage, AK 99508
emprovost@anthc.org
 907/729-4567

Marny Rivera, Ph.D

UAA Justice Center
 Assistant Professor
 3211 Providence Drive
 Anchorage, AK 99508
Afmsr1@uaa.alaska.edu
 907/786-1126

Patrick Sidmore

Alaska Mental Health Board
 Advisory Board on Alcoholism & Drug Abuse
 Research Analyst
 431 N. Franklin, Suite 201
 Juneau, AK 99801
Pat.sidmore@alaska.gov
 907/465-3072

Jodi Trojan

TCC Tribal SPF SIG
Tribal SPF Evaluator
Tanana Chiefs Conference
122 First Ave., Suite 600
Fairbanks, AK 99701
Jodi.trojan@tananachiefs.org
907/451-6822

Bonnie Walters

Department of Transportation
Transportation Planner I
3132 Channel Dr., MS-2500
Juneau, AK 99801
bonnie.walters@alaska.gov
907/465-6996

Charles Utermohle

DHSS, Division of Public Health
Public Health Specialist II
3601 C Street, Suite 720
Anchorage, AK 99503
Charles.uter Mohle@alaska.gov
907/269-8030

Margaret Young

DHSS, Division of Public Health
Public Health Specialist
3601 C Street, Suite 358
Anchorage, AK 99503
Margaret.young@alaska.gov
907/269-5657

B

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

Percent of youth lifetime alcohol use
 Percent reporting 30-Day alcohol use
 Percent of youth first alcohol before age 13
 Percent of youth alcohol on school property
 Percent of youth age of first use of alcohol
 Percent reporting binge alcohol use
 Percent of youth alcohol or drug use before last sexual intercourse
 Percent reporting alcohol dependency or abuse
 Percent reporting need of alcohol treatment during the past year
 Percent of adults reporting heavy alcohol use
 Percent of adults reporting “too much to drink” before driving
 Percent of youth alcohol use during pregnancy
 Percent of youth alcohol use before pregnancy
 Percent of adults reporting daily alcohol use by an adult
 Number of case sales
 Per capita consumption of all beverages
 Per capita consumption of ethanol
 Number of communities with alcohol restrictions
 Number of alcohol distribution centers
 Number of sales of alcohol to minors
 Quantity of alcohol transported to rural Alaska
 Seized amounts of alcohol illegally transported/sold (bootlegged)

SOURCE

YRBS
 YRBS BRFSS NSDUH
 YRBS
 YRBS
 YRBS
 YRBS BRFSS NSDUH
 YRBS
 NSDUH
 NSDUH
 BRFSS
 BRFSS
 PRAMS BVS
 PRAMS
 BRFSS
 DOR
 AEDS
 AEDS
 AEDS
 AEDS
 Alcohol Board
 DOR
 DO Public Safety

ILLICIT DRUG CONSUMPTION INDICATORS

Percent of youth reporting lifetime cocaine use
 Percent of youth reporting lifetime inhalant use
 Percent reporting 30-day marijuana use
 Percent of youth reporting marijuana before age 13
 Percent of youth reporting lifetime heroin use

SOURCE

YRBS
 YRBS
 YRBS NSDUH
 YRBS
 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 30-day any illicit drug use other than marijuana	NSDUH
Percent reporting drug dependency or abuse	NSDUH
Percent reporting need drug treatment in the past year	NSDUH
Percent reporting lifetime injecting drugs for adults	NSDUH
Percent of youth reporting lifetime marijuana use	YRBS
Percent reporting marijuana use during pregnancy	PRAMS
Daily drug use for Alaska	
Driving under the influence of illicit drugs	
Drug related personnel actions	
Percent reporting 30-Day inhalant use	

TOBACCO CONSUMPTION INDICATORS

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 of youth reporting prescription Use	YRBS
Percent reporting lifetime cigarette use	BRFSS
Percent reporting 30-Day tobacco use	NSDUH
Percent reporting cigarette use during pregnancy	PRAMS BVS
Percent reporting cigarette use before pregnancy	PRAMS
Number of cigarette sales per capita	SETD
Number of sales of smokeless tobacco	
Number of sales of nicotine replacement products	
Percent reporting greater than 100 cigarettes smoked	
Adult Tobacco Survey (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	
Public Health	
Traditional Vs Alternative Schools	
Percentage of Youth Reporting Lifetime Use of Alcohol	YRBS
Percentage of Youth Reporting Alcohol Use Before Age 13	YRBS
Percent of Youth Reporting Current Alcohol Use	YRBS
Percent of Youth Reporting Current Binge Drinking	YRBS
Percentage of Students Who Used Chewing Tobacco, snuff or Dip on One or More of the Past 30 Days	YRBS
Percentage of Students Who Smoked a Whole Cigarette for the First Time Before Age 13 Years	YRBS
Percentage of Students Who Smoked Cigarettes on 20 or More of the	

SOURCE

Past 30 Days	YRBS
Percent of Youth Reporting Lifetime Marijuana Use	YRBS
Percent of Youth Reporting Marijuana Use Before Age 13	YRBS
Percent of Youth Reporting Current Marijuana Use	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 Cocaine Use	YRBS
Percent of Youth Reporting Current Cocaine Use	YRBS
Percentage of students who were offered, sold, or given an illegal drug by someone on school property during the past 12 months	YRBS
Percentage of students who used marijuana on school property one or more times during the past 30 days	YRBS

CONSEQUENCE INDICATORS

	SOURCE
Number/rate per 100,000 of alcohol induced deaths	BVS
Number/rate per 100,000 of chronic liver disease / cirrhosis deaths	BVS
Number/rate per 100,000 of vehicle and traffic deaths	BVS
Number/rate per 100,000 of deaths due to motor vehicle crashes among children aged 14 and younger	BVS
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	BVS
Number/rate per 100,000 of intentional injury death (homicide, suicide)	BVS
Number/rate of infant death (under 1 year of age) per 1,000 live births	BVS
Number/rate per 100,000 of homicide deaths	BVS
Number/rate per 100,000 of suicide deaths	BVS
Number/rate per 100,000 of undetermined deaths	BVS
Number/rate per 100,000 of smoking attributable death	BVS
Number/rate per 100,000 of lung cancer deaths	BVS
Number/rate per 100,000 of chronic lower respiratory diseases	BVS
Number/rate per 100,000 of cardiovascular deaths	BVS
Number/rate per 100,000 of drugs Induced death	BVS
Number/rate per 100,000 of viral hepatitis death	BVS
Number/rate per 100,000 of HIV deaths	BVS
Number/rate per 100,000 of malnutrition deaths	BVS
Number/rate per 100,000 of accidental firearm deaths	BVS
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
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

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Number/rate per 100,000 of deaths caused by motor vehicle accidents (inc. pedestrians)	FARS
Percent of alcohol involved drivers in fatal crashes	FARS
Number/percentage of injury crashes that are alcohol-related	DOT
Number/percentage of non-fatal injuries that are alcohol-related	DOT
Percentage of property damage that is alcohol-related	DOT
Number of non-fatal injuries caused by motor vehicle crashes	DOT
Number of DUI arrests	UCR
Number of state/municipal/community liquor laws	UCR
Number of arrests for drunkenness	UCR
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 2,500 g.	BVS
Percent of singleton births weighing less than 2,500 g.	BVS
Percent of births weighing less than 1,500 g.	BVS
Percent of singleton births weighting less than 1,500 g.	BVS
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 100,001	HIV
Number of alcoholic psychoses diagnoses	HDD
Number of alcoholic dependence diagnoses	HDD
Number of alcohol related injuries	HDD,ED
Number of illicit drug related psychosis diagnoses	HDD,ED
Number of illicit drug related dependence diagnoses	HDD,ED
Number of illicit drug related injuries in ER populations	ED
Number of FASD - Alaska Birth Defects Registry	ABDR
Number of alcohol related arrests and seizures	ABADE
Number of controlled substance arrests/charges - cocaine	ABADE
Number of controlled substance seizures/purchases - cocaine	ABADE
Number of controlled substance arrests/charges - marijuana	ABADE
Number of controlled substance seizures/purchases - marijuana	ABADE
Number of controlled substance arrests/charges - methamphetamine	ABADE
Number of controlled substance seizures/purchases - methamphetamine	ABADE
Number of controlled substance seizures/purchases - clandestine labs	ABADE
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 murder, manslaughter reported	UCR
Number of domestic violence incidents reported	UCR
Number of domestic violence arrests	UCR
Number of drug violations arrests	UCR
Number of controlled substance seizures/purchase - crack cocaine	UCR
Number of AST cocaine seizures	UCR
Number of AST cocaine cases	UCR
Number of controlled substance seizures/purchase - hashish	UCR
Number of controlled substance seizures/purchase - sinsemilla plants	UCR
Number of controlled substance seizures/purchase - marijuana plants	UCR
Number of controlled substance seizures/purchase - ditchweed/wild plants	UCR
Number of AST marijuana seizure	UCR
Number of AST marijuana cases	UCR
Number of AST hashish seizure	UCR
Number of AST hashish cases	UCR
Number of AST methamphetamine seizure	UCR
Number of AST methamphetamine cases	UCR
Number of AST clandestine labs seizures	ASB
Number of Alaska K12 alcohol related expulsions	ASB
Number of Alaska K12 alcohol related suspensions	ASB
Number of Alaska K12 drug related expulsions	ASB
Number of Alaska K12 drug related suspensions	DPS
Number of meth clandestine labs seizures	DPS
Number of federal drug seizures - labs – DEA, State, local	ABADE
Number of treatment facilities in Alaska	AK AIMS
Number of treatment beds funded by Alaska	AK AIMS
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
Number of 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

OTHER CONSUMPTION OR CONSEQUENCE ASSOCIATED INDICATORS SOURCE

Number/rate per 100,000 of ten leading causes of mortality in AK	BVS
Number/rate per 100,000 of all death in Alaska	BVS
Number/rate per 100,000 of child deaths (under 18 years of age)	BVS
Number of adoptions of children with public child welfare agency involvement	BVS
Number/rate of teen births 18-19:	BVS

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Number/rate of teen births 15-19:	BVS
Number/rate of teen births 15-17:	KC, BVS
Neonatal mortality rate per 1,000 live births	BVS, WCFH
Post-neonatal mortality rate per 1,000 live births	BVS, WCFH
Perinatal mortality rate per 1,000 live births plus fetal deaths	BVS, 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
Percentage of students who had sexual intercourse	YRBS
Percentage of students who had sexual intercourse before age 13	YRBS
Percentage of students who had sexual intercourse with four or more people during their life	YRBS
Percentage of students who had sexual intercourse with one or more people during the last three months	YRBS
Of students who had sexual intercourse, the percentage who used a condom pills during last sexual intercourse	YRBS
Of students who had sexual intercourse, the percentage who used birth control pills during last sexual intercourse	YRBS
Percentage of students who received grades mostly of D's and F's during the past 12 months	YRBS
Percentage 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 251) 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
Percentage of high school dropouts	ASB

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 persons discharged from hospital ER for alcohol related injuries (as per ICD-10 codes) per 100,000 population
 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
2000-01	632,716	4,370	0.69	9,980	2,934	7,046	-2,676
2001-02	641,729	9,013	1.41	9,892	3,075	6,817	2,196
2002-03	649,466	7,737	1.20	10,025	3,107	6,918	819
2003-04	659,653	10,187	1.56	10,299	3,060	7,239	2,948
2004-05	667,146	7,493	1.13	10,368	3,167	7,201	292
2005-06	674,583	7,437	1.11	10,656	3,163	7,493	-56
2006-07	680,169	5,586	0.82	11,065	3,456	7,609	-2,023
2007-08	686,818	6,649	0.97	11,283	3,523	7,760	-1,111
2008-09	697,828	11,010	1.59	11,504	3,503	8,001	3,009
2009-10	714,146	16,318	2.31	11,192	3,538	7,654	8,664
2010-11	722,190	8,044	1.12	11,658	3,728	7,930	114

Source: Alaska Department of labor and Workforce Development, Research and Analysis Section. <http://labor.alaska.gov/research/pop/estimates/pub/popover.pdf>

Table 2. Profile of General Population and Housing Characteristics, 2010

SEX AND AGE		
Total population	710,231	100.0
Under 5 years	53,996	7.6
5 to 9 years	50,887	7.2
10 to 14 years	50,816	7.2
15 to 19 years	52,141	7.3
20 to 24 years	54,419	7.7
25 to 29 years	55,419	7.8
30 to 34 years	47,706	6.7
35 to 39 years	45,833	6.5
40 to 44 years	47,141	6.6
45 to 49 years	54,726	7.7
50 to 54 years	56,300	7.9
55 to 59 years	49,971	7.0
60 to 64 years	35,938	5.1
65 to 69 years	22,202	3.1
70 to 74 years	13,148	1.9



75 to 79 years	8,892	1.3
80 to 84 years	5,985	0.8
85 years and over	4,711	0.7
Median age (years)	33.8	(X)
16 years and over	544,208	76.6
18 years and over	522,853	73.6
21 years and over	491,763	69.2
62 years and over	74,405	10.5
65 years and over	54,938	7.7
Male population	369,628	52.0
Under 5 years	27,896	3.9
5 to 9 years	26,038	3.7
10 to 14 years	26,147	3.7
15 to 19 years	27,179	3.8
20 to 24 years	29,706	4.2
25 to 29 years	29,307	4.1
30 to 34 years	24,861	3.5
35 to 39 years	23,731	3.3
40 to 44 years	24,646	3.5
45 to 49 years	28,398	4.0
50 to 54 years	29,288	4.1
55 to 59 years	26,394	3.7
60 to 64 years	19,231	2.7
65 to 69 years	11,714	1.6
70 to 74 years	6,662	0.9
75 to 79 years	4,150	0.6
80 to 84 years	2,620	0.4
85 years and over	1,660	0.2
Median age (years)	33.6	(X)
16 years and over	284,293	40.0
18 years and over	273,222	38.5
21 years and over	256,540	36.1
62 years and over	37,153	5.2
65 years and over	26,806	3.8
Female population	340,603	48.0
Under 5 years	26,100	3.7
5 to 9 years	24,849	3.5
10 to 14 years	24,669	3.5
15 to 19 years	24,962	3.5
20 to 24 years	24,713	3.5
25 to 29 years	26,112	3.7

30 to 34 years	22,845	3.2
35 to 39 years	22,102	3.1
40 to 44 years	22,495	3.2
45 to 49 years	26,328	3.7
50 to 54 years	27,012	3.8
55 to 59 years	23,577	3.3
60 to 64 years	16,707	2.4
65 to 69 years	10,488	1.5
70 to 74 years	6,486	0.9
75 to 79 years	4,742	0.7
80 to 84 years	3,365	0.5
85 years and over	3,051	0.4
Median age (years)	34.1	(X)
16 years and over	259,915	36.6
18 years and over	249,631	35.1
21 years and over	235,223	33.1
62 years and over	37,252	5.2
65 years and over	28,132	4.0

RACE

Total population	710,231	100.0
One Race	658,356	92.7
White	473,576	66.7
Black or African American	23,263	3.3
American Indian and Alaska Native	104,871	14.8
Asian	38,135	5.4
Asian Indian	1,218	0.2
Chinese	2,061	0.3
Filipino	19,394	2.7
Japanese	1,476	0.2
Korean	4,684	0.7
Vietnamese	960	0.1
Other Asian [1]	8,342	1.2
Native Hawaiian and Other Pacific Islander	7,409	1.0
Native Hawaiian	949	0.1
Guamanian or Chamorro	380	0.1
Samoan	4,663	0.7
Other Pacific Islander [2]	1,417	0.2
Some Other Race	11,102	1.6
Two or More Races	51,875	7.3
White; American Indian and Alaska Native [3]	26,127	3.7
White; Asian [3]	6,915	1.0
White; Black or African American [3]	4,685	0.7
White; Some Other Race [3]	2,211	0.3

Race alone or in combination with one or more other races: [4]

White	518,949	73.1
Black or African American	33,150	4.7
American Indian and Alaska Native	138,312	19.5
Asian	50,402	7.1
Native Hawaiian and Other Pacific Islander	11,154	1.6
Some Other Race	15,183	2.1

HISPANIC OR LATINO

Total population	710,231	100.0
Hispanic or Latino (of any race)	39,249	5.5
Mexican	21,642	3.0
Puerto Rican	4,502	0.6
Cuban	927	0.1
Other Hispanic or Latino [5]	12,178	1.7
Not Hispanic or Latino	670,982	94.5

HISPANIC OR LATINO AND RACE

Total population	710,231	100.0
Hispanic or Latino	39,249	5.5
White alone	18,256	2.6
Black or African American alone	1,314	0.2
American Indian and Alaska Native alone	2,315	0.3
Asian alone	676	0.1
Native Hawaiian and Other Pacific Islander alone	190	0.0
Some Other Race alone	9,991	1.4
Two or More Races	6,507	0.9
Not Hispanic or Latino	670,982	94.5
White alone	455,320	64.1
Black or African American alone	21,949	3.1
American Indian and Alaska Native alone	102,556	14.4
Asian alone	37,459	5.3
Native Hawaiian and Other Pacific Islander alone	7,219	1.0
Some Other Race alone	1,111	0.2
Two or More Races	45,368	6.4

RELATIONSHIP

Total population	710,231	100.0
In households	683,879	96.3
Householder	258,058	36.3
Spouse [6]	127,558	18.0
Child	211,837	29.8
Own child under 18 years	165,810	23.3
Other relatives	37,717	5.3
Under 18 years	16,189	2.3
65 years and over	4,181	0.6
Nonrelatives	48,709	6.9

Under 18 years	4,040	0.6
65 years and over	1,675	0.2
Unmarried partner	22,087	3.1
In group quarters	26,352	3.7
Institutionalized population	6,458	0.9
Male	4,626	0.7
Female	1,832	0.3
Noninstitutionalized population	19,894	2.8
Male	15,427	2.2
Female	4,467	0.6
HOUSEHOLDS BY TYPE		
Total households	258,058	100.0
Family households (families) [7]	170,750	66.2
With own children under 18 years	85,121	33.0
Husband-wife family	127,558	49.4
With own children under 18 years	58,487	22.7
Male householder, no wife present	15,455	6.0
With own children under 18 years	9,057	3.5
Female householder, no husband present	27,737	10.7
With own children under 18 years	17,577	6.8
Nonfamily households [7]	87,308	33.8
Householder living alone	66,073	25.6
Male	37,714	14.6
65 years and over	5,710	2.2
Female	28,359	11.0
65 years and over	8,281	3.2
Households with individuals under 18 years	93,873	36.4
Households with individuals 65 years and over	41,303	16.0
Average household size	2.65	(X)
Average family size [7]	3.21	(X)
HOUSING OCCUPANCY		
Total housing units	306,967	100.0
Occupied housing units	258,058	84.1
Vacant housing units	48,909	15.9
For rent	6,729	2.2
Rented, not occupied	667	0.2
For sale only	2,876	0.9
Sold, not occupied	1,006	0.3

For seasonal, recreational, or occasional use	27,901	9.1
All other vacants	9,730	3.2
Homeowner vacancy rate (percent) [8]	1.7 (X)	
Rental vacancy rate (percent) [9]	6.6 (X)	
HOUSING TENURE		
Occupied housing units	258,058	100.0
Owner-occupied housing units	162,765	63.1
Population in owner-occupied housing units	448,438	(X)
Average household size of owner-occupied units	2.76	(X)
Renter-occupied housing units	95,293	36.9
Population in renter-occupied housing units	235,441	(X)
Average household size of renter-occupied units	2.47	(X)

Source: U.S. Census Bureau and the Alaska Department of labor and Workforce Development, Research and Analysis Section. <http://quickfacts.census.gov/qfd/states/020001k.html>

X Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] One of the four most commonly reported multiple-race combinations nationwide in Census 2000.

[4] In combination with one or more of the other races listed. The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race.

[5] This category is composed of people whose origins are from the Dominican Republic, Spain, and Spanish-speaking Central or South American countries. It also includes general origin responses such as "Latino" or "Hispanic."

[6] "Spouse" represents spouse of the householder. It does not reflect all spouses in a household. Responses of "same-sex spouse" were edited during processing to "unmarried partner."

[7] "Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couple households are included in the family households category if there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. "Nonfamily households" consist of people living alone and households which do not have any members related to the householder.

[8] The homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale." It is computed by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied; and then multiplying by 100.

[9] The rental vacancy rate is the proportion of the rental inventory that is vacant "for rent." It is computed by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied; and then multiplying by 100.

Source: U.S. Census Bureau, 2010 Census.

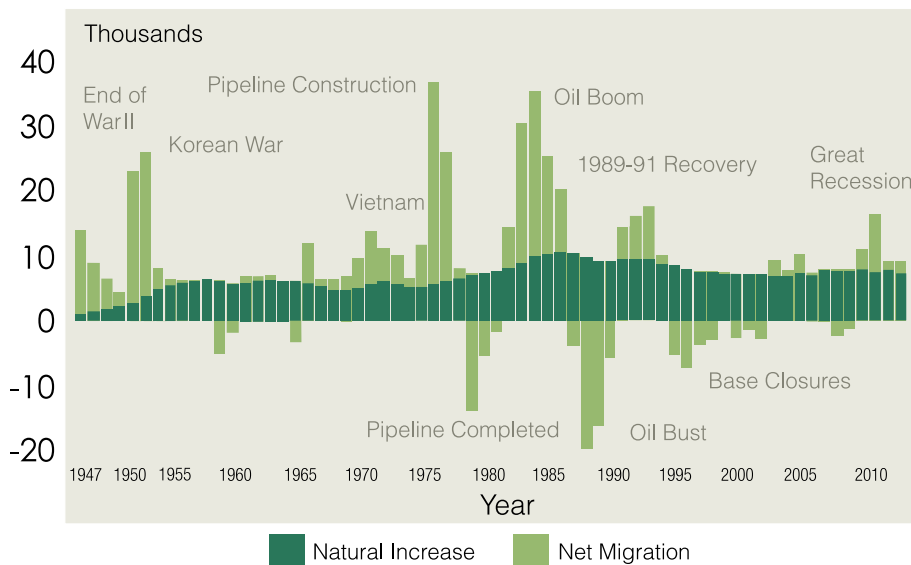
Available at: <http://quickfacts.census.gov/qfd/states/020001k.html>

Table 3. Annual Labor force, Employment, and Unemployment for Alaska 2000-2009

Calendar Year	AK Labor Force	Employment	Unemployment	Unemployment Rate	US Unemployment Rate
2000	319941	300220	197216	.24	.0
2001	322951	303125	198266	.14	.7
2002	329335	306005	233307	.15	.8
2003	335367	309653	257147	.76	.0
2004	339653	314586	250677	.45	.5
2005	344333	320640	236926	.95	.1
2006	348821	326052	227686	.54	.6
2007	351440	330086	213546	.14	.6
2008	355879	332981	228986	.45	.8
2009	358960	331185	277767	.79	.3
2010	362303	333523	287807	.99	.6
2011	365508	337790	277197	.68	.9

Source: Alaska Department of labor and Workforce Development, Research and Analysis Section.
<http://live.laborstats.alaska.gov/labforce/>

Appendix F: About Alaska¹



Source: 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 4), Alaska population density (excluding Anchorage) is slightly more than one person per square mile.
- As of July 1, 2011, Alaska has an estimated population of 723,136, which is approximately 0.2% on the national population. Alaska's population has increased 9,090, or 1.3%, from the prior year and an increase of 94,790, or 15.0%, since the year July 1, 2000. The population distribution reflects that more than 75% of Alaskans reside in urban areas, including Anchorage (the State's largest city), Fairbanks and Juneau. These urban areas house 51.1% of the State's population.
- As of July 1, 2011, the Alaska median age was 33.8 years (33.7 years for Alaska males and 34.2 years for Alaska females), which is less than the national median age of 37 years. Of all states, Alaska has the smallest

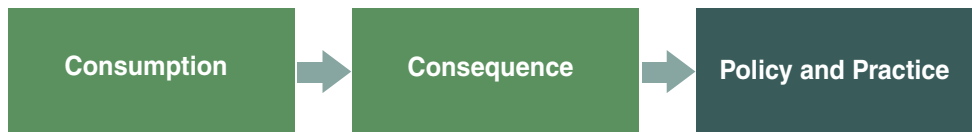
proportion of persons 65 years and over (7.5%). The percentage of the population aged 18 years and over was 73.4%.

- In 2011, the population comprises several racial groups: 67.9% White; 14.9% Alaska Native/American Indian; 5.6% Asian; 3.6% Black, 1.1% Hawaiian/Pacific Islander, and 7.0% Multi-race. Hispanic ethnicity represents 5.8% of the overall state population.

Appendix G: Selection Process for Indicators

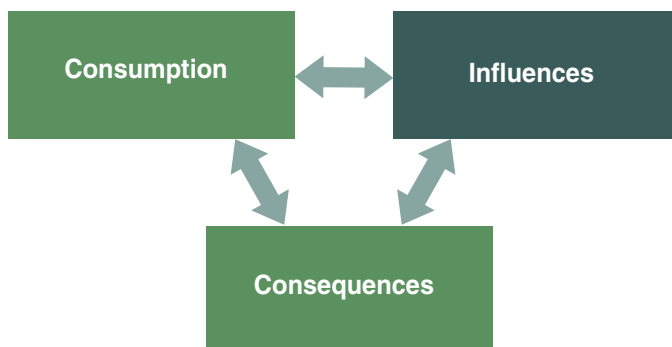
The importance of having a comprehensive and integrated compilation of data across disciplines is the foundation for determining key constructs that truly show the impact of alcohol, illicit drug use, and tobacco in Alaska. The SPF relationship diagram (Figure 2) illustrates the sequence of events from 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, inter-personal 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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>i</i> to <i>i</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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 measurable 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:

$$\text{Relevance Score} = (\text{Severity} + \text{Magnitude} + \text{Cultural Sensitivity}) \times \text{Changeability}$$

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 SIG 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}

Indicator Developmental Stage II: Existing measurement system needs further support and refinement.

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}

References

1. **Resnick, M.D.** et al. (1997). Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278 (10), 823-832; National Longitudinal Study of Adolescent Health (1995-2003) Series of Monographs.
2. **Child Trends.** (2002). *Building a better teenager: A summary of what works in adolescent development*. Washington, D.C. Child Trends, Inc.
3. **Rutter, M.** (1985). Resilience in the face of adversity. *British Journal of Psychiatry*, 147, 598-611.
4. **Werner, E. E., & Smith, R. S.** (1992). *Overcoming the Odds: High risk children from birth to adulthood*. Ithaca, NY: Cornell University Press.
5. **Garmezy, N.** (1985). Stress-resistant children: The search for protective factors in J. E. Stevenson (Ed.), *Recent research in developmental psychopathology. Journal of Child psychology and psychiatry book supplement no.4* (pp. 213-233). Oxford, England: Pergamon Press.
6. **Catalano, R. F.** et al. (1998). Positive youth development in the United States. Retrieved: <http://aspe.hhs.gov/hsp/PositiveYouthDev99>
7. **Borowsky, I.** et al. (1999). Suicide Attempts Among American Indian and Alaska Native Youth. *Archives Pediatrics Adolescent Medicine Vol 153*. 573-580.
8. **Hawkins J D,** et al. (1992). Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention. *Psychological Bulletin*, 112(1), 64-105.
9. **Scales, P.C. & Leffert, N.** (1999). *Developmental Assets: A Synthesis of the Scientific Research on Adolescent Development*. Minneapolis: Search Institute.

10. **Springer, F.** (2001). EMT. National Cross-Site Evaluation of High Risk Youth Programs to Address Substance Abuse (CSAP).
11. **National Youth Violence Prevention Resource Center.** Sponsored by US Department of Health and Human Services.
12. **Surgeon General's Call to Action to Prevent Suicide** (1999) Department of Health and Human Services.
13. **J. Eccles & J. Goodman, eds.** (2002). Community Programs to Promote Youth Development.

National Research Council and Institute of Medicine. National Academy Press. a) Grossman & Tierney (1998) Big Brothers, Big Sisters Evaluation 187-189; b) Catalano et. al. (1999) Positive Youth Development Programs in the US: Research Findings on Evaluations of Positive Youth Development Programs.175-177.
14. **Segal, B.** (1999) Alaska Natives combating substance abuse and related violence through self healing: a report for the people. *A report to the Alaska Federation of Natives.* The Center for Alcohol and Addiction Studies. The Institute of Circumpolar Health Studies. University of Alaska Anchorage.
15. **Bernard, B.** (2004) *Resiliency What We Have Learned.*
16. **Berry, J.W.** (1985) Acculturation and mental health among circumpolar peoples. *Circumpolar Health 84: 305-311*
17. **Boyer, D. & Fine, D.,** (1992) Sexual Abuse As a Factor Adolescent Pregnancy and Child Maltreatment. *Family Planning Perspectives. Vol 24; 1: 4-11.*
18. **Hawkins, D.,** et al. (1993) *Communities That Care,* curriculum. Developmental Research and Programs, Seattle, WA.
19. **Wolsko, C** (2007) Stress, coping, and the well being among the Yup'ik of the Yukon-Kuskokwim delta, the role of enculturation and acculturation. *International Journal of Circumpolar Health, 66* (1).
20. **American Medical Association** (1992). Family Violence: Adolescents as Victims and Perpetrators. Report I of the Council on Scientific Affairs (A-92).
21. **Mohatt, G.et.al.** Tied together like a woven hat: Protective pathways to Alaska native sobriety. *Harm Reduction Journal 2004,1:10.*
22. **McNeely, C.** et al. (2002). Promoting School Connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health. Vol 72 no 4. 138-146.*
23. **Lonczack, H.** et al. (2002). Effects of the Seattle Social Development Project on Sexual Behavior, Pregnancy and Birth and Sexually Transmitted Disease Outcomes by Age 21 Years. *Archives Pediatrics and Adolescent Medicine. Vol. 156 No. 5.*
24. **Murphy, D.** et al. (2004). Relationships of Brief Measure of Youth Assets to Health –Promoting and Risk Behaviors. *Journal of Adolescent Health (2004):34-184-191.*

25. **Oman, R.** et al. (2004). The Potential Protective Effect of Youth Assets on Adolescent Alcohol and Drug Use. *American Journal of Public Health Vol. 94, No 8. 1425-30.*
26. **Whitlock J.** (2005) *Places to Be Places to Belong.* Cornell University
27. **Perry, C.** (1988) “Comparing Peer-Led to Teacher-Led Youth Alcohol Education in Four Countries.” *Alcohol Health & Research World. Vol. 12;* 4. 322-326.
28. **Rickert, V.** et al. (1991)“Effects of Peer-counseled AIDS Education Program on Knowledge, Attitudes, and Satisfaction of Adolescents” *Journal of Adolescent Health. Vol 12,; 38-43.*
29. **Slap, G.,** et al. (1991) “Human Immunodeficiency Virus Peer Education Program for Adolescent Females.” *Journal Adolescent Health. Vol. 12. 434-442.*



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