Advisory Board on Alcoholism and Drug Abuse
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Alaska Mental Health Board

Behavioral Health Disorders Among Alaskans

JANUARY 2015

Alaska's behavioral health system is complex. State grants and Medicaid provide mental health and/or substance abuse treatment for specific, eligible populations through the Division of Behavioral Health in the Department of Health and Social Services. Those Alaskans who do not fall into these specific categories of income and diagnoses may receive their services through the Indian Health Service, Veterans' Administration, Department of Corrections, private providers, or even a combination of this list. Identifying which and how many Alaskans need and receive services is difficult.

This report examines four areas of interest, listed below, to understand how Alaskan adults and youth are served in the behavioral health system in Alaska. This information also shows data gaps along with the need to better understand the system and how it serves all Alaskans.

(1) Mental Illness among Alaskans
(2) Drug and Alcohol Dependence among Alaskans
(3) Drugs of Abuse and Treatment Admissions
(4) Treatment Outcomes

According to the United States Census, there were an estimated 349,923 female residents (260,343 were eighteen years or older), and 385,209 male residents (286,596 were eighteen years or older) of Alaska in 2013; of these, The Department of Education and Early Development reported that, on October 1, 2013 there were 38,597 students enrolled in grades 9-12 for the 2013-2014 school year, including 19,847 males and 18,750 females.[1] These figures will be used to estimate the number of Alaskans with behavioral health issues throughout this report.

The behavioral health of Alaskans, including both substance use and mental health disorders, is an important issue for policy makers to consider. In the following pages, each question will be explored and answered with the best information available.

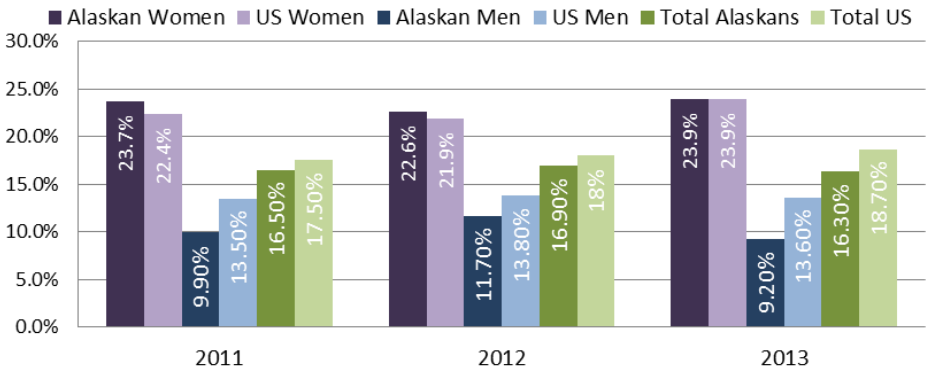
A number of different sources of information are used in this report. A more detailed description of these sources can be found at the end of the report. It may be helpful to review these descriptions before examining the charts based on their data. Data used in this report are based on surveys and treatment sources and therefore should be used with caution.

1 E-mail from Brian Laurent, Data Management Supervisor, Department of Education & Early Development.

Depression

The population-based rates of diagnosis for depressive disorders are slightly less in Alaskans than in men and women in the United States. Data from the Behavioral Risk Factor Surveillance Survey (BRFSS) show 16.3% of Alaskans reported being diagnosed with a depressive disorder in 2013. The 2013 Census estimate along with this percentage suggest 119,826 Alaskans experienced depression in 2013 (Chart 1-A). Women report depressive symptoms much more often than men, though at similar rates to women nationally. Based on this data, the number of Alaskans who experienced depression in 2013 is estimated to be 62,222 women and 57,604 men. As seen in Chart 1-A, Alaskan men report depressive symptoms less often than men report nationally, and almost three times less often than Alaskan women reported in 2013.

Chart 1-A
Results of the BRFSS Question: Has a doctor, nurse, or other health professional ever told you that you have a depressive disorder (including depression, major depression, or dysthymia, or minor depression)?



Source: Behavioral Risk Factor Surveillance Survey

The Youth Risk Behavior Survey (YRBS) indicates that, while adolescents in Alaskan high schools continue to report *similar rates* regarding depressive symptoms as in traditional U.S. high schools, adolescents in alternative high schools in Alaska have *significantly higher rates* than adolescents in traditional schools (Chart 1-B1 and Chart 1-B2). In 2013, more than half of the female students in alternative schools in Alaska reported experiencing depressive symptoms (Chart 1-B2). Applying the rates for traditional Alaskan high school students as shown in Chart 1-B to the number of high school students (38,597), we would estimate conservatively, that 10,498 students experienced depressive symptoms in 2013. The percentage of students reporting depressive symptoms has increased since 2009.

Chart 1-B1
Traditional High School Student responses to the YRBS Question: During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?

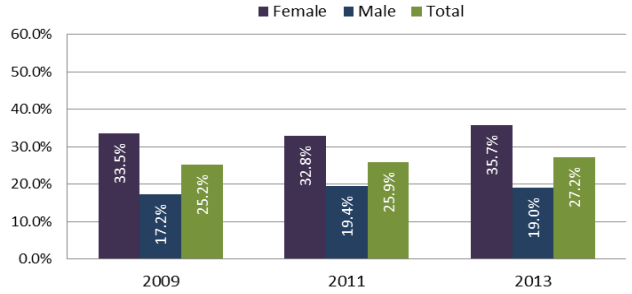
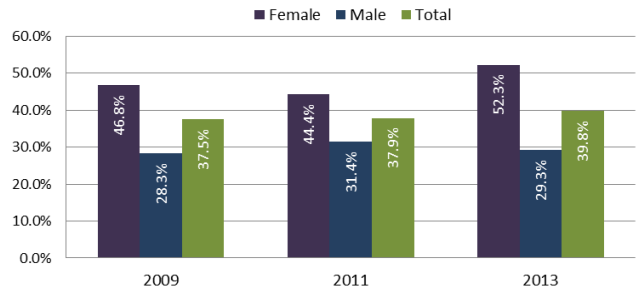


Chart 1-B2
Alternative high school student responses to the YRBS question: During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?



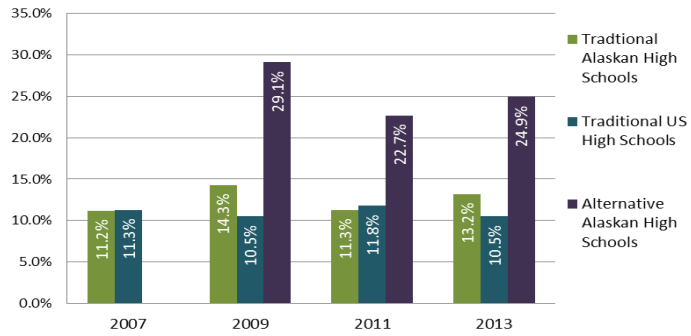
Source: Youth Risk Behavior Survey

Trauma

An examination of behavioral health must include trauma as a factor, especially in Alaska. The impact on individuals who experience violence of any kind can be profound and has been linked to anxiety disorders and post- traumatic stress disorder. Based on data from the 2010 Alaska Victimization Survey (AVS), it is estimated that, during their lifetimes, 58% of Alaskan women experienced intimate partner or sexual violence, and by 2013 an estimated 150,999 Alaskan women have experienced either intimate partner violence or sexual assault.[2]

Adolescent girls report high rates of domestic violence and sexual assault. Based on the rates reported by girls in traditional high schools (Charts 1-C and 1-D), we would estimate that, of the 18,750 female students in 2013, 2,475 experienced forced intercourse and 2,119 were assaulted by a romantic partner. This estimate is conservative, given that female alternative high school students report significantly higher rates of forced intercourse (24.9% in 2013) and domestic violence (20.0% in 2013) than female traditional high school students (Charts 1-C and 1-D).

Chart 1-C
Percentage of female high school students reporting ever having been forced to have intercourse when they didn't want to

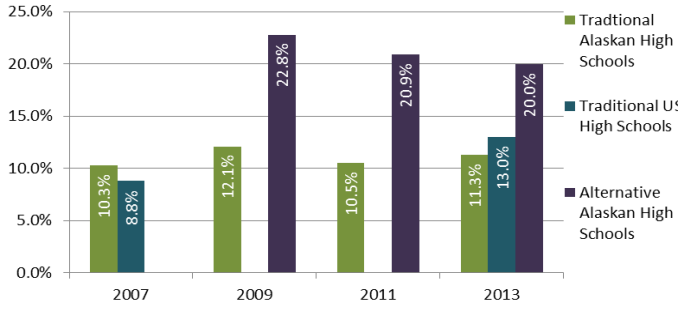


Source: Youth Risk Behavior Survey

Table 1-A
Percentage of students who report having ever been forced to have intercourse when they didn't want to

Year	Female Students		Male Students	
	Traditional Alaskan High Schools	Traditional US High Schools	Traditional Alaskan High Schools	Traditional US High Schools
2007	11.2%	11.3%	7.2%	4.5%
2009	14.3%	10.5%	6.10%	4.5%
2011	11.3%	11.8%	7.20%	4.5%
2013	13.2%	10.5%	5.30%	4.2%

Chart 1-D
Percentage of female high school students reporting ever being hit slapped or physically hurt by a someone they were dating



Source: Youth Risk Behavior Survey

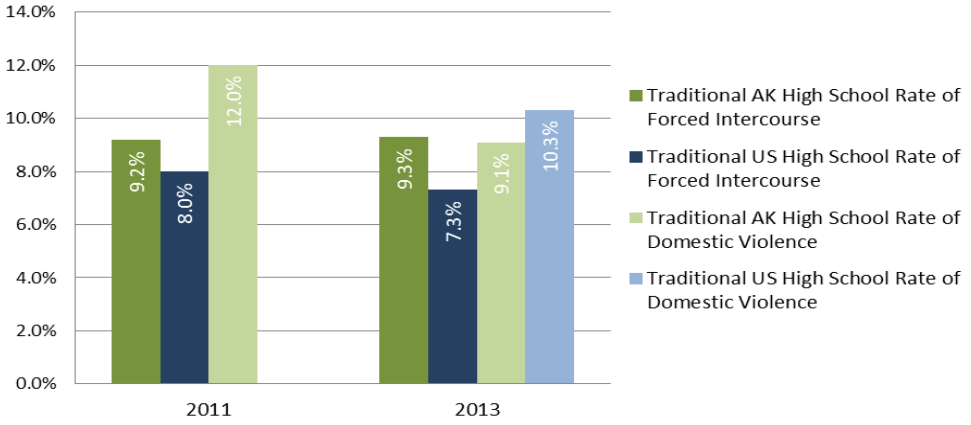
Table 1-B
Percentage of students who report having ever been hi, slapped or physically hurt by a boyfriend or girlfriend

Year	Female Students		Male Students	
	Traditional Alaskan High Schools	Traditional US High Schools	Traditional Alaskan High Schools	Traditional US High Schools
2007	10.3%	8.8%	-	-
2009	12.1%	-	14.2%	-
2011	10.5%	-	13.4%	-
2013	11.3%	13.0%	6.2%	7.4%

2 The Alaska Victimization Study, University of Alaska Justice Center, 2010. This study only surveyed female adult Alaskans.

In 2013, male traditional high school students in Alaska reported lower rates of domestic violence than male students nationally, 6.2% and 7.4%, respectively (Table 1-B). Forced intercourse in male students is slightly higher in Alaskan traditional schools (5.3% or an estimated 994 males in 2013) than male students in the US (4.2% in 2013), as seen in Table 1-A. Male students in alternative high schools report higher rates of domestic violence (9.7% in 2013) and forced intercourse (8.1% in 2013) that reported in traditional high schools. In total, Alaskan traditional high school students report more forced intercourse, but less domestic violence than national high school students (Chart 1-E). A conservative estimate for the total number of Alaskan students who reported forced intercourse in 2013 is 3,590, and another 3,512 students reported physical dating violence.

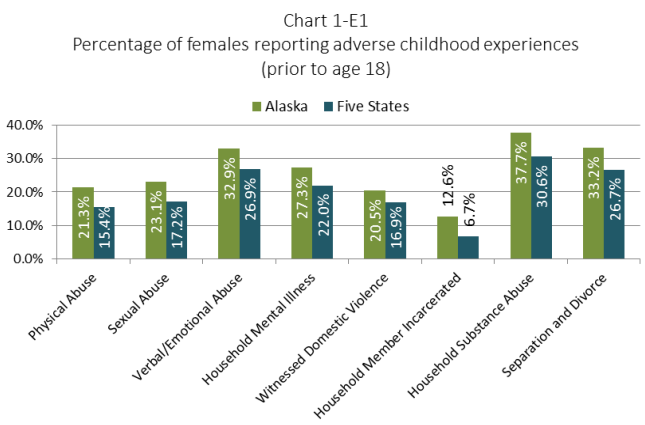
Chart 1-E
Percentage of total high school students reporting forced intercourse or domestic violence

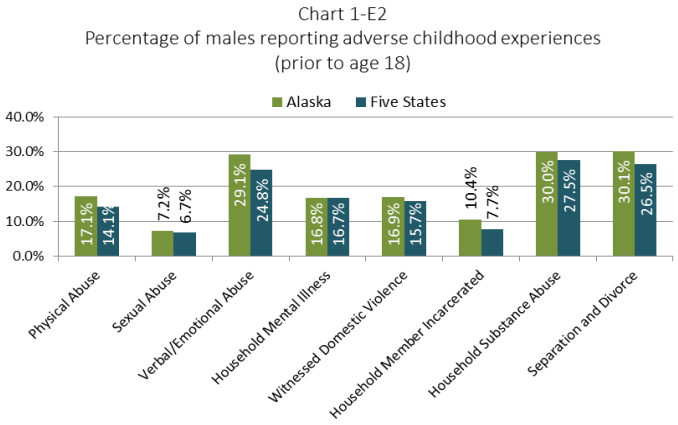


Source: Youth Risk Behavior Survey

Trauma is strongly linked to depression and substance abuse, as well as suicide and a myriad of other physical health and behavioral health diagnoses. To gain a deeper understanding of the impact of trauma on Alaskans, Alaska has become the 20th state to add the Adverse Childhood Experiences (ACEs) module to the BRFSS. In 2013, Alaska asked a sample of its adult population about experiences during their childhoods (prior to age 18). These questions were developed by the Center for Disease Control (CDC) to study the effects of ACEs on adult health outcomes. Subsequent studies conducted with Kaiser Permanente have shown a strong correlation between ACEs and poor physical and behavioral health, as well as poor social and economic outcomes. There are no national rates of ACEs, so for the purposes of this analysis Alaskan's rate of ACEs will be compared to a five-state sample that used the same survey. These states – Arkansas, Louisiana, New Mexico, Tennessee and Washington – represent approximately 26 million Americans.

Alaskan women reported high rates of ACEs at a statistically significant rate for all eight categories surveyed, except witnessing domestic violence (Chart 1-E1). As children and youth, Alaskan women experienced trauma at higher rates than Alaskan men as well as the women of other states. Alaskan men experience ACEs at lower levels than women, though at higher levels than the men of other states (Chart 1-E2). These experiences at a population level can lead to high incidence of smoking, drinking, depression, suicide attempts, heart disease, and other poor outcomes. While individuals can overcome exposure to ACEs with the right interventions, Alaska's high rate of childhood adversity means that Alaskans are starting with a disadvantage as they begin their adult lives. See the CDC's web site for more detail about the links between ACEs and outcomes: http://www.cdc.gov/violenceprevention/acestudy/

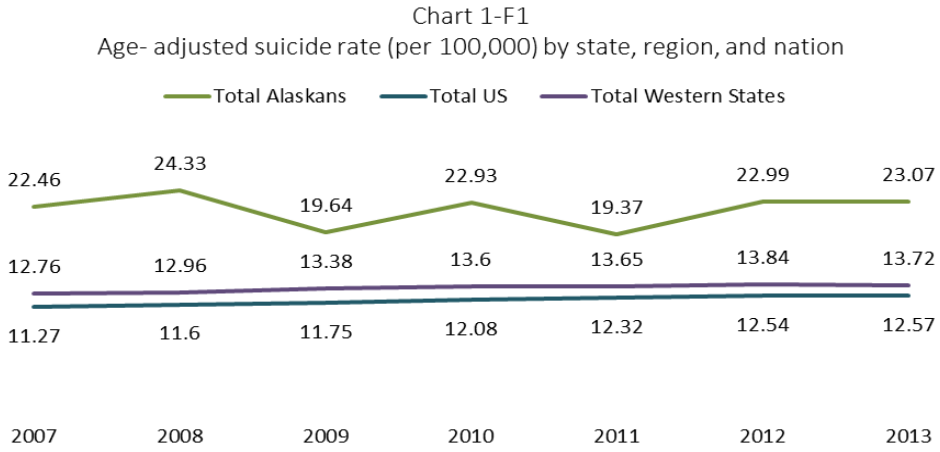




Source: *ACEs in Alaska*, Patrick Sidmore, Health Planner, Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse (2014)

Suicide

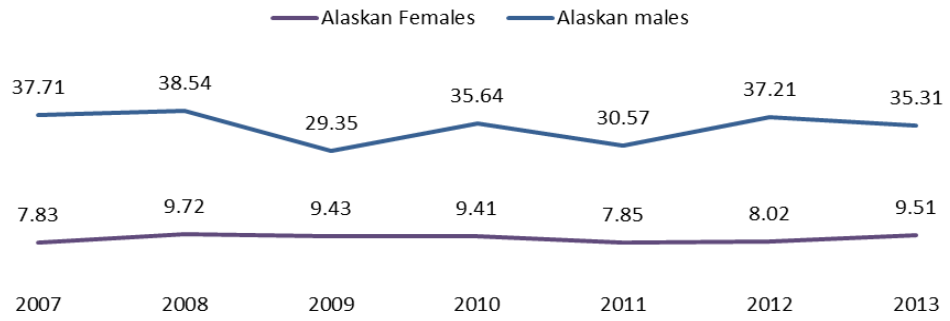
A closely related measure for a population's behavioral health status is the suicide rate. Chart 1-F1 shows that the rate of suicide among Alaskans is much higher than the rate nationally and in our western state neighbors. Alaska's increased rates of suicide mirrors the national rate increase as well as the western state rate increase since 2007.



Source: Center for Disease Control and Prevention, NCHS Vital Statistics System for Number of Deaths.

To examine further, Chart 1-F2 shows the rate of suicide between males and females in Alaska. Alaskan males have a sucide rate more than three times that of Alaskan females.

Chart 1-F2
Age- adjusted suicide rate (per 100,000) by sex

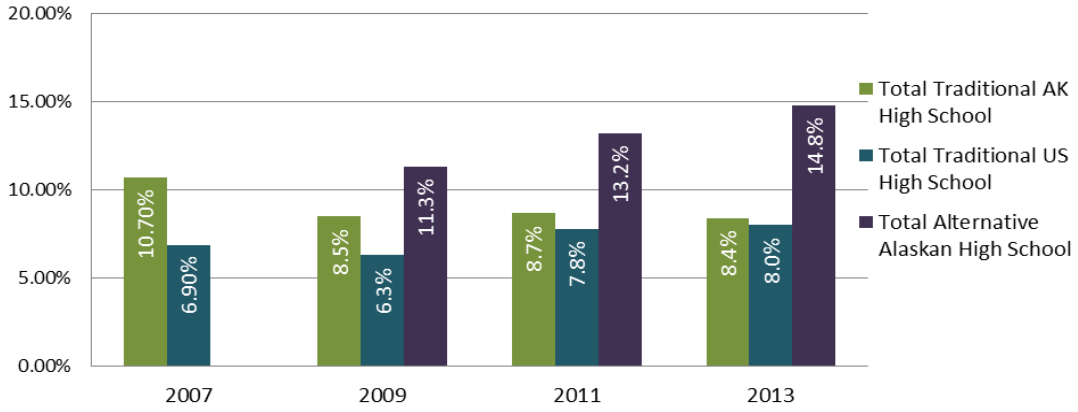


Source: Center for Disease Control and Prevention, NCHS Vital Statistics System for Number of Deaths.

Alaska's rate of adolescent suicide attempts in the previous 12 months, as reported in 2013 by high school students, was 8.4%, or 3,242 students, in traditional high schools and close to double that (14.8%) in alternative high schools (Chart 1-G). Alaska's adolescent suicide rate is greater than the adolescent rate nationally. However, the rate has decreased between 2007 and 2013 among Alaskan students, while it has increased in students nationally, causing the two rates to become very similar in 2013.

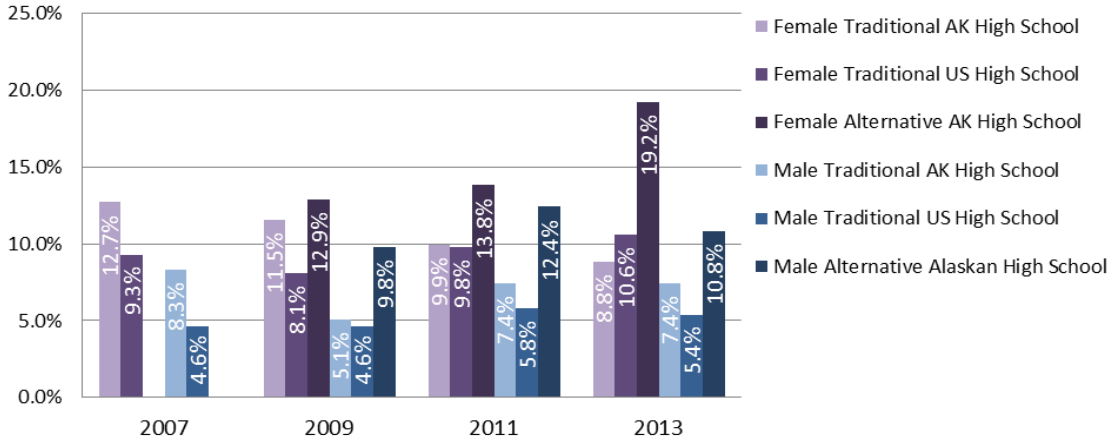
When comparing adolescent suicide rates between male and female students, we can see a decreasing trend in Alaskan female students' suicide attempts between 2007 and 2013 in traditional high schools, which is the opposite trend of female high school students nationally (Chart 1-H). A similar pattern is seen in male students as well. The most alarming trend seen in Chart 1-H is the increase in suicide attempts among female students in Alaskan alternative schools, which was almost double that of male alternative school students in 2013.

Chart 1-G
Percentage of high school students who made one or more suicide attempts during the last 12 months



Source: Youth Risk Behavior Survey

Chart 1-H
Percentage of male and female high school students who made one or more suicide attempts during the last 12 months



Source: Youth Risk Behavior Survey

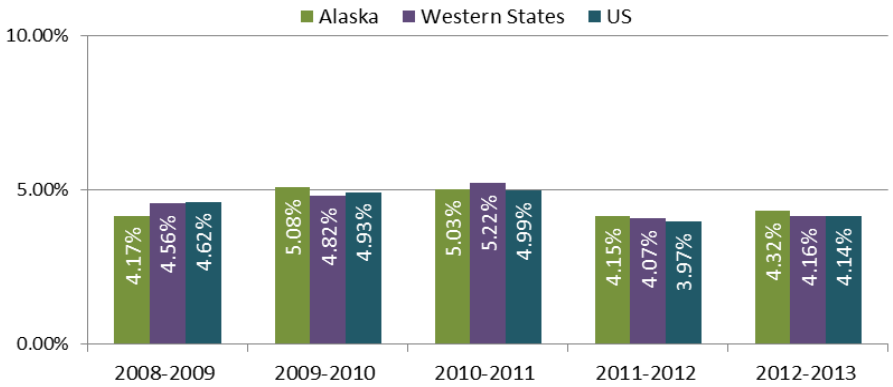
Serious Mental Illness

Serious mental illnesses (SMI) include a wide range of disorders and represent the people who experience the most limitation from their illness. People experiencing SMI meet the following criteria:

- a mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) that is
  - diagnosable currently or within the past year;
  - of sufficient duration to meet diagnostic criteria specified within the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV); and
  - resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities.

Alaskans report slightly higher rates of SMI than individuals residing in the western states, as well as individuals nationally. Reports of SMI have increased slightly among all three regional groups between 2011-2012 and 2012-2013 (Chart 1-I).

Chart 1-I
Percentage of adults who report having serious mental illness within the past year



Source: National Survey on Drug Use and Health

To more closely examine how the prevalence of SMI differs between Alaskan women and men, we look to the population served by the Division of Behavioral Health (DBH). Because services are provided primarily through grant and Medicaid services, the population of low-income households (less than 240% of the Federal Poverty Guidelines) was used to establish the number of Alaskans who fit the dual criteria of SMI and low income (Table 1-A).

The authors of the prevalence report cited caution: "*The estimates are also conservative in being limited to households: a considerable number of people experiencing disorders have other living arrangements including being homeless, in the military, in prisons or jails, seasonal workers, etc... And finally they are conservative because 'serious' disorders exclude acute psychiatric situations including suicidal behavior."*[3] Note that these Prevalence Rates were determined with 2006 data.

Table 1-A
SMI Only

Region*	Adult Females	Adult Males	Total Adults
Northern	1,343	860	2,203
South Central	2,349	1,475	3,824
Anchorage	2,470	1,324	3,794
Southeast	718	409	1,127
SMI Total	6,880	4,068	10,948
Prevalence Rate	7.70%	4.90%	6.40%

Source: 2006 Behavioral Health Prevalence Estimates in Alaska: Serious Behavioral Health Disorders by Household, WICHE Mental Health Program, Chuck McGee, M.S., Charles Holzer, PhD.

* Northern Region; Includes Nome Census Area, NW Arctic Borough, North Slope Borough, Yukon Kuskokwim Census Area, Denali Borough Fairbanks North Star Borough, SE Fairbanks Census Area, Southeast; From Yakutat Borough south, Anchorage; Includes the municipality of Anchorage only. South Central Region; Includes the remainder of the state. The Division of Public Health regions were used.

The prevalence of co-occurring disorders, the presence of both a mental health and substance use disorder, is reflected in Table 1-B. This estimate is for Alaskans in low-income households only.

Table 1-B
Co-Occurring Disorders Only

Region	Adult Females	Adult Males	Total Adults
Northern	327	379	706
South Central	519	553	1072
Anchorage	563	486	1049
Southeast	159	155	314
C-OD Total	1,568	1,573	3,141
Prevalence Rate	1.80%	1.90%	1.80%

Source: 2006 Behavioral Health Prevalence Estimates in Alaska: Serious Behavioral Health Disorders by Household, WICHE Mental Health Program, Chuck McGee, M.S., Charles Holzer, PhD.

[3] 2006 Behavioral Health Prevalence Estimates in Alaska: Serious Behavioral Health Disorders by Household, WICHE Mental Health Program, Chuck McGee, M.S.,Charles Holzer, PhD at page 6.

In the SMI category of behavioral health diagnoses, women are represented in larger proportion than men as seen in their respective prevalence rates: 7.70% and 4.90%. The estimate of low-income women experiencing SMI (whether alone or co-occurring with a substance use disorder) is 9.45% -- much more than the comparison of low-income men at 6.80%.

The Youth Risk Behavioral Survey (YRBS) clearly shows that adolescents in alternative high schools are at much greater risk for behavioral health difficulty (see above). The YRBS only captures those students who are in school, which could result in underreporting, as dropping out of school and behavioral health issues often go hand-in-hand.

Alaskans Receiving Mental Health Treatment

Despite the evidence of higher prevalence rates of SMI in women, women make up slightly less of the population of those reported by DBH as receiving mental health services in 2013 (48.2% women compared to 49.4% men). Table 1-C shows the most recent report to the Substance Abuse and Mental Health Services Administration (SAMHSA) of the number of Alaskans served by the state-funded behavioral health system for mental health conditions. Alaska's figures are not unduplicated. These reflect duplicated services across community, residential, hospital, and other inpatient settings. The majority of states and territories (43 of 56) report unduplicated counts, so the higher penetration rate suggested in this evaluation may be inflated. For a closer look at this question review Tables 1-D and 1-E.

Table 1-C

Demographics	Alaska		US		Penetration Rates per 100,000 population		
	n	%	n	%	Alaska	West	US
Female	10,429*	48.20%	3,731,595	51.50%	29.8	18.4	23.1
Male	10,689*	49.40%	3,500,934	48.30%	28.0	19.6	22.4
Gender Total	21,638*	100.00%	7,242,764	99.90%	29.6	19.1	22.8

Source: Alaska 2013 Mental Health National Outcome Measures (NOMS): CMHS Uniform Reporting System, http://www.samhsa.gov/data/sites/default/files/URSTables2013/Alaska.pdf *Includes duplicated individuals

To further clarify the duplicated figures in Table 1-C above, the following two tables represent **unduplicated** counts within the type of services indicated (Community Services and State Psychiatric Hospital Services). Alaska has a higher penetration rate than the rest of the US for people served in communities. Alaska had a lower percentage of women served in communities than did the rest of the country for community services in 2013. Men in Alaska were served in communities just slightly more than men nationally.

Table 1-D
Served in Community

Demographics	Alaska		US		Penetration Rates per 100,000 population		
	n	%	n	%	Alaska	US	States Reporting
Female	9,256	49.00%	3,634,417	51.70%	26.4	22.5	58
Male	9,116	48.30%	3,380,128	48.10%	23.9	21.6	58
Gender Total	18,892	100.00%	7,024,249	100.00%	25.8	22.1	58

Source: Alaska 2013 Mental Health National Outcome Measures (NOMS): CMHS Uniform Reporting System, http://www.samhsa.gov/data/sites/default/files/URSTables2013/Alaska.pdf

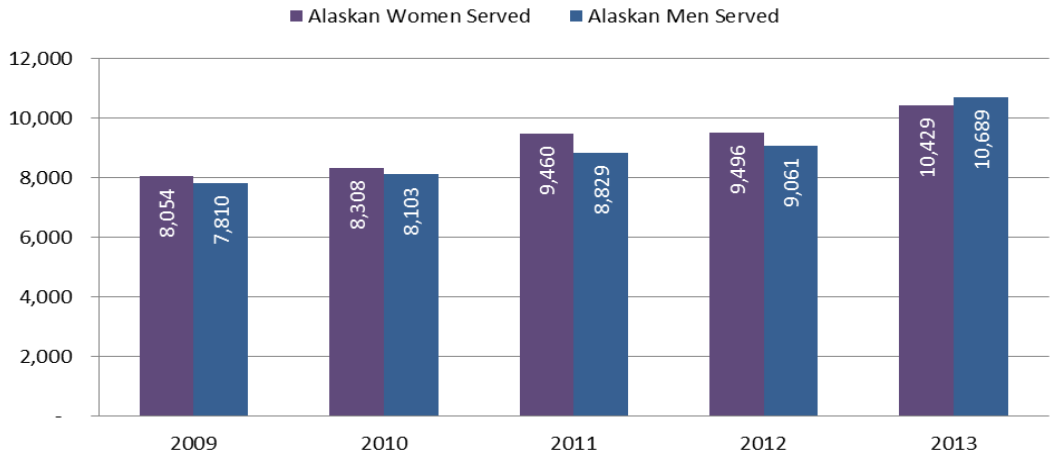
Alaska has a higher penetration rate for than the rest of the country for State Psychiatric Hospital services. Alaska has a higher percentage of female patients and a lower percentage of men than the rest of the US in this category of service.

Table 1-E Served in Psychiatric Hospitals							
Demographics	Alaska		US		Penetration Rates per 100,000 population		
	n	%	n	%	Alaska	US	States Reporting
Female	525	42.60%	50,121	33.90%	1.5	0.3	53
Male	706	57.40%	97,719	66.10%	1.9	0.6	54
Gender Total	1,231	100.00%	147,853	100.00%	1.7	0.5	54

Source: Alaska 2013 Mental Health National Outcome Measures (NOMS): CMHS Uniform Reporting System, http://www.samhsa.gov/data/sites/default/files/URSTables2013/Alaska.pdf

Just over 8,000 women received mental health treatment services through the public behavioral health system in 2009. That number grew by 17% to 9,460 women served in 2011, and climbed another 9.3% by 2013 (Chart 1-G). The number of men receiving treatment grew by 36.9% between 2009. This mirrors the overall growth in people served. It is important to note that this number does not reflect the total number of Alaskans diagnosed with a mental health disorder or needing mental health services. It is a **duplicated** count of persons served by state-funded behavioral health programs, a low-income client population. Alaskans with insurance and other resources to pay for mental health services through private practitioners are not included in this number, nor are those served by the Department of Corrections, the Veteran's Administration, or other federal programs. This number also does not reflect the total number of Alaskans receiving mental health services through the tribal health system. Only those who are Medicaid eligible or receiving state grant funded services are counted in this number.

Chart 1-G
Number of Alaskan men an women served by the Division of Behavioral Health*



Source: Alaska 2009, 2010, 2011, 2012 and 2013 Mental Health National Outcome Measures (NOMS): CMHS Uniform Reporting System, http://www.samhsa.gov/dataoutcomes/urs/ *Includes duplicated individuals

Summary: Mental Illness Among Alaskans

- The conservatively estimated prevalence of severe mental illness in Alaskans in low-income households was **9.45%** for women and **6.80%** for men in 2006.

- Using 2013 Behavioral Risk Factor Surveillance Survey data and 2013 Census estimates, we would estimate that more than **119,826** Alaskans have been diagnosed with a depressive disorder in their lifetime: **62,222** Alaskan women and **57,604** Alaskan men.

- In 2013, more than half of the female students in alternative schools in Alaska reported experiencing depressive symptoms. The number of high school students estimated (conservatively) to experience depressive symptoms in 2013 is **10,498** students. The percentage of students reporting depressive symptoms has increased since 2009.

- Intimate partner violence or sexual assault was reported at a rate of 58%. Based on 2013 Census estimate, an estimated **150,999** Alaskan women have been the victim of this type of crime during their lifetime. While not every woman who experiences domestic violence or sexual assault develops a behavioral health disorder, the likelihood is quite high.

- In 2013, a conservative estimate for the total number of Alaskan students who reported forced intercourse was 3,590 and another 3,512 students reported physical dating violence.

- The suicide rate for Alaskan women is **one third higher** than the national rate, is and significantly higher than the rate of our neighbors in the western states.

- Alaska's rate of suicide attempts in the previous 12 months as reported by high school students was 8.4% (traditional) and 14.8% (alternative) in 2013. Conservatively, of the 38,597 high school students in 2013, an estimated 3,242 high school students made a suicide attempt in 2013.

Substance Use Disorders

Substance Use Disorders (SUD), whether substance abuse or substance dependence, are defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifested in one or more enumerated ways, within a twelve-month period. Alcohol and drug use by itself is not a substance use disorder. A substance use disorder manifests through functional impairments, such as developing a tolerance to or symptoms of withdrawal from the substances used, failure to maintain work or familial obligations, high risk or dangerous behaviors, involvement with the legal or corrections systems, etc.

When determining the prevalence of substance use disorders for the population served by the Division of Behavioral Health, a more narrow scope is used. Because services are provided primarily through grant and Medicaid services, the population of low-income households was used to establish the number of Alaskans who fit the dual criteria of SUD and low income (Table 2-A). Note that these prevalence rates were determined with 2006 data and the Division of Public Health regional definitions were used. The prevalence of co-occurring disorders (presence of both a mental health and substance use disorder) is reflected in Table 2-B. This estimate is for Alaskans in low-income households only.

Table 2-A
Substance Use Disorders Only

Region	Adult Females	Adult Males	Total Adults
Northern	308	1,149	1,457
South Central	489	1,822	2,311
Anchorage	652	2,142	2,749
Southeast	160	534	649
SUD Total	1,609	5,647	7,256
Prevalence Rate	1.80%	6.90%	4.20%

Table 2-B
Co-Occurring Disorders Only

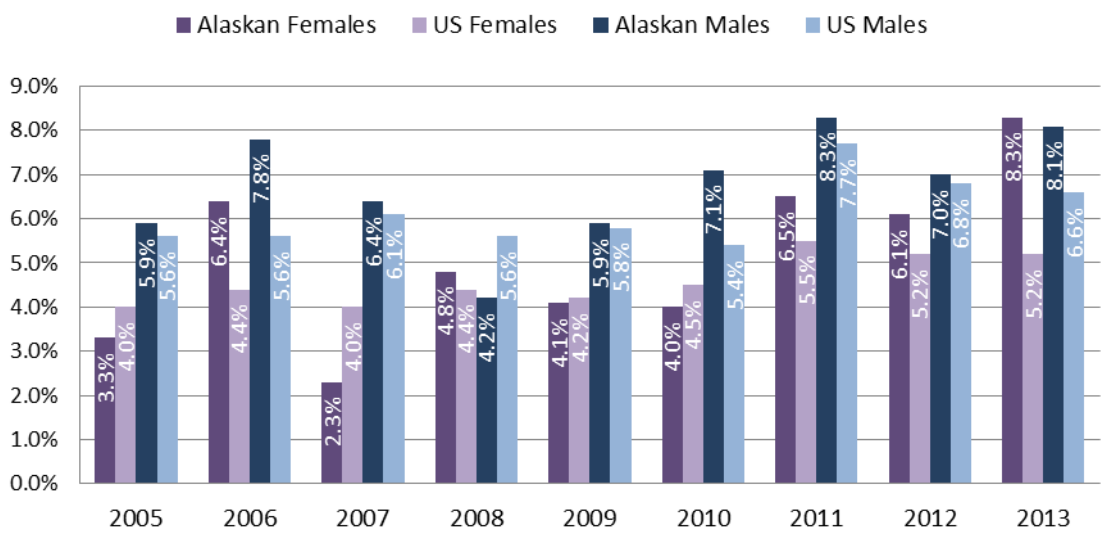
Region	Adult Females	Adult Males	Total Adults
Northern	327	379	706
South Central	519	553	1,072
Anchorage	563	486	1,049
Southeast	159	155	314
C-OD Total	1,568	1,573	3,141
Prevalence Rate	1.80%	1.90%	1.80%

Source: 2006 Behavioral Health Prevalence Estimates in Alaska: Serious Behavioral Health Disorders by Household, WICHE Mental Health Program, Chuck McGee, M.S., Charles Holzer, PhD.

Alcohol

According to the Behavioral Risk Factor Surveillance System (BRFSS), Alaskan adult women have reported rates of heavy drinking, defined as having more than one drink per day, at rates increasingly greater than women nationally (Chart 2-A). Alaskan men also have differing heaving drinking rates than men nationally, though the difference between the two groups is not as dramatic. Between 2005 and 2013, Alaskan men reported drinking heavily more than Alaskan women each year, excluding 2013. This demonstrates that heaving drinking is increasingly problematic among Alaskan women.

Chart 2-A
Percentage of adults who report drinking heavily

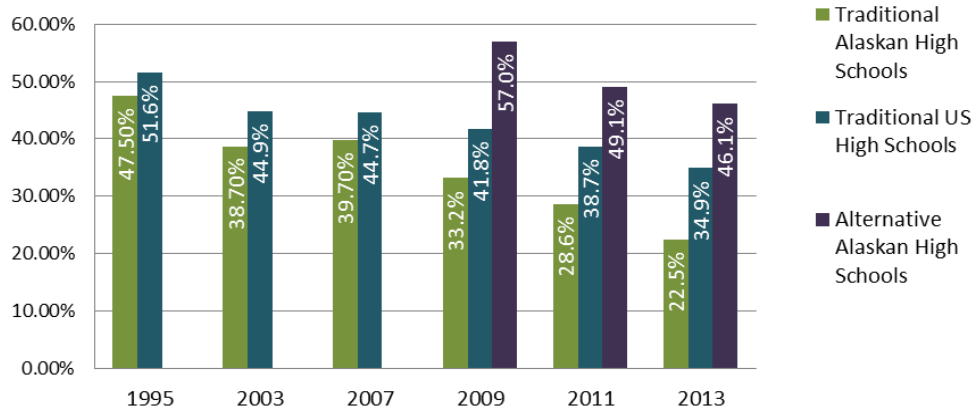


Source: Behavioral Risk Factor Surveillance Survey

An average of the heavy drinking data from 2009 to 2013 (5.8% of females and 7.3% of males), applied to 2013 Census estimate, results in an estimated 15,100 Alaskan women age 18 years and older, and 20,922 Alaskan men age 18 years or older, falling into this category each year.

In the past eighteen years, the rate of Alaskan high school girls drinking has dropped significantly, and compared to the U.S. rate, Alaska continues to do well (Chart 2-B). However, almost half of students in Alaska's alternative high schools report drinking each month. If we apply the lower rate of 22.5% of traditional high school student drinkers to the number of high school students in 2013, an estimated 8,684 Alaskan students were drinking each month in 2013.

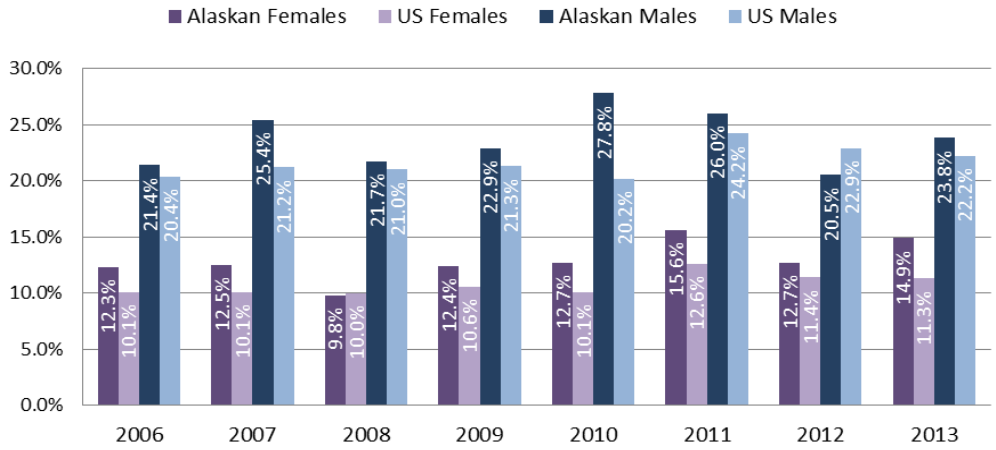
Chart 2-B
Percentage of students who had at least one drink of alcohol on one or more days during the last 30 days



Source: Youth Risk Behavior Survey

Binge drinking is defined differently for men and women. For women, binge drinking is having four or more drinks on one occasion, while for men five or more drinks on one occasion constitutes binge drinking. Data show that binge drinking is more prevalent among Alaskans than adults nationally (Chart 2-C). An application of the 2013 Census estimate to these data results in an estimated 38,791 (14.9%) Alaskan women age 18 years and older and 68,210 (23.8%) Alaskan men age 18 and over engaging in binge drinking during 2013. Both Alaskan men and men nationally report much higher rates of binge drinking than women in either group.

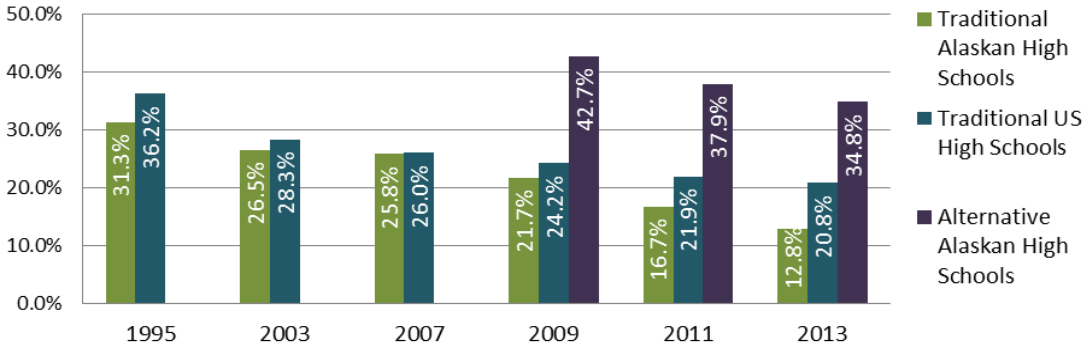
Chart 2-C
Percentage of adults who report binge drinking



Source: Behavioral Risk Factor Surveillance Survey

Alaska's traditional high school students continue to report a lower rate of binge drinking than students nationally. However, alternative high school students report rates of binge drinking more than double those of traditional high school students (Chart 2-D). These data do not account for students who have dropped out of school. Based on female students enrolled in 2013, an estimated 4,940 Alaskan students were binge drinking each month in 2013.

Chart 2-D
Percentage of students who report binge drinking during the past 30 days

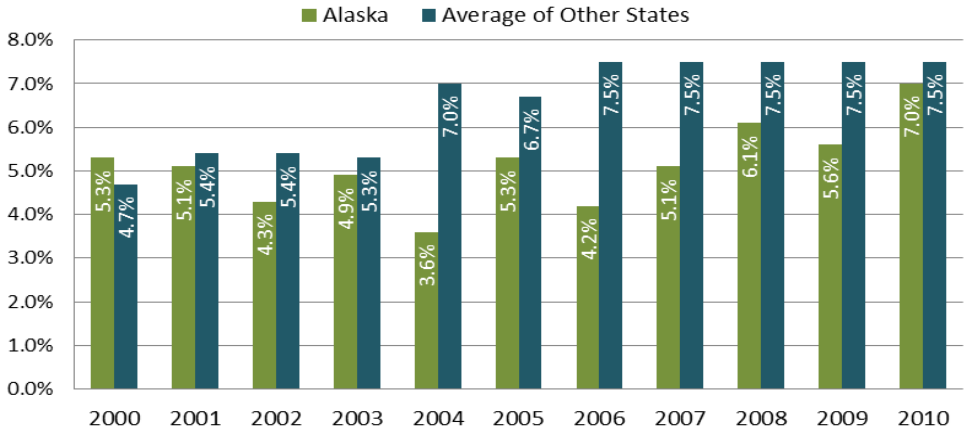


Source: Youth Risk Behavior Survey

According to the Pregnancy Risk Assessment Monitoring System (PRAMS), Alaskan women report drinking during pregnancy at slightly lower rates than women in other states (Chart 2-E). Using data from 2000 to 2009 and the total statewide number of live births reported by the Alaska Bureau of Vital Statistics, we would estimate that 5,280 children were born with pre-natal exposure to alcohol.

However, the Alaska Bureau of Vital Statistics also reports a number each year of births where drinking was reported. These figures are considerably lower than the PRAMS data suggest. During the same nine-year period, the Alaska Bureau of Vital Statistics reported only 2,586 births where drinking during pregnancy was reported.

Chart 2-E
Percentage of females who report drinking during pregnancy



Source: Pregnancy Risk Assessment Monitoring System

Summary: Drug and Alcohol Dependence Among Alaskans

- For the purposes of determining the prevalence of substance use disorders for low income Alaskans served through Division of Behavioral health **7,256** was the conservative estimate of Alaskans experiencing substance use disorders. The prevalence of co- occurring disorders for low income Alaskans was conservatively estimated at **3,141**. Estimates are for 2006.

- Heavy drinking was reported by 8.3% of Alaskan women and 8.1% of Alaskan men in 2013. Based on 2013 Census estimates, **15,100** women and **20,922** men experience this chronic alcohol problem each year.

- Approximately one fifth (22.5%) of students surveyed in traditional high schools reported drinking during the prior month in 2013. For alternative high school students, the rate was 46.1%. A low estimate of adolescents drinking alcohol each month is **8,684** students in 2013.

- Self-reported binge drinking rates for Alaskan women are estimated to yield **38,791** women and **68,210** men that binge drink each month. Alaskan men and men nationally report much higher rates of binge drinking than women in either group.

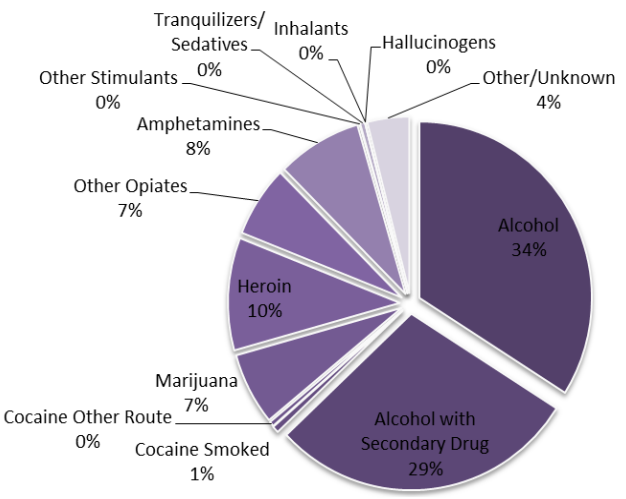
- Of traditional Alaskan high school students, 12.8% reported binge drinking in the previous month. In alternative schools 34.8% of students reported binge drinking. Based on enrollment, **4,940** Alaskan students were binge drinking each month in 2013.

- From 2000 to 2009, **between 2,586 and 5,280 infants** each year may have been born exposed to alcohol because their mothers drank during pregnancy.

Drugs of Abuse and Treatment Admissions

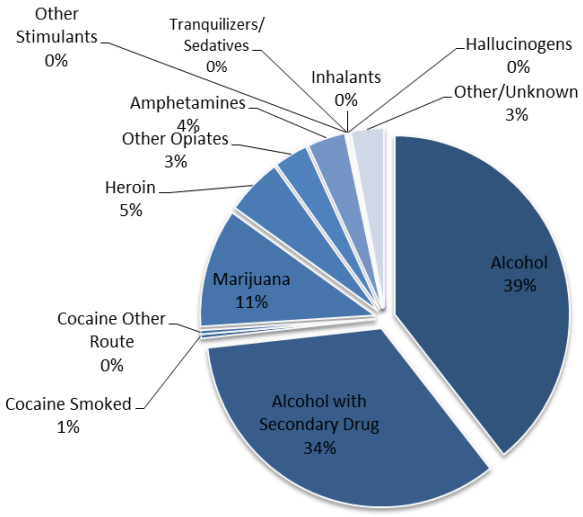
Looking at Alaskans admitted for treatment in 2013 by the primary type of substances abused (Chart 3-A and Chart 3-B), it is clear that **alcohol** is the substance for which men and women seek treatment services most often. Approximately two-thirds of women and almost three-quarters of men have an issue with either alcohol alone or alcohol and another substance. In contrast, for women who seek treatment for the same categories of substance abuse nationally, just over one-third identified alcohol as their primary or secondary substance of abuse. Rates of treatment for alcohol as primary or secondary substance of abuse occur in Alaskan men and men nationally at similar rates.

Chart 3-A
Distribution of Alaskan females admitted for substance abuse treatment in 2013



Source: Treatment Episodes Data Set

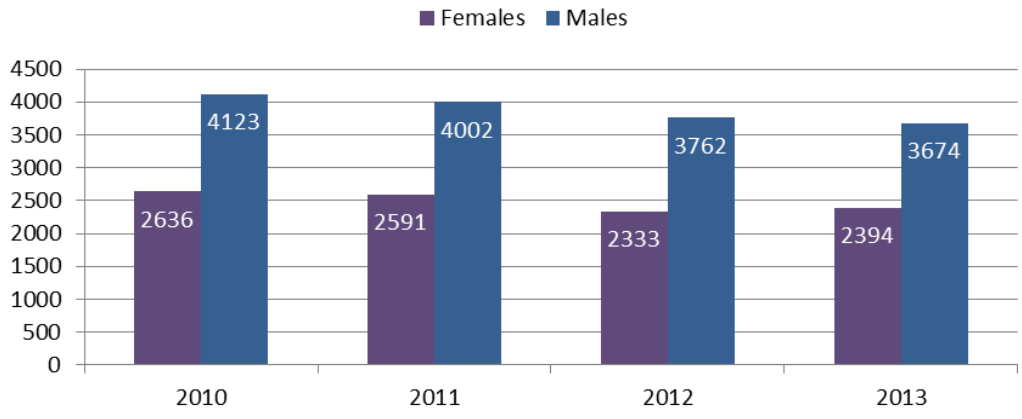
Chart 3-B
Distribution of Alaskan males admitted for substance abuse treatment in 2013



Source: Treatment Episodes Data Set

In 2013, Alaskan men made up the major portion of those people admitted to treatment programs through the Division of Behavioral Health, (Chart 3-C).

Chart 3-C
Admissions for all substance abuse treatment in Alaska

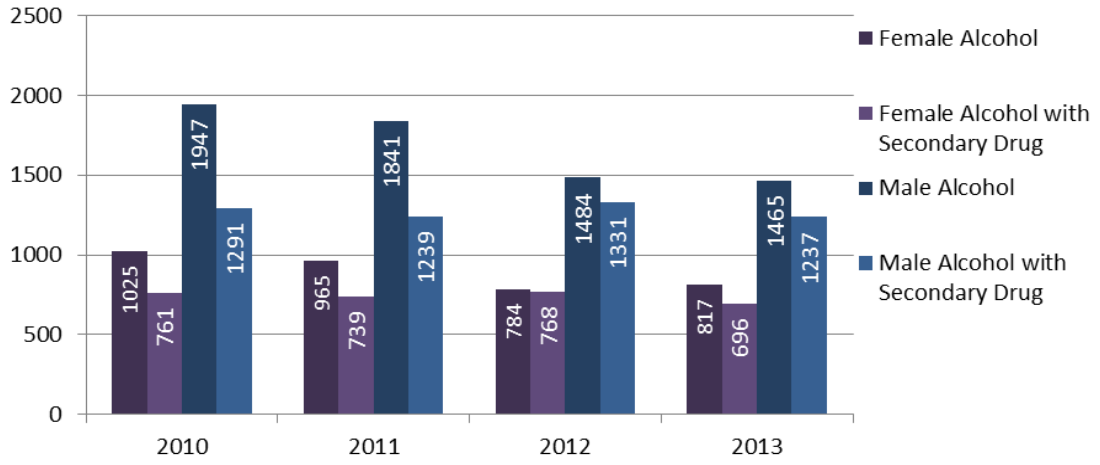


Source: Treatment Episodes Data Set

Alcohol

Almost twice as many men are treated for alcohol as women in Alaska (Chart 3-D). This is true for both alcohol as a primary substance of abuse and alcohol with a secondary drug abuse treatment.

Chart 3-D
Admissions for alcohol treatment in Alaska



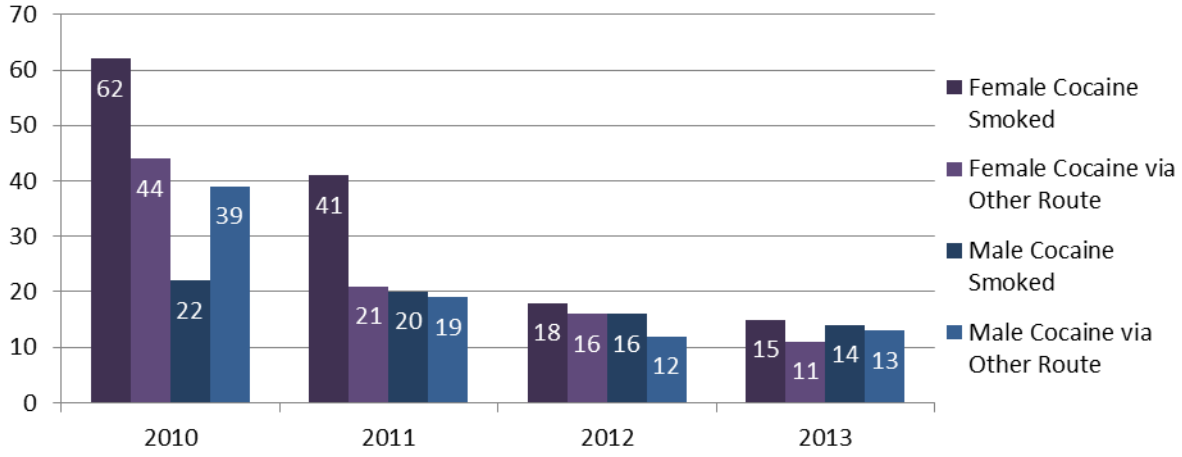
Source: Treatment Episodes Data Set

Cocaine

Cocaine, whether smoked or used in some other form, represented the substance abuse issue for 1% of Alaskan men and women seeking treatment in 2013. Nationally, almost 7% of individuals seeking treatment sought help with cocaine in 2012.

Alaskan women made up the majority of those admitted for cocaine treatment in 2010 and 2011, though in 2012 and 2013 both sexes were admitted for cocaine treatment at similar rates (Chart 3-E). Since 2010 the admissions for cocaine treatment have decreased dramatically among all Alaskans.

Chart 3-E
Admissions for cocaine treatment in Alaska

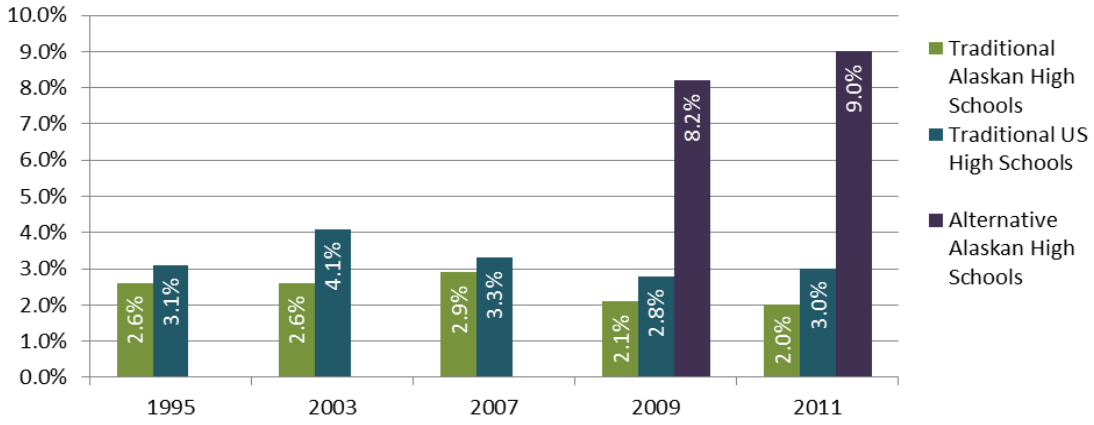


Source: Treatment Episodes Data Set

Cocaine use by traditional high school students in Alaska is similar to the U.S. rate, though the alternative school rate of use is much higher (Chart 3-F). While the admissions for cocaine treatment is historically higher

in women than in men in Alaska, as seen in Chart 3-E, the reported use of cocaine among Alaskan high school students is higher in male students than in female students (Table 3-A). This may suggest a future change in gender distribution for those admitted for cocaine use in Alaska. Based on the total rate of 2.0% of traditional Alaskan high school students who reported using cocaine regularly in 2011, 772 students are represented when applied to the 2013 enrollment. Unfortunately, this survey question was dropped from the Youth Risk Behavior Survey in 2013, and is not planned to be asked in the 2015 survey.

Chart 3-F
Percentage of students who use cocaine one or more times during the last 30 days



Source: Youth Risk Behavior Survey

Table 3-A
Percentage of students who used any form of cocaine, including powder, crack or freebase one or more times during the last 30 days

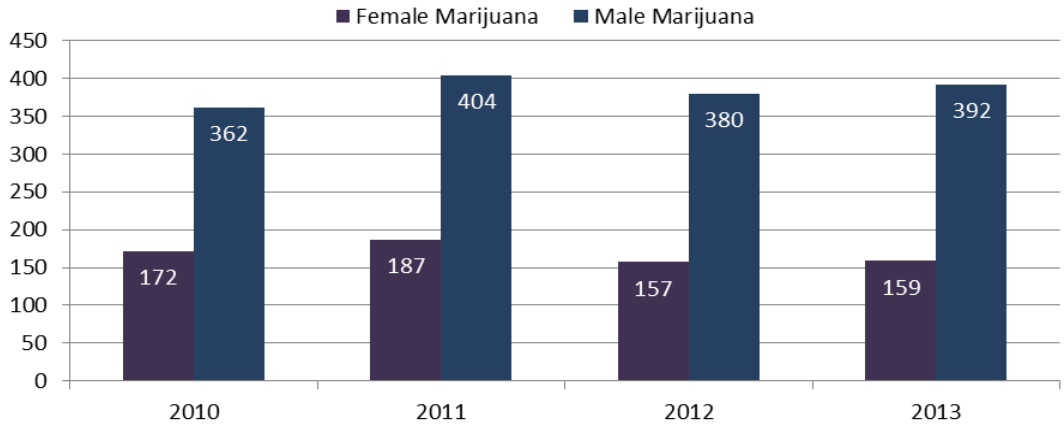
Year	Female Students		Male Students	
	Traditional Alaskan High Schools	Traditional US High Schools	Traditional Alaskan High Schools	Traditional US High Schools
1995	1.5%	1.8%	3.6%	4.3%
2003	1.7%	3.5%	3.2%	4.6%
2007	2.5%	2.5%	3.0%	4.0%
2009	1.6%	2.0%	2.5%	3.5%
2011	1.7%	1.8%	2.2%	4.1%

Source: Youth Risk Behavior Survey

Marijuana

The majority of Alaskans seeking treatment for marijuana abuse or dependence are men. Alaskan women represent less than one-third of those being admitted for treatment for marijuana dependence (Chart 3-G).

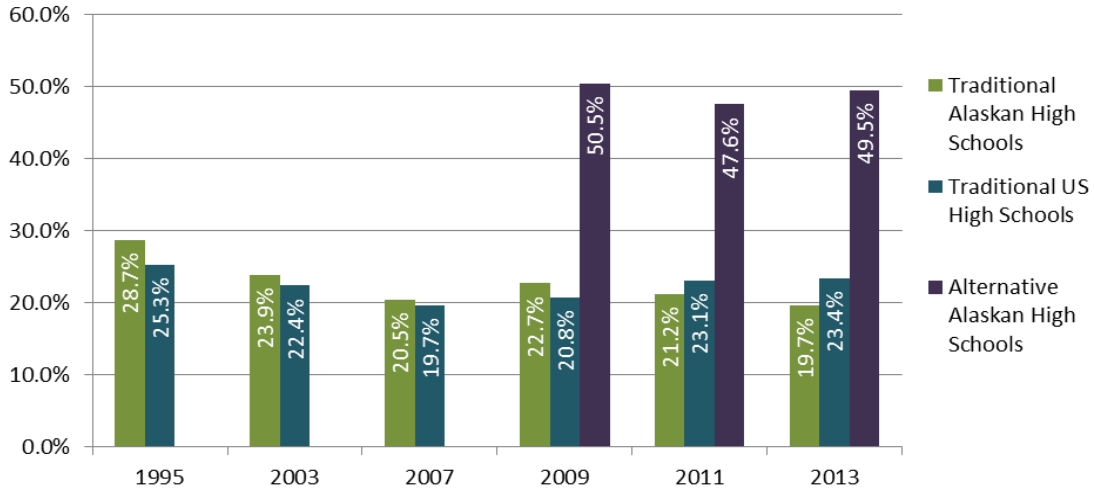
Chart 3-G
Admissions for marijuana treatment in Alaska



Source: Treatment Episodes Data Set

Marijuana use by Alaskan high school students was slightly higher than the rest of the U.S among traditional high schools students between 1995 and 2009, though in 2013 fell below national usage to the lowest rate reported in eighteen years (Chart 3-H). Despite this, the percentage of students in Alaskan alternative high schools who regularly use marijuana is more than twice that of students in traditional high schools. Applying the 19.7% rate to the 38,597 enrollment figure for students in Alaskan high schools in 2013, an estimated 7,604 students used marijuana in the previous month.

Chart 3-H
Percentage of students who use marijuana one or more times during the last 30 days

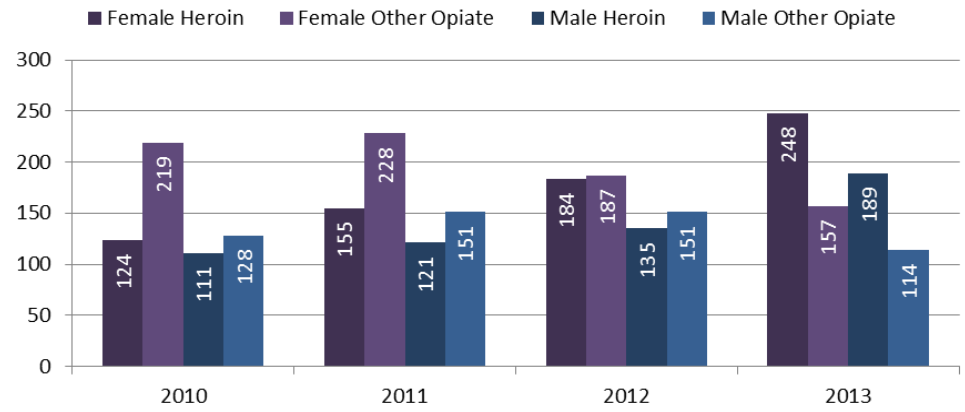


Source: Youth Risk Behavior Survey

Opiates Including Heroin

In 2013, 405 females and 303 males were admitted for treatment for opiate/heroin abuse or dependence. Women make up the majority of those admitted for treatment of opiate and heroin abuse (Chart 3-I), though heroin use has increased in both Alaskan men and women between 2010 and 2013.

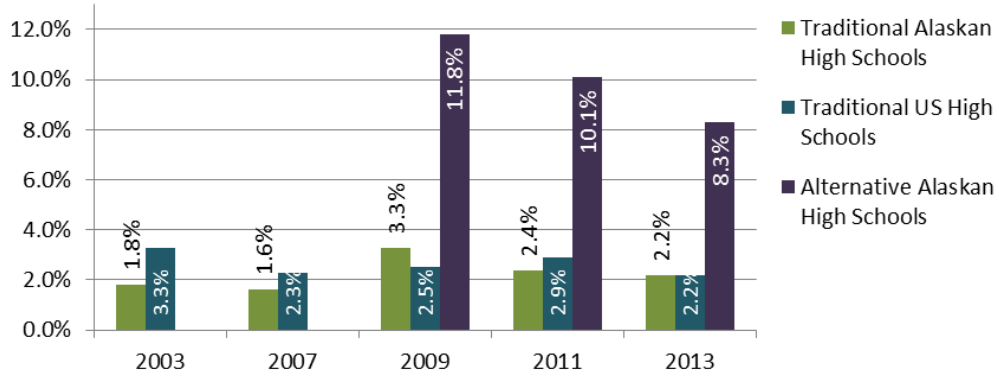
Chart 3-I
Admissions for heroin and other opiate treatment in Alaska



Source: Treatment Episodes Data Set

In 2013, 2.2% of Alaskan traditional high school students and 8.3% of alternative high school students reported using heroin at least once in their lifetimes (Chart 3-J). An estimated 849 students in Alaskan high schools have used heroin in their lifetimes, based on the traditional high school rate and the 2013 enrollment. Male students reported lifetime heroin use more than twice as often as female high school students in 2013 (2.8% of male students compared to 1.2% of female students). This is again the opposite trend as seen in adults between the two sexes.

Chart 3-J
Percentage of students who use heroin one or more times during their life

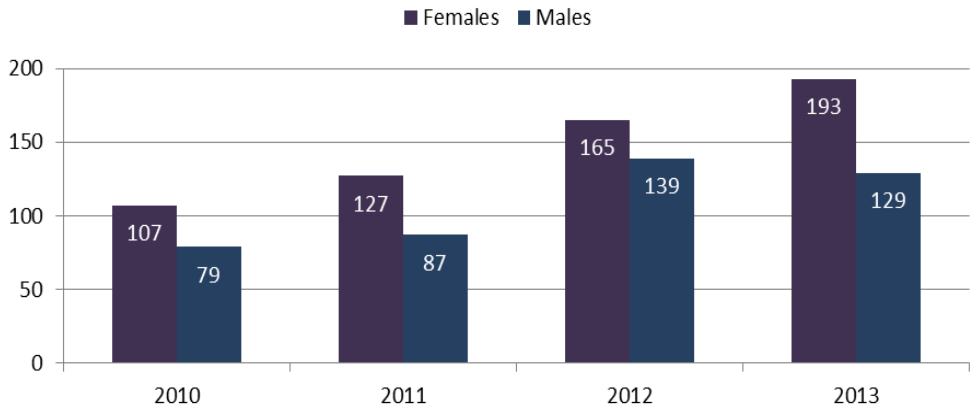


Source: Youth Risk Behavior Survey

Other Drugs

More women than men are admitted for treatment for stimulants addiction (Chart 3-K), with a consistently increasing number of female admissions from 2010 to 2013. There were 193 women and 129 men treated in 2013 for stimulant addiction.

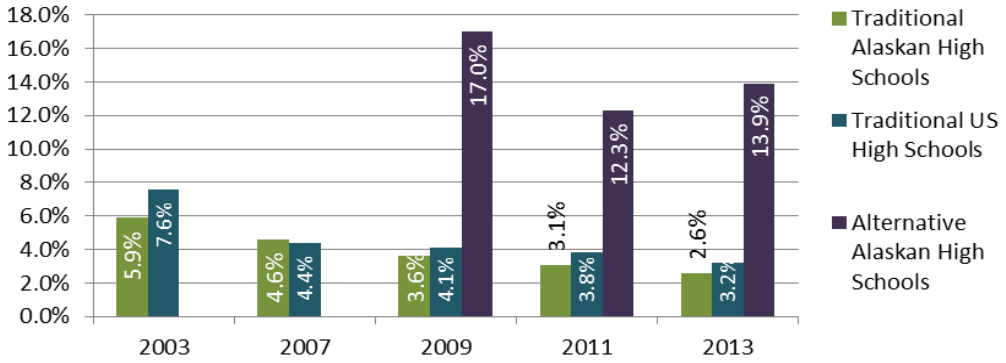
Chart 3-K
Admissions for ampethamine and other stimulant treatment in Alaska



Source: Treatment Episodes Data Set

Methamphetamine use has declined among Alaskan traditional high school students, but a much larger percentage of alternative high school students report use of methamphetamine at least once in their lifetime (Chart 3- L). A low estimate of students in Alaska have used methamphetamines in their lifetime is 1,004 in 2013.

Chart 3-L
Percentage of students who use methamphetamines one or more times during their life



Source: Youth Risk Behavior Survey

Summary: Drugs of Abuse and Treatment Admissions

- Approximately **2,400** women and **3,700** men were admitted for treatment through Division of Behavioral Health supported programs in 2013. Admissions for both sexes represent a *decreasing* trend in admissions since 2010.

- **1,513** women and **2,702** men were admitted for treatment related to use or dependence upon alcohol or alcohol and another substance in 2013 through Division of Behavioral Health providers, a *decrease* for both sexes from the previous year.

- Only **26** women and **27** men were admitted in 2013 for cocaine abuse, a *decrease* of 9 total admits from the previous year.

- Using the traditional high school rate of 2.0% and enrollment of 38,597 students, a low estimate for students that may have used cocaine regularly in 2011 is **772**.

- **159** women and **392** men were admitted for marijuana treatment in Division of Behavioral Health programs in 2013.

- In 2013, 19.7% of traditional high school students reported using marijuana in the last 30 days, compared to 49.5% of alternative high school students reporting regular use. Based on 2013 enrollment in traditional high schools, an estimated **7,604** students used marijuana in the previous month, a *decreasing* trend among Alaskan students since 1995.

- In 2013, **405** women and **303** men were admitted for opiate treatment. This is part of an *increasing* trend in heroin use among both sexes since 2010.

- In 2013, 2.2% of traditional high school students and 8.3% of female alternative school students reported using heroin in their lifetimes. Based on 2013 enrollment, an estimated **849** students in traditional Alaskan high schools have used heroin in their lifetimes. Reported heroin use has been *decreasing* among traditional and alternative students since 2009.

- More women than men are admitted for treatment for stimulants. **193** women and **129** men were treated through Division of Behavioral Health programs in 2013, nearly double the admissions for both sexes compared to 2010.

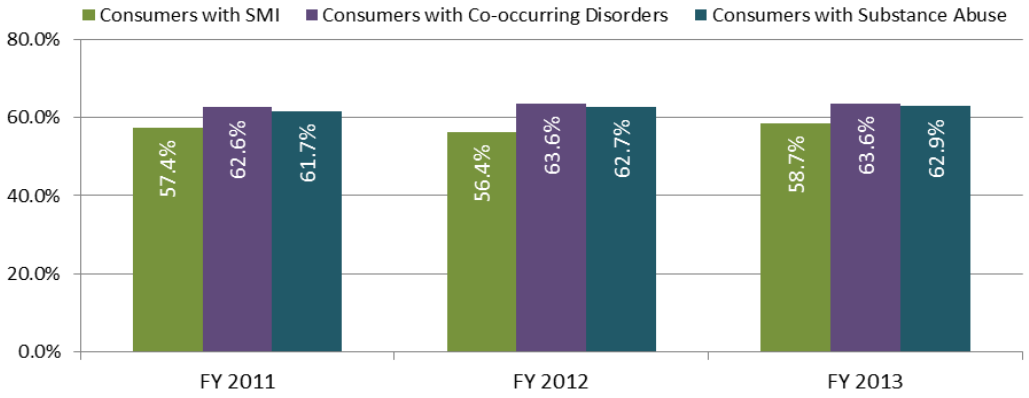
- Traditional high school students reported using methamphetamines at a rate of 2.6% in 2013, resulting in a conservative estimate of **1,004** students. Reported methamphetamine use has *decreased* among traditional and alternative students since 2009.

Treatment Outcomes

The Division of Behavioral Health requires that publicly funded behavioral health providers administer the Client Status Review (CSR) to clients in order to evaluate with people in services the change in their functioning throughout their treatment. This tool looks at "life domains" and shows the level of improvement and can be used by the clinician working with a client to monitor their progress. Life domains include: financial/basic needs, housing, meaningful actives/employment, mental and emotional health, physical health, and thoughts of self-harm.

Client Status Review outcomes as reported by the Division of Behavioral Health are provided in Chart 4-A. These outcomes are reports for all male and female clients, and include the sum of the reports on all defined life domains by type of consumer.

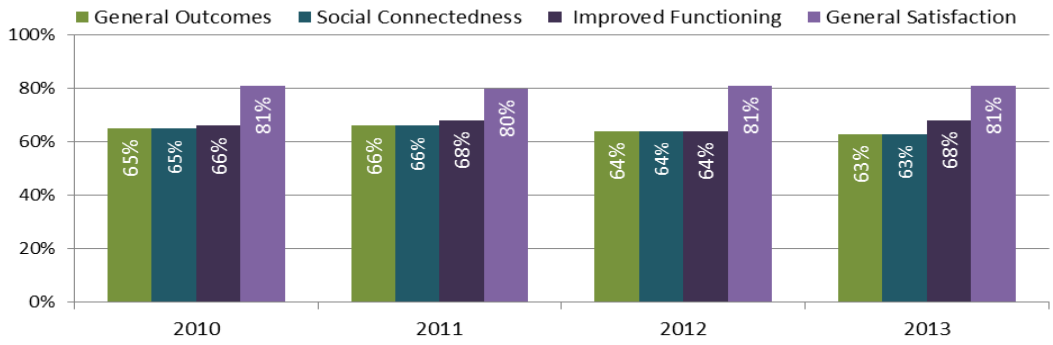
Chart 4-A
Percentage of adult Division of Behavioral Health consumers who report satisfaction or improvement in life components (as a sum of all life components reported)



Source: Michael Walker, Information System Coordinator, Division of Behavioral Health.

Treatment effectiveness is directly related to the intensity of the addiction, the level of motivation to achieve recovery, therapeutic engagement and level of services, and connections to community supports. The National Outcomes Measures tool collects data from consumer surveys to evaluate the percentage of consumers that report positively about specific outcomes. In Chart 4-B the NOMs consumer reports are displayed.

Chart 4-B
Percentage of adult consumers reporting positively about the listed outcomes



Source: National Outcome Measures

We hope that the continued Client Status Review analysis will contribute Alaska-specific data to this research base, and will include gender specific data in the future.

Sources

Behavioral Risk Factor Surveillance Survey (BRFSS)

The Alaska Behavioral Risk Factor Surveillance System (BRFSS) assesses the prevalence of diseases and risk factors (indicators) in adults (individuals of 18 years of age and older) statewide through an on- going telephone survey. The Alaska BRFSS has been in place since 1991, interviewing nearly 56,000 adult Alaskans between 1991 and 2010. The Alaska BRFSS is part of the Centers for Disease Control and Prevention's BRFSS to track health conditions and risk behaviors in the United States, District of Columbia, and territories. The content of the BRFSS includes demographics, chronic diseases, health indicators, access to care, health screenings, and perceptions. The current versions of the health profile maps may contain up to 153 variables with the number of available indicators dependent upon the geographic system depicted and the number of respondents within each area for the time period.
http://www.cdc.gov/brfss/
http://dhss.alaska.gov/dph/Chronic/Pages/brfss/method.aspx

Youth Risk Behavioral Survey (YRBS)

The Youth Risk Behavior Survey (YRBS) is part of an epidemiological surveillance system that was established in 1990 by the Centers for Disease Control and Prevention (CDC). The purpose of the Youth Risk Behavior Survey (YRBS) is to help monitor the prevalence of behaviors that put Alaskan youth at risk for the most significant health and social problems that can occur during adolescence and adulthood, in order to assist in prevention and intervention planning and evaluation. The YRBS survey is a school-based survey of high school students administered in cooperation with the Department of Education & Early Development. This anonymous survey examines a minimum of six categories of adolescent behavior.
http://www.cdc.gov/HealthyYouth/yrbs/index.htm
http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx

Treatment Episode Data Set (TEDS)

The Treatment Episode Data Set (TEDS) is part of SAMHSA's Drug and Alcohol Services Information System (OASIS). TEDS is a compilation of data on the demographic and substance abuse characteristics of admissions to (and more recently, on discharges from) substance abuse treatment. The data are routinely collected by State administrative systems and then submitted to SAMHSA in a standard format. Because of the logistics involved in collecting and standardizing admissions and discharge data for an entire calendar year from all the participating states and jurisdictions, there is a delay in the availability of the entire national data set for publication. States vary in their reporting load and the latest year for which they have complete data.
http://wwwdasis.samhsa.gov/webt/NewMapvl.htm

Pregnancy Risk Assessment Monitoring System (PRAMS)

The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) Project is an on-going survey of mothers of newborns initiated by the State of Alaska Division of Public Health, Section of Maternal, Child and Family Health in 1990. PRAMS was developed by the Centers for Disease Control and Prevention (CDC) Division of Reproductive Health and is part of CDC's initiative to reduce infant mortality and low birth weight. The PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and after pregnancy.
http://www.cdc.gov/prams/
http://www.epi.hss.state.ak.us/mchepi/PRAMS/default.stm

National Center for Health Statistics Vital Statistics System

The National Vital Statistics System is the oldest and most successful example of inter-governmental data sharing in Public Health and the shared relationships, standards, and procedures form the mechanism by which NCHS collects and disseminates the Nation's official vital statistics. These data are provided through contracts between NCHS and vital registration systems operated in the various jurisdictions legally responsible for the registration of vital events - births, deaths, marriages, divorces, and fetal deaths.
http://www.cdc.gov/nchs/nvss.htm
http://www.cdc.gov/injury/wisqars/fatal.html

2010 Alaska Victimization Survey

This survey was designed to establish a baseline with statewide intimate partner and sexual violence estimates. It was modeled after the National Intimate Partner and Sexual Violence Surveillance System (CDC, NU, DoD) and administered by RTL It utilized a statewide random digit dial dual frame phone survey (both land and cell phone lines) and maximized respondent safety and confidentiality. Survey respondents were limited to English speaking adult women residing in a household with at least one land or cell phone line. It included 871 adult women throughout Alaska, surveyed in May/June 2010. Sampling weights were used to control for selection, non-response, and coverage.
http://justice.uaa.alaska.edu/research/2010/1004.victimization/index.html

Mental Health National Outcome Measures (NOMs)

This web-based data reporting system provides a state-by-state picture of mental health service delivery results. NOMs features prevalence, treatment, and funding data. Data for reporting on the NOMs comes primarily from the States. NOMs are sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA).
http://www.samhsa.gov/dataoutcomes/urs/

Adverse Childhood Experiences Study (ACEs)

The ACE Study is research conducted by Kaiser Permanente health maintenance organization and the Centers for Disease Control and Prevention (CDC). The study demonstrates an association of adverse childhood experiences with health and social problems as an adult and has been significant in epidemiological research. Data on ACEs in Alaska has been accumulated from the 2013 Alaska Behavioral Risk Factor Surveillance System, Alaska Department of Health and Social Services, Division of Public Health, and the Section of Chronic Disease Prevention and Health Promotion.
http://dhss.alaska.gov/abada/ace-ak/pages/default.aspx

National Survey on Drug Use and Health (NSDUH)

The National Survey on Drug Use and Health provides national and state-level data on mental health and the use of drugs including alcohol, illicit drugs (including non-medical use of prescription drugs) and tobacco in the United States. NSDUH is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA).
http://www.samhsa.gov/data/population-data-nsduh